

Great Lake Regional Collaboration PBT Group

I. Problem Statement

While persistent toxic substances (PTS) have been significantly reduced in the Great Lakes over the past 30 years, PTS continue to be present in the Great Lakes ecosystem at levels high enough to warrant fish consumption advisories and to pose threats to human and wildlife health. More recently, researchers have documented the presence of new chemicals of emerging concern that may also pose a threat to the Great Lakes Basin Ecosystem. Characteristics of these substances, such as sources, fate, transport, persistence, bioaccumulation, and toxicity, are not yet fully understood.

II. Principles

- Great Lakes PTS evaluation and reduction efforts can serve as a model for statewide, nationwide and international efforts.
- Regulatory programs are essential to controlling releases of PTS chemicals and must be supported and updated.
- Existing Great Lakes PTS programs will continue to play a vital role and include:
 - *Remedial Action Plans* to address beneficial uses impaired by PTSs at Areas of Concern,
 - *Lakewide Management Plans* for the reduction of critical PTS loads in each Great Lake and
 - *Great Lakes Binational Toxics Strategy*, which sets goals and implements reductions for 12 PTS chemicals across the Great Lakes.
- Protection is as important as remediation and Great Lakes waters, currently high quality, will not be degraded.

I would replace the above with “Prevention of new threats to the Great Lakes Basin Ecosystem is as important as remediation of already-impaired Great Lakes waters.”

- Significant amounts of PTSs are delivered to the Great Lakes via the atmosphere and reducing PTS loads will require reductions in emissions outside the Great Lakes.

III. Goals

- Prevent the release of toxic substances in toxic amounts, and virtually eliminate the release of any or all persistent toxic substances to the Great Lakes Basin Ecosystem.

• Reduce environmental levels of toxic chemicals to the point that all restrictions on the consumption of Great Lakes fish can be lifted.

• Significantly, reduce exposure to persistent toxic chemicals from reservoir sources by relying on both aggressive source remediation and pathway intervention.

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- Protect the general public from toxic substances through effective outreach and education, including protective fish consumption advice throughout the Great Lakes Basin Ecosystem.
- Protect the health and integrity of wildlife populations and habitat from adverse physical, chemical and biological impacts associated with the release of persistent toxic substances.
- Identify and fill the gaps in our scientific understanding that are central to our ability to effectively manage the risks of toxic substances found in the Great Lakes.

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<#>Clean up all sediments and other reservoir sources contaminated with persistent toxic substances in the Great Lakes Basin Ecosystem.¶

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IV. Recommended Actions

A. Great Lakes In-Basin Program Support

Significant investments have already been made in Great Lakes programs. From regulatory programs that are established by laws and rules to non-regulatory programs such as the Lakewide Management Plans (LaMPs) and the Great Lakes Binational Toxics Strategy (BTS), a structure already exists that should not be duplicated or dismantled. Activities consistent with supporting these programs are included in Appendix 1.

Examples of these activities include:

- Provide funding and support to improve garbage collection, recycling programs including electronic waste, and household hazardous waste collection in communities in the Great Lakes basin as needed to prevent burning, burying and dumping of solid waste
- Convene a group of representatives of Great Lakes States and other interested States to discuss implementation of the Clear Air Mercury Rule, including the potential for deeper regional emission reductions than required under this federal legislation.
- Continue and maintain support for GLBTS activities, including PBT product phase-outs, pollution prevention activities, tracking trends in the environment, improving emissions inventories, and determining contributions from local, regional, and global sources of PBTs.
- Where a human or environmental threat is presented by discharges of pharmaceuticals/EDCs/PCPs in wastewater effluent, sewage sludge, or affected tributaries, develop appropriate tools (e.g. treatment requirements/effluent limit regulations, pre-discharge reduction programs) to reduce the discharges of these chemicals in effluent and sewage sludge.

Deleted: disposal capacity and recycling opportunities

Deleted: Provide assistance and incentives to accelerate phase-out of equipment that contains PCBs. For example, provide guidance on identifying PCB bearing equipment in utilities' inventories, secure lower insurance rates for PCB free facilities or provide grants for testing, replacement and disposal of PCB bearing equipment.

Deleted: <#>Great Lakes governments should provide stable funding and carry out a variety of collection programs, including collections of waste pesticides, mercury bearing devices, white goods containing mercury or PCBs, burn barrels and their ash and other household and small business hazardous waste.¶

B. Great Lakes and Beyond: Program Support

Although the Great Lakes have served as a model for innovative approaches to PTS reduction, programs that affect entire states or the nation are important to the protection and restoration of the Great Lakes. This is especially true when the role of atmospheric deposition of PTS chemicals to the Great Lakes is considered. Activities consistent with supporting these programs are included in Appendix 2.

