Harmful Pollutants Annex to the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

DRAFT FOR PUBLIC COMMENT

Canada Ontario

BETWEEN

HER MAJESTY THE QUEEN IN RIGHT OF CANADA (CANADA)

AND

HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO (ONTARIO)

WHEREAS the Governor in Council, by Order in Council No. P.C. , dated the day of , 200 has authorized the Canada Minister(s) to execute and deliver this Annex on behalf of Her Majesty;

WHEREAS the Lieutenant Governor in Council, by Order in Council No. O.C. , dated the day of , 200 has authorized the Ontario Minister(s) to execute and deliver this Annex on behalf of ;

I Preamble

To achieve the Canada-Ontario Agreement's (COA) vision of a healthy, prosperous and sustainable Great Lakes Basin ecosystem it is necessary to achieve virtual elimination of persistent bioaccumulative toxic substances and significant reductions of other harmful pollutants.

Over the years, considerable progress has been made in addressing releases of harmful pollutants. Efforts by Canada and Ontario, combined with those of industry, municipalities and basin residents, have successfully reduced the levels of many substances in the lakes.

For instance, over the past decade significant reductions of persistent bioacculumative toxic substances have been achieved through regulatory and voluntary actions. In particular, over 75% reductions have been reported for dioxins, furans, mercury, alkyl lead and other chemicals. Nevertheless, additional efforts are required to reach virtual elimination of persistent bioacculumative toxic substances.

In fact, all of the Great Lakes continue to suffer from chemical and pathogen related problems. Persistent bioaccumulative toxic substances are grave concerns because they can threaten fish, wildlife and human health. Newer threats of an increasing concern include the effect of air pollution on the ecosystem and the influence of hormone-mimicking chemicals on fish, wildlife, and human health.

Harmful pollutants are released from a variety of sources, many of them far from the Great Lakes. For example, more than 50 percent of Ontario's air pollution, in the form of smog, comes from the United States. Efforts need to take these factors into account.

The more we learn about harmful pollutants, the more we recognize how challenging it is to virtually eliminate the last remaining sources. Our current emphasis is on the development of policies and programs that address this challenge.

II Goals

Canada and Ontario have identified three five-year goals that will demonstrate progress toward the virtual elimination of persistent bioaccumulative toxic substances and significant reductions of other harmful pollutants. They are:

1. Have in place policies and programs to make progress towards virtual elimination for persistent bioaccumulative toxic substances such as mercury, dioxins, furans and PCBs;
2. Reduce other harmful pollutants that have a significant environmental impact; and,
3. Have comprehensive knowledge of the sources, movement, fate and impact of harmful pollutants, including persistent bioaccumulative toxic substances, for policy and program development purposes.

III Results

Taking Action

Canada and Ontario will work with producers and sources of pollutants towards virtual elimination of persistent bioaccumulative toxic substances and reductions of other harmful pollutants, using a substance and/or sector specific approach by achieving:

Result 1

The virtual elimination of high-level Polychlorinated Biphenyls (PCB).

Canada will:

- Amend the federal chlorobiphenyl regulation to require the phase out of all PCBs in service by December 31, 2008, and prohibit PCB storage after that date for existing stored material; and,
- Amend federal waste export regulation to allow for better control and tracking of PCB wastes.

Ontario will:

- Use regulatory or other measures to destroy all PCBs in storage by 2008.

Result 2

An 85 % reduction in Mercury releases compared to releases in 1988 by 2005 and a 90 % reduction by 2010.

Canada and Ontario will:

- Develop standards for mercury emissions from coal-fired plants through the Canada-Wide Standards (CWS) process;
- Develop technical information to guide municipalities in identifying and reducing sources of mercury discharges to sewer systems;
- Develop and implement, with other partners, life cycle management programs to divert mercury-containing products from the waste stream; and,
- Develop a public education program on mercury for use in schools.

Canada will:

- Implement its commitments under the CWS for waste from dental amalgam;
- Develop and implement education and outreach programs with manufacturers to eliminate or reduce the use of mercury in manufactured products; and,
- Provide pollution prevention training for the healthcare sector to reduce mercury entering the waste stream and municipal sewer systems.

