



IJC Consultation Chemicals of Emerging Concern to the Great Lakes

GLBTS Substances and Sectors Workgroup
March 31, 2009

Background

- IJC Nearshore Initiative
 - Chemicals of Emerging Concern Workgroup
 - 15th Biennial Report
 - Charged to evaluate State of the Great Lakes with respect to CECs, and Policies that effect CECs and the Great Lakes

States of Great Lakes with Respect to Chemicals of Emerging Concern

- Literature Survey over past 10 years
 - Classes of Chemical Compounds
 - BFRs
 - Other FRs
 - PFCs
 - SCCPs
 - PPCPs
 - APEs
 - Siloxanes
 - CUPs

Policy Analysis

- CELA and UMass Lowell
 - Focus on Federal, Provincial and State programs,
 - Focus on front end chemical management rather than on control (e.g., permitting, enforcement, etc.)
 - Focus both on national and regional efforts.

Organization of the Workshop

Prior to the workshop, participants received two reports:

- "Review of Contaminants of Emerging Concern and Analysis of Environmental Exposures in the Great Lakes Basin" by Klecka, et. al.
- "The Challenge of Emerging Substances of Concern in the Great Lakes Basin: A Review of Chemicals Policies and Programs in Canada and the United States" by Wordsworth, et. al.

Environmental Data Questions

- What conclusions can be drawn from the analysis of environmental monitoring data for contaminants of emerging concern in the Great Lakes?
- What do the data tell us about potential exposures of humans or ecosystems?
- What gaps in our understanding need to be addressed?
- What criteria should be used to prioritize substances for additional monitoring?

Environmental Data Questions

- Is current monitoring of chemicals of emerging concern adequate, and if not, why not? What monitoring improvements are necessary to adequately assess and manage Chemicals of Emerging Concern (CECs)? Are there any chemicals of critical concern that have been missed?
- If additional monitoring is recommended, how can we make the best use of limited resources, assuming that the budget for monitoring will not increase?
- Can environmental prediction be used to anticipate and manage risk from CECs?
- Is there a major red flag out there?

Findings

- There has been an increasing shift in focus from industrial point sources to dispersed release of chemicals and substances in consumer products and pharmaceuticals that require new analyses and risk management approaches. Imported consumer products pose special challenges.

Findings

- There are a large number of chemicals in water and the Great Lakes environment that raise concern, but significant interpretation is required to understand the extent of threat these chemicals may pose.
- Monitoring data are valuable and an important resource for protecting the Great Lakes. Binational cooperation in monitoring is to be encouraged.

Findings

- The limitations of current monitoring data must be understood including inconsistencies between countries, lack of representativeness, and inability to characterize human exposure and effects.
- There are significant gaps in the availability of monitoring data, our understanding of it, and its adequacy for use in policy making.
- Models and other prediction methods have value but must be used appropriately.

Recommendations

- The Parties need to consider a fundamental shift from chemical by chemical monitoring as the way to identify problems and guide risk management to monitoring of biological endpoints and indicators that measure early indicators of exposure to a complex mixture that has potential for toxic or other effects.
- Additional criteria should be considered to prioritize substances for monitoring.

Policy Discussions

- Is there sufficient coordination or consistency between US and Canadian policy to protect the Great Lakes from chemicals of emerging concern?
- Are the national programs serving the Great Lakes?
- Is the analysis undertaken by CELA and the Lowell Center complete – what else needs to be taken into consideration?
- How can known discharges of chemicals of emerging concern be best managed as a precautionary approach? e.g. from waste water treatment plants
- What are the ways of improving existing chemicals management and control/treatment programs?

Policy Questions

- Does the existing policy framework allow new research to be incorporated, and if it doesn't, how could this feature be included?
- Is the current Agreement adequate, and what provisions need to be developed to address chemicals of emerging concern in a revised Agreement?
- Are there major gaps in the management of chemicals in the Great Lakes that have, or could result in harm to the environment or to health?
- Is there a major red flag out there?

Findings

- The analysis and report prepared by CELA and the Lowell Center addresses only a portion of relevant regulations and is focused on preventative measures that can be taken upstream of use and release.
- Coordination and consistency between US and Canadian policy is highly desirable, effective in many instances, but not complete.

Findings

- National programs are serving the Great Lakes, but it is not clear, at least at this point in time, whether they are sufficient to protect the Basin from CECs. Specific gaps were identified relative to regulatory management of environmental impacts of cosmetic and personal care products and pharmaceuticals in both countries.

Findings

- There are gaps in current chemical management programs including those related to measures of effect, nanotechnology, use and life-cycle information, regulatory tools for consumer and personal care products, and handling imports.
- While research is encouraged, there are significant impediments to incorporating new research into current chemical management programs.

Findings

- Wastewater Treatment Plants (WWTP) are key players in management of CECs. Upstream management approaches as well as control technologies need to be developed and tested.
- The Great Lakes Water Quality Agreement has been an effective and valuable policy tool, guiding actions on both sides of the border, and leading to improvements in national regulations and policies based on efforts taken in response to the Agreement.

Points of Discussion

- There were differing opinions on the extent of focus on WWTPs as the primary approach to control of CECs.
- The Parties need to consider a fundamental shift from chemical by chemical management as the way to identify problems and guide risk management to a more holistic assessment of environmental protection and risk management.
- There were differing opinions on the degree of focus on developing a list of CECs and where that list would reside.

Recommendations

- Areas where chemical management policies need improvement include animal waste management, biomarker and bioassay development, consumer education, and oversight of chemicals in imported products.
- The Great Lakes Water Quality Agreement needs to be updated, made visionary and flexible, and broadened to address the CECs.

Next Steps

- Receiving Comments to Mid-April
- Report to Commissioners by September 2009
- 15h Biennial Report Issued October 2009