

PUBLIC WORKSHOP

NIAGARA RIVER TOXICS MANAGEMENT PLAN:  
1990 UPDATE

Tuesday, June 19, 1990

From: Charles Zafonte, EPA Representative  
Niagara River Secretariat

To: Workshop Registrants

Following up on Michael Goffin's letter announcing a workshop on the 1990 Update of the Niagara River Toxics Management Plan, enclosed are:

- (1) The draft Plan Update;
- (2) The Issues for Discussion, which is a synopsis of, and a companion document to, the draft Plan Update; and
- (3) The Agenda for the Workshop.

The Four Parties are in the process of updating the Niagara River Toxics Management Plan for the third time -- reporting progress on commitments in the 1988 Update and proposing follow-up commitments to continue progress in reducing the load of toxics entering the river. The revisions to the Niagara River Toxics Management Plan have not been major, although a number of new commitments have been added in the 1990 Update. Nevertheless, we are looking forward to hearing your views on all issues related to the Plan.

The purpose of the Issues for Discussion document is to stimulate thinking prior to the workshop by highlighting the issues we think are most important; the issues are presented in an order consistent with draft Plan Update. If you feel that other questions need to be raised, please let us know. You'll have the opportunity to discuss them at the workshop, or send comments in writing within the two-week comment period following the workshop.

After considering the comments received at the workshop and during the comment period, we will prepare a Public Responsiveness Document and propose a final Plan to the Coordination Committee at an open meeting to be scheduled in September.

If you have any questions, or know other interested persons who would like to provide oral or written comments on the Plan Update, please call one of the following agency representatives:

Michael Goffin, Environment Canada	(416) 973-6482
Charles Zafonte, U.S. Environmental Protection Agency	(212) 264-7678
Stan Irwin, Ontario Ministry of the Environment	(416) 521-7704
Gerry Mikol, New York State Department of Environmental Conservation	(518) 457-0669

**PUBLIC WORKSHOP AGENDA**

**NIAGARA RIVER TOXICS MANAGEMENT PLAN:  
1990 UPDATE**

**RAMADA FALLSVIEW  
6455 Buchanon  
Niagara Falls, Ontario  
Tuesday, June 19, 1990**

**5:00pm Welcome & Opening Remarks**

- o How workshop results will influence Plan Michael Goffin
- o Workshop process Louise Knox
- o Overview of 1990 NRTMP Update Charles Zafonte
- o Overview of Issues for Discussion Document Gerry Mikol

**6:00pm Dinner**

**7:00pm Break-out sessions in groups of approximately 12 (not including Facilitator, Recorder, Resource Person)**

- o Introductions
- o Review of issues for discussion

**9:00pm Reports back from break-out sessions Facilitators**

**9:25pm Overview of next steps Stan Irwin**

**9:30pm Closing Remarks Michael Goffin**

**PUBLIC WORKSHOP: ISSUES FOR DISCUSSION**

**NIAGARA RIVER TOXICS MANAGEMENT PLAN**

**1990 UPDATE**

**June 19, 1990, 5:00 - 9:30 PM**

**RAMADA FALLSVIEW**

**6455 Buchanon**

**Niagara Falls, Ontario**

## GOAL

The fundamental goal of the Niagara River Toxics Management Plan (NRTMP) is to reduce the loadings of toxic chemicals to the Niagara River. In the 1990 Update of the NRTMP, this goal remains unchanged.

Q: Do you feel that the goal should be expanded or revised? And, if so, how?

A:

## OBJECTIVES

To meet the goal of the NRTMP, the Four Parties will focus on achieving four interrelated objectives:

- o Sorting chemicals as a basis for action;
- o Implementing programs to reduce the loadings of toxics entering the Niagara River;
- o Assessing the success of programs to reduce significantly the loadings of toxics, ensuring a continuing focus on critical inputs; and
- o Coordinating NRTMP activities with Remedial Action Plan (RAP) activities.