Examples of these activities include:

- Support legislation that promotes the use of green chemistry and design for the environment principles in development of new chemicals for commerce.
- Fully fund and implement existing PBT regulatory programs and authorities while considering human health risk, including risk via consumption of fish (and other food) contaminated by PBTs.
- Implement mandatory phase-out of in-use PCB electrical equipment and hydraulic fluids consistent with the Stockholm Convention. The Great Lakes region contains more in-use PCB transformers than any other EPA Region.
- Reauthorize the Superfund tax.

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Deleted: <#>Government and manufacturers should work together to develop product stewardship and reverse distribution systems as well as nationwide labeling protocols for PTS-containing products. ¶

C. Personal Responsibility: The Need for Outreach and Education

It is increasingly obvious that the habits of individuals and households have a significant impact on the Great Lakes ecosystem. This is true for PTSs (for example, some household activities such as burning trash have a significant cumulative effect on dioxin loading) as well as nonpoint source pollution, habitat protection and sustainability. With better knowledge, residents of the Great Lakes basin can make better informed decisions as citizens and consumers. Activities consistent with supporting these programs are included in Appendix 3.

Examples of these activities include:

- Develop a consistent and easily accessible basin-wide message regarding the presence and possible health effects of PTSs and ways to reduce their output. Topics would include fish consumption advisories, mercury-bearing devices, energy conservation and burn barrels.
- Develop consistent fish consumption advice for the Great Lakes and issue advice to citizens and health care workers in multiple languages.
- Ensure that Great Lakes residents are aware of disposal options for waste pesticides and that local collection programs are aware of proper handling methods.

Comment [PFL1]: It would seem that we should also promote information on the disposal of other hazardous wastes for the general public.

D. Decision Making Ability/Knowledge

Just as residents of the Great Lakes must be provided with knowledge in order to make informed decisions, the lawmakers, program managers and stakeholders must have knowledge for decision making. This more technical information ranges from models of how PTSs move through the environment, to assessing the risk of various sources of

PTSs to methods for identifying PTS chemicals and other technical needs. Activities consistent with supporting these programs are included in Appendix 4.

Examples of these activities include:

- [Create a central body or clearinghouse for chemical screening information from various screening programs \(integrate into IRIS?\)](#)
- [Develop a emerging chemical “watch list” for Great Lakes monitoring programs using predictive tools such as the PBT Profiler and QSARs.](#)
- [Develop water quality and fish tissue criteria for human health consumption and water quality criteria for aquatic life and recreation for selected emerging chemicals of concern.](#)
- Create a Great Lakes HANES (Health and Nutrition Examination Study), including analysis of emerging chemicals of concern and foci on sensitive populations

Deleted: <#>Develop improved Quantitative Structure-Activity Relationships (QSARs) for fate, transport and effects of contaminants.¶

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Deleted: <#>Conduct additional modeling exercises and collect related monitoring data for PTS contaminants that drive fish consumption advisories for all lakes and address Areas of Concern. Formalize the regular input of monitoring data into models. ¶

E. Accountability: Monitoring and Indicators

Great Lakes programs must be able to assess progress. In some cases, this means sampling environmental indicators such as contaminant levels in fish, wildlife, humans, air, water and sediment. However, such monitoring may not assess progress of programs within the Great Lakes since atmospheric deposition is such an important pathway for PTSs in the Great Lakes (for example, mercury levels in fish are likely to reflect trends in atmospheric deposition rather than projects to reduce mercury emissions or use of mercury-bearing devices in the Great Lakes basin). Therefore, in addition to environmental indicators there is a need for source indicators. Activities consistent with supporting these programs are included in Appendix 5?.

Examples of these activities include:

- Measure progress in the environment to track trends in atmospheric deposition dominated PTSs. Relative contributions of atmospheric PTSs from local, regional and global sources as well as the forms of PTSs (i.e., speciation, profiles and congeners) should be examined.
- [Ensure funding for adequate monitoring coverage in space, time and chemicals-of-concern for each of the current State of the Great Lakes PBT indicators \(including PBTs in air, water, fish, and other biota\). \(Reference current GL funding bills in Congress?\)](#)
- [Collaborate with wastewater treatment plants in the Great Lakes basin to develop a surveillance program to assess the presence and significance of emerging contaminants in final effluent, sewage sludge, and affected tributaries.](#)

Deleted: <#>Measure local reduction progress by examining sources of PTSs (i.e., releases to air, water and land as well as product use). ¶

V. Connecting PTSs to Other Great Lakes Issues

[Contaminated sediments are an important source of PTS in the Great Lakes \(particularly PCBs\) so full funding of clean-ups of contaminated sediments is critical to not only Areas](#)

of Concern, but also to reduction of PBTs in the Great Lakes Basin Ecosystem as a whole.

Insert text on cross cutting (e.g., AOC), sustainability, human health and tribal issues.