Ontario will:

- Implement the CWS for emissions from coal-fired plants;
- Implement initial actions to support the CWS for incinerations, with the inclusion of dioxins and furans into the standards; and,
- Implement its commitments under the CWS for waste from dental amalgam.

Result 3

A 90 % reduction in the release of dioxins and furans by 2005, compared to releases in 1988, and reduction of other persistent bioaccumulative toxic substances.

Canada and Ontario will:

- Develop CWS for dioxins and furans from steel manufacturing and iron sintering; and,
- Undertake outreach initiatives, including with municipalities, to promote environmentally sound waste biosolid utilization and incineration.

Canada will:

- Undertake outreach initiatives directed at the steel sector to guide the implementation of Strategic Options Process environmental codes of practice and verify reduction progress under the CWS process;
- Review the performance of federal solid waste incinerators operating in Ontario and undertake outreach initiatives to promote compliance with the CWS for mercury, dioxins and furans;
- Provide technical support to develop and demonstrate innovative waste incineration control technologies; and,
- Survey household garbage disposal practices in rural Ontario and determine the significance of barrel/backyard trash burning as a source of dioxins and furans, and develop options for addressing the issue.

Ontario will:

- Review the performance of existing incinerators against the CWS for mercury, dioxins and furans, and develop a compliance strategy; and,
- Implement the CWS by 2006.

Result 4

Reductions in the use, generation and release of other harmful pollutants.

Canada and Ontario will:

- Develop environmental codes of practice in collaboration with sectors identified under the federal CEPA Strategic Options Process;
- Develop programs, including an education and outreach program, to promote woodstove changeover in the Great Lakes Basin;
- Implement the commitments under the Canada-US Air Quality Agreement Ozone Annex, Anti Smog Action Plan, and Canada-Wide Standards, and

establish a federal-provincial smog coordinating committee to exchange information in order to develop opportunities for further reductions; and,
- Undertake outreach initiatives to promote the implementation of Codes and Guidelines for reducing releases of benzene and volatile organic compounds (VOCs).

Canada will:

- Regulate on-road vehicles and fuels by actions including:
    - Enacting regulations to reduce sulphur content in gasoline to 30 parts per million by 2004;
    - Developing national emission reduction regulations, aligned with those in the United States, for on-road vehicles, light-duty vehicles and light-duty trucks, effective the 2004 model year;
    - Developing codes of practice for heavy-duty vehicle inspection and maintenance programs in 2001;
    - Aligning emission control programs for off-road engines with those in the United States to be effective by the 2004 model year; and,
    - Enacting new regulations to reduce sulphur in on-road diesel fuel to 15 parts per million by 2006.
- Implement the 2001 Memorandum of Understanding between Environment Canada and the Canadian Marine Manufacturers Association to introduce cleaner outboard engines and personal watercraft into the Canadian market place;
- Identify sources of those substances found "toxic" under the Canadian Environmental Protection Act and undertake outreach initiatives to promote pollution prevention activities by source sectors/facilities; and,
- Lead the implementation of the Binational Toxics Strategy (BTS).

Ontario will:

- Undertake outreach initiatives to influence further reductions in discharges from Municipal/Industrial Strategy for Abatement (MISA) sectors and facilities, and examine and implement new policies and regulations to manage aqueous industrial discharges and dischargers not currently captured under MISA;
- Accelerate reductions of nitrogen oxides (NOx) and VOC emissions to 25% and 45% reduction from 1990 levels by 2005 and 2010 respectively, from the current commitment to meet this target by 2015;
- Quantify reductions in other harmful pollutants that result as a co-benefit of reduced criteria air contaminants; and,
- Implement a public education program linking individual behaviour to the release of criteria air pollutants.

Result 5

Reductions in the release of harmful pollutants in municipal wastewater discharges.

Canada and Ontario will:

- Consider sewage treatment plant upgrades and combined sewer overflow issues as priorities for capital assistance through the Canada-Ontario Infrastructure Program; and,
- Research sewage treatment plan processes to optimize technologies used to treat harmful pollutants.

