

Great Lakes Great Region

The Council of Great Lakes Industries is a partner organization of the World Business Council for Sustainable Development and the Sediment Management Work Group.

newsletter



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MISSION

To promote the economic growth and vitality of the region in harmony with its human and natural resources (sustainable development).

PRESIDENT'S COLUMN

This newsletter takes a closer look at the Binational Toxics Strategy (BNTS) and how it is helping achieve sustainable development in our region. The three key components of sustainable development are environmental protection, economic growth and social equity, all viewed with an eye to future generations. CGLI has devoted significant resources toward the success of the BNTS and its goals of environmental improvement as one tool in achieving CGLI's sustainable development mission.

CGLI has a vision for the region - similar to other stakeholders - that includes lakes that are appreciated for their beauty, healthful to mankind and wildlife, and useful to the population. The vision includes the ability to eat the fish, swim in the lakes and drink the water.

As you will note from the accompanying article on the BNTS, there are impressive successes toward meeting the toxic part of the region's ecosystem challenge. However, toxics are only part of the challenge. The State of the Lakes Ecosystem Conference (SOLEC) is developing a set of comprehensive, basin-wide indicators that will enable the region to report on progress on a broad set of ecosystem challenges. The indicators are intended to help us set priorities and view progress toward meeting the goals of the Great Lakes Water Quality Agreement. These indicators can also be used to answer the simpler questions of our vision such as: Can we eat the fish, swim in the lakes and drink the water?

The governments of Canada and the United States have used these SOLEC developed indicators to issue the State of the Great Lakes 2001 Report. Their overall view of the integrity of the waters of the Great Lakes basin ecosystem according to this report is "mixed". Mixed is part of the ranking scale of indicators ranging from "good" to "mixed improving", "mixed", "mixed deteriorating" and "poor". Twenty five percent of the 33 indicators were "good" or "improving", 25% were "poor" or "deteriorating" and the remaining 50% were "mixed".

At first look the overall "mixed" rating can be very disappointing because of all the efforts that have been focused on environmental improvement in recent years. But a closer look reveals that true progress has been and continues to be made.

The report found that surface waters of the Great Lakes are still among the best sources of drinking water in the world. We can drink the water.

Progress is evident both in cleaning up contaminants and in rehabilitating some fish and wildlife species according to the SOLEC report. Walleye

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Progress Made Through Binational Toxics Strategy



Feature Story

CGLI has chosen to invest considerable time on the Great Lakes Binational Toxics Strategy for the Virtual Elimination of Persistent Toxics (BNTS) because the members believe the program to be an important aspect of achieving sustainable development in the Great Lakes region. We are pleased that much progress has been made.

In the Great Lakes region, the overriding binational instrument that guides public policy regarding toxic pollutants is the Great Lakes Water Quality Agreement (WQA). One of the goals of the Agreement is the virtual elimination of the discharge of persistent, bioaccumulating toxic substances (PBTs). Thus the agreement established one of the toughest standards for PBTs on record. The governments have determined that traditional regulatory approaches can not be solely relied upon to meet these standards because regulations would require intensive resources that they are not able to provide.

The BNTS, however, has proven to be an effective supplement to existing regulation in achieving the WQA objectives. The main features of the program are:

- it is a multi-stakeholder collaborative process,
- all or most of the necessary parties have consistently been "at the table,"
- it is voluntary,
- binational and
- it sets specific reduction targets and timetables for 12 named substances called the Level I substances.

It also includes a longer list of Level II substances for which pollution prevention activities are sought to avoid the unintended presence of these 18 substances in the ecosystem.

The Progress

The specific challenges and the progress made toward meeting the challenges for the Level I substances are detailed in Table 1 as reported by Environment Canada and the U.S. Environmental Protection Agency. This demonstrable progress is significant. But progress within the BNTS is more than just meeting pollution reduction targets. Pursuit of the BNTS challenge goals has brought with it important public policy process improvements as well.

The multi-stakeholder process has engaged the necessary participants. Representatives from government, industry, and Environmental Non-Government Organizations (ENGOS) from both the U.S. and Canada have consistently participated. Members of these diverse groups have come together on a regular basis for straight forward and open discussion of the progress made, the issues remaining and the path forward to meet the goals.