These objectives are a rearrangement of the three objectives in the 1988 Update of the NRTMP, which were: (1) reducing the inputs of identified priority toxics; (2) determining if there are additional toxics that warrant priority attention; and (3) implementing existing and developing programs for the control of all toxics. We believe the rearrangement makes the objectives

clearer and minimizes overlap among the objectives. Each of the objectives for the 1990 Plan Update will be discussed in turn.

→ SORT

The first objective of the Plan is to sort chemicals as a basis for action.

The Four Parties have developed a system to categorize toxics (Table I, p. 18) and have agreed to use the system to decide what actions are appropriate for each chemical. Most importantly, chemicals found in excess of the most stringent standards or criteria receive special emphasis for reduction and for analytic efforts, such as development of mass-balance models.

Q: How effective do you think the categorization process is?

A:

Q: What suggestions do you have for improving it?

A:

The Four Parties developed a preliminary list of 15 priority toxics based on this categorization process. They also identified 10 for 50% reduction by 1996 based on the presence of significant Niagara River sources (Table II, p 19).

**Q:** Are you aware of any other chemicals that exceed standards or criteria and, therefore, should be added to the list of priority toxics?

**A:**

The following priority toxics are not included on the list for 50% reduction:

- Chrysene
- Chlordane
- Dieldrin
- Octachlorostyrene
- DDT and metabolites

**Q:** Do you know of any significant Niagara River sources of these chemicals?

**A:**

In conducting the categorization process, the Four Parties faced two issues related to:

- o How current the data need to be, and
- o The spatial representativeness of the data (that is, how data representing localized conditions within the river should be included in the categorization process).

One view is that all Niagara River data, with the exception of end-of-pipe data, should be used to categorize toxic chemicals for all NRTMP actions by the Four Parties.

Another view is that only quality-assured data (that is, validated as good for its intended use), representative of open-water conditions from 1986-87 onward should be used to categorize toxic chemicals for NRTMP actions.

Before the Secretariat considers the matter, we ask you:

Q: What do you see as the pros and cons of these alternative views?

A: + SARA TITLE 3 DATA  
 + AIR PERMITS  
 INDUSTRIAL CHEMICAL SURVEYS EPA  
 MISA - INDUSTRIAL DISCHARGES

AGE OF DATA USED TO CATEGORIZE  
 86-87 IS THE BASELINE YEAR

Q: Do you have any specific recommendations about data sources that can be used in preparing the updated categorization of toxic chemicals for the NRTMP?

A:



**Q:** What additional suggestions do you have related to sorting chemicals as a basis for action?

**A:**

### REDUCE

The second objective of the Plan is to implement programs to reduce significantly the loadings of toxics entering the Niagara River. Commitments are included in the following categories:

- o Point sources;
- o Non-point sources;
- o Upstream loadings; and
- o Pollution prevention.

**Point Sources** - The Four Parties have documented an 80% reduction in U.S. and Canadian point sources of toxics since 1981-82. We have also presented plans for an additional reduction of 50% by 1996 in the loadings of the ten persistent toxic chemicals of concern, and will, on an annual basis, describe the overall agency programs for point source control.

**Q:** What do you feel are the pros and cons of having the 50% load reduction goal for point sources of the ten chemicals of concern?

**A:**

**Q:** What objectives should we consider using to limit the point source loadings of the five toxic chemicals that are not on the list for 50% reduction (the chemicals are listed on p 3)?

**A:**

**Non-Point Sources** - The 50% reduction commitment applies to both point sources and non-point sources.

**Q:** What do you feel are the pros and cons of having the 50% load reduction goal for non-point sources of the ten chemicals of concern?

**A:**

Unlike point sources, the non-point source components of the Niagara River loadings of the ten chemicals have not yet been directly measured. Nevertheless, to proceed as quickly as possible to reduce the non-point source loadings, the Four Parties are focusing initially on cleaning up hazardous waste sites contributing toxic chemicals to the Niagara River.

**Q:** In light of this uncertainty, what do you feel are the pros and cons of focusing immediate attention on hazardous waste sites contributing toxics to the Niagara River?