Canada will:

- Develop a comprehensive municipal wastewater strategy as part of a national water strategy;
- Provide technical support to optimize sewage treatment plant processes in order to improve treatment efficiency;
- Provide pollution prevention training and other support to municipal inspectors and industry sectors;
- Undertake outreach initiatives to promote pollution prevention planning as a municipal sewer use bylaw requirement; and,
- Regulate the concentration of hexachlorobenzene in coagulant used in municipal wastewater treatment to reduce hexachlorobenzene releases into receiving waters.

Ontario will:

- Provide technical advice, information and training to encourage optimization in the management of municipal wastewater;
- Develop a management framework for municipal wastewater;
- Develop best practices guidance documents to aid municipalities in identifying and reducing sources of harmful pollutants and other contaminants discharged to sewers; and,
- Implement outreach activities to promote water conservation as a means of reducing demands on wastewater treatment facilities and maximizing treatment efficiency.

Result 6

Voluntary reductions in the release of harmful pollutants by targeted stakeholders and sectors.

Canada and Ontario will:

- Develop and implement a joint pilot program where Environmental Management Agreements (EMAs) are negotiated to encourage multi-pollutant, beyond-compliance reductions of harmful pollutants by priority sectors/facilities; and,
- Undertake outreach initiatives targeting priority industries and industry associations to promote participation in the joint pilot program.

Enhancing Knowledge

Canada and Ontario will ensure that essential knowledge is available for decision-making pertaining to virtual elimination of persistent bioaccumulative toxic substances and reductions of other harmful pollutants by achieving:

Result 7

A common approach for effective emissions reporting.

Canada and Ontario will:

- Develop and implement a pilot project to integrate the air emission reporting requirements of Ontario's proposed Mandatory Monitoring and Reporting Regulation with the federal National Pollutants Release Inventory to facilitate the development of a common database of harmful pollutants and tracking the releases to air.

Result 8

Improved quantification of in-basin and out-of-basin sources of harmful pollutant releases.

Canada will:

- Develop and maintain substance profiles in support of the Binational Toxics Strategy and the Canadian Environmental Protection Act to identify source sectors for remedial actions and release reduction activities;
- Provide technical support for stack emissions testing of persistent bioaccumulative toxic substances within selected priority sectors to improve substance inventories;
- Maintain the Great Lakes Integrated Atmospheric Deposition Monitoring Network (IADN) stations, expand to monitor mercury, dioxins and furans, and review monitoring coverage to ensure a comprehensive substance list and sufficient spatial coverage;

- Monitor COA Tier I and II substances at selected federal National Air Pollutants Surveillance (NAPS) sites; and,
- Develop, with various partners, Canada-US regional airshed networks (beginning with Windsor) to address local transboundary air pollution issues including complaints, monitoring and prevention.

Ontario will:

- Develop a program to monitor application of biosolids, including biosolids quality;
- Identify transboundary sources of air deposition through regional scale models; and,
- Provide current air quality information and smog updates both on-line and via the media.

Result 9

Knowledge of the occurrence, fate and impact of harmful pollutants on human and environmental health is gathered and communicated to the public.

Canada and Ontario will:

- Collect and develop more complete and comprehensive data on pollutant releases and sources to facilitate the risk and health impacts assessment of harmful pollutants within the Great Lakes Basin; and,
- Conduct field studies on the fate and movement of harmful pollutants including pathogens in biosolids applied to agricultural lands.

Canada will:

- Research the nature and impacts of harmful pollutants to human health;
- Research the occurrence, persistence, fate and effects of toxic substances in the aquatic environment;
- Research the impact of discharges from various source sectors on the receiving environment, and develop and implement environmental effects monitoring programs for major source sectors such as pulp and paper and metal mining; and
- Develop a Health Science Framework (national and Great Lakes specific) to guide and facilitate the health science activities undertaken by researchers and other health scientists.

Ontario will:

- Develop source-receptor models and provide data to appropriate agencies for use in determining the human health impacts of harmful pollutants; and,
- Research health impacts of harmful pollutants to set new provincial standards, guidelines and objectives.

Result 10

An understanding of the ecological and human health risks of priority chemicals.