**A:**

**Q:** Are you aware of other non-point sources that warrant immediate attention? If so, what information can you provide?

**A:**

In November 1989, EPA and DEC issued a report identifying the twenty sites estimated to contribute 99% of the toxic chemical loading from all sites in the U.S. to the river and presented schedules for cleanup of these sites by 1996. MOE will issue a Canadian hazardous waste sites report on the five Canadian waste sites by June 1990, with status reports and updates annually thereafter.

**Q:** What can the Four Parties do to assist the public in monitoring progress in meeting these schedules?

**A:**

DEC has issued statewide non-point source assessment and program status reports. MOE will issue its initial non-point source report by December 1990. EPA/DEC and MOE intend to develop non-point source management plans that focus more directly on reducing the loadings of toxic chemicals of concern entering the Niagara River from all significant categories of non-point sources, not just hazardous waste sites.

The Four Parties intend to develop, by September 1990, a methodology for estimating overall non-point source loadings to the Niagara River and to generate the loading estimates by September 1991.

Q: How do you feel about broadening non-point source activities under the NRTMP beyond hazardous waste sites? How would you suggest this be done?

A:

Q: Do you have any information to offer on the most likely non-point sources of the fifteen priority toxics?

A:

**Upstream Loadings** - Six of the fifteen NRTMP priority toxics have significant upstream Great Lakes sources. The Four Parties alerted the International Joint Commission, by letter dated March 21, 1989, that Lake Erie water entering the Niagara River contains elevated levels of the six toxic chemicals.

The Four Parties now intend to make specific recommendations to ensure that the responsible governmental agencies (EPA, EC, MOE, DEC and the other Great Lakes states) address this inter-lake transport issue. Before the Four Parties reach a decision on this matter, we ask you:

→ Q: Do you have recommendations for how this inter-lake transport issue should be addressed?

A:

**Pollution Prevention** - In order to make further progress towards the goal of virtual elimination of toxic discharges as embodied in the Great Lakes Water Quality Agreement, the Four Parties are committed to evaluating how pollution prevention activities (for example, source reduction, in-plant recycling, product substitution, etc.) can be incorporated in the Plan.

Q: How do you feel about the Four Parties incorporating a pollution prevention initiative into the Plan?

A:

**Q:** Do you have any recommendations to guide the initiative?

**A:**

### ASSESS

The third objective of the Plan is to assess the success of programs to reduce the loading of toxics, ensuring a continuing focus on critical inputs.

The most important tool in this assessment is the Framework for 50% Reduction Progress Report for the NRTMP, which:

- o Details how to prepare an annual report, using Niagara River ambient and source data, and documenting progress toward attainment of the goal of 50% reduction of problem toxics;
- o Identifies how best to present statistically valid year-to-year comparisons of river loadings data; and
- o Revises the protocol for adding chemicals to the list of priority toxics for 50% reduction.

Two key charts from the framework are included as Tables III (p 20) and IV (p.21).

**Q:** How important do you think it is to be able to document the 50% reduction in statistically significant terms (that is, to be able to define the "wiggle room" in the conclusion)?

**A:**

**Q:** How important do you think it is to have U.S. and Canadian point source data that are comparable, for example, in monitoring frequency, detection levels, and the chemicals covered?

**A:**



At present, the Four Parties conduct biomonitoring programs in the Niagara River independently of each other. The 1990 Plan Update calls for the Four Parties to decide whether an agreed-upon biomonitoring program should be developed.

Q: What are the pros and cons of incorporating an integrated Four Party biomonitoring program into the Plan? What should it accomplish, and how should it be structured?

A:

#### COORDINATE

The fourth objective of the Plan is to coordinate activities with Remedial Action Plan (RAP) activities.

The Four Parties will prepare annual progress reports on the RAPs for the Niagara and the Buffalo rivers, beginning June 1990. The progress reports will provide the basis for Four Party recommendations to the RAPs, and will provide the opportunity for the review of NRTMP activities proposed by the RAPs.

Q: Do you have any suggestions for improving compatibility between the RAPs and the NRTMP?

A:

**Q:** Can you suggest any opportunities for integration of activities between NRTMP and the RAPS?

**A:**

#### **ORGANIZATION**

The Four Parties have established an integrated management structure (Figure I on p 22) to implement the Niagara River and Lake Ontario Toxics Management Plans, and to keep them current.

**Q:** How well does the organizational structure meet the needs of the NRTMP?

**A:**

→ Q: Do you have any suggestions for improving it?

A:

#### **PUBLIC INVOLVEMENT**

A public involvement process has been developed for the NRTMP. Its key elements are:

- o The inclusion of one Canadian and one U.S. citizen on each of the six technical committees established to meet the commitments of the Niagara River and Lake Ontario Toxics Management Plans;
- o Public consultation workshops on Secretariat recommendations to the Coordination Committee -- both on Plan updates and focusing on particular issues; and
- o Holding all Coordination Committee meetings in public in the Niagara area.

**Q:** How do you feel about these key elements?

**A:**

**Q:** How would you suggest improving the public involvement process?

**A:**

**OTHER ISSUES**

We have reviewed the key elements of the NRTMP and raised the questions we think are most useful in helping us update the Plan.

**Q:** Are there any other NRTMP-related issues that you wish to discuss?

**A:**

**Q:** What is your impression of the workshop? Do you have any suggestions for improving future workshops?

**A:**

**TABLE I****CATEGORIES OF TOXICS****I. Ambient Data Available**

- A. Exceeds enforceable standard
- B. Exceeds a more stringent, but unenforceable criterion
- C. Equal to or less than most stringent criterion
- D. Detection limit too high to allow complete categorization
- E. No criterion available

**II. Ambient Data Not Available**

- A. Evidence of presence in or input to the River
- B. No evidence of presence in or input to the River

TABLE II

## NRTMP PRIORITY TOXICS

	N.R. WATER EXCEEDANCES <sup>1</sup>	L.O. FISH EXCEEDANCES <sup>2</sup>	SIGNIFICANT NR SOURCES <sup>3</sup>
o benz(a)anthracene	X		X
o benzo(a)pyrene	X		X
o benzo(b)fluoranthene	X		X
o benzo(k)fluoranthene	X		X
o chlordane		X	
o chrysene	X		
o dieldrin		X	
o hexachlorobenzene		X	X
o mercury		X	X
o mirex		X	X
o octachlorostyrene		X	
o PCBs (total)	X	X	X
o DDT & metabolites		X	
o dioxin (2,3,7,8-TCDD)		X	X
o tetrachloroethylene	X		X

-----

1 These seven chemicals were identified from a master list of persistent toxic chemicals as exceeding water quality standards, criteria or guidelines at Niagara-on-the-Lake.

2 These nine chemicals were identified from a master list of persistent toxic chemicals as exceeding fish tissue standards, criteria or guidelines in Lake Ontario.

3 These ten chemicals were identified as having significant Niagara River sources, based on a significant positive differential load (i.e., a positive differential load  $\geq 25\%$  of the total load as measured at Niagara-on-the-Lake), or based on the existence of known current Niagara River sources.

Table III

RESPONSIBILITIES OF TECHNICAL COMMITTEES

**REVISED MASS BALANCE FRAMEWORK**

**Annual Loading by Chemical**

Upstream Load	Differential Load			Downstream Load
	Point	Non-Point	Gains/Losses	
RMC	PSC	NPSC	FOTC	RMC

- RMC - River Monitoring Committee
- PSC - Point Source Committee
- NPSC - Non-Point Source Committee
- FOTC - Fate of Toxics Committee



Table IV

# REVISED MASS BALANCE FRAMEWORK (Cont.)

## Loading Trends by Chemical

Loadings	86/87	87/88	88/89	-----	96/97	Trend
Upstream						
Point Source						
NPS						
Gains/Losses						
Downstream						

# MANAGEMENT STRUCTURE