Canada and Ontario will:

- Research the environmental and human health impacts of substances of potential concern; and,
- Research the sources of these substances and examine options for reducing their release into the environment.

VI. Management and Administration

This Annex will remain in effect for five years, after which time it may be considered for renegotiation and/or renewal by Canada and Ontario. Renegotiation, renewal or amendments to this Annex will include public consultation in accordance with the Canada-Ontario Agreement. Upon mutual agreement, the Parties may amend this Annex at any time.

Effective implementation and management of this Annex will ensure progress and consistency in decision making, monitoring, communications and reporting, as well as clarity in government leadership pursuant to this Annex.

To manage the delivery of the results and commitments under this Annex, the Parties will establish Annex Management Leads. The Leads will report to, and receive direction from, the COA Management Committee. The Leads will be a director-level representative of Environment Canada and a director-level representative of Ministry of the Environment. Canada and Ontario will provide resources needed for the management of the Annex jointly and equally.

The Annex Management Leads will:

- Develop and coordinate implementation of a multi-year Work Plan, to be updated annually by June 1. Within 12 months of this Annex coming into effect, the work-plan will be submitted to the COA Management Committee for review and approval. The Work Plan will describe the activities and deliverables of each contributing agency in relation to the specific results and

commitments articulated within the Annex. In preparing COA Work Plans, every effort will be made to maximize the integration of activities of contributing departments and ministries in order to ensure a coordinated and cooperative approach;
- Annually, by June 1, update the multi-year Work Plan and prepare Progress Reports for review and approval by the COA Management Committee; and,
- Liaise with other departments/ministries to ensure that those agencies are aware of the goals, priorities and strategies of the COA, and to the maximum extent, incorporate these into agency planning.

VII. Definitions

Criteria air pollutants

- Nitrogen Oxides (NO_X), Volatile Organic Compounds (VOCs), Sulpur Dioxide (SO_2), particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5).

Discharge

- Refers to a release of a substance directly to a water body.

Emission

- Refers to a release of a substance to the air.

Harmful Pollutants

- Are those substances having a deleterious impact on the health/functioning of the Great Lakes Basin ecosystem. In this Annex, the harmful pollutants will refer to substances on the Tier I and Tier II substance list, as well as others such as, PM10/PM2.5, NOx, VOCs, and SO2.

Loading

- Refers to the amount (concentration x flow) of a substance being emitted or discharged

Parties:

- The governments of Canada and Ontario

Release

- Refers to an air emission or aqueous discharge, depending on the context.

Source-Receptor Models

- Computer or mathematical models that predict how sources of pollution are distributed in the environment and what risk that they pose to the receptor, which could be humans, animals, water quality, etc.

Tier I

- Includes the 11 critical pollutants identified by the International Joint Commission, plus critical pollutants identified in the Niagara River and lake Ontario Toxic Management Plans and the Lake Superior Binational Program. Tier I pollutants are targeted for virtual elimination. The Tier I listing includes:

Aldrin/dieldrin*	Hexachlorobenzene	PCDD (dioxins)
Alkyl-lead*	Mercury	PCDF (furans)
Benzo(a)pyrene	Mirex*	Toxaphene*
Chlordane*	Octachlorostyrene	
DDT*	PCBs	

Note:* denotes substances that are no longer being used or released in Ontario

Tier II

- Includes substances identified as having the potential for causing widespread impacts, or have already caused local adverse impacts on the Great Lakes environment. The Tier II listing includes:

Anthracene	Dinitropyrene
Cadmium	Hexachlorocyclohexane
1,4'-dichlorobenzene	4,4''-methylnebis(2-chloraniline)
3,3'-dichlorobenzene	Pentachlorophenol
Tributyl tin	

Plus 17 PAHs as a group, including but not limited to:

Benz(a)anthracene	Perylene
Benzo(b)fluoranthene	Phenanthrene
Benzo(g,h,i)perylene	

Virtual Elimination

- Means that there is "no measurable release" of a substance to the environment.

IN WITNESS WHEREOF, this Annex has been executed on the _____ day of _____, 2001.

Her Majesty The Queen in Right of Canada

_____ _____

Witness

Her Majesty The Queen in Right of Ontario

_____ _____

Witness