This collaborative process has established important relationships that may lead beyond BNTS challenge goals towards the more difficult aspects of the WQA goals.

The relationships that have evolved between industry, governments and ENGOS within the

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basin have enabled all the groups to better understand the difficulties in meeting WQA goals, the need for trade-offs and prioritization efforts, and hopefully a better understanding of what those trade-offs can and must be.

Working to meet the BNTS challenge goals has required the assembly of accurate source and release data for each substance. The process used has enabled us to find ways to review, collect, and correct important source and release data, some of which has not been available or recorded accurately in the past. In addition, important data gaps have been identified.

Better processes are also being used to evaluate the significance of the release data in order to prioritize potential source categories. Using the more accurate data, and clearly expressed trends, the BNTS has provided a much clearer picture of both the release and present levels of toxic substances in the Great Lakes region. That combined picture shows that substantial progress has been made toward the virtual elimination of the release of PBTs.

For industry, an attractive aspect of the BNTS process has been the voluntary approach. This gives industries the ability to determine the best way for them to contribute towards reaching the goals using the most efficient and economically feasible methods.

Industry participation

CGLI has been working toward maximum industry participation, not only with our members, but also with all affected sectors of industry. CGLI has conducted extensive awareness campaigns, recruited workgroup participants, and gathered data for building release inventories. We initially developed and helped implement a decision tree process to determine sector significance and researched incentives that attract industry to BNTS participation. CGLI has worked with industries to produce specific commitments. To date, more than 150 industry representatives have regularly participated directly in the BNTS process.

Level I substances

The Table 1 progress chart indicates that with some substances more work can be done

to secure specific industry commitments. CGLI will continue to work to engage smaller companies and specific industry sectors that have not yet participated in BNTS activities. Soliciting participation from key industry suppliers can also increase involvement.

Importantly, the ecosystem has demonstrated that there has been great improvement in the PBT picture within the Great Lakes region. Levels of toxic substances are declining in sediments, gull eggs, predator fish and lake trout. As current challenge targets are gradually being met, we have found that other difficult source issues such as air deposition and contribution from sediments remain. Of course these are not unique to the Great Lakes, but progress can and has been made within the region and this regional effort can be used to provide information and coordinated with national and global efforts to address these same concerns.

Level II substances

CGLI has begun a review of pollution prevention efforts currently underway by companies and industries in the Great Lakes region and will examine how those efforts are providing progress towards the BNTS goals established for the Level II substances.

Moving forward on BNTS related issues

As we move forward with the governments into the next phase of the BNTS effort, there are some issues that need to be addressed.

- A process needs to be put in place to reach consensus on what the next set of BNTS objectives and challenges should be.
- We need to come to a common understanding on how to view remaining releases that may occur after the initial BNTS goals are attained as well as how to account for naturally occurring levels.
- The few remaining releases must be viewed in relation to historic release levels. Small remaining releases may not significantly impact the ecosystem.
- Proposed additional reduction efforts must be viewed in terms of ecosystem improvement potential, in relation to costs and in relation to risks. In other words, will the time and money involved actually

provide commensurate improvement and reduced risk?

Also, we need to build on the BNTS collaboration successes to achieve success elsewhere. Other issues that could benefit from this type of effort should be identified.

Communication

While a great deal of progress has been made in the region's ecosystem, surprisingly few people, except those directly working on these issues, appear to be aware of this progress. The citizens of the Great Lakes Basin are largely unaware of the uniqueness of the BNTS effort, the large numbers of individuals and organizations involved, and the success that has been achieved. Efforts are being made by those involved, including CGLI via this newsletter, to communicate this progress.

In addition, as the BNTS effort begins to shift the action agenda towards environmental impacts of individual or family activities such as backyard trash burning and residential wood burning, citizens within the Great Lakes basin will need to understand their responsibilities for progress to continue.

The future

As contaminant levels continue to decline, through the efforts of programs like the BNTS, other environmental issues will require increasing levels of attention. These include: invasive species impact reduction, habitat protection, ecosystem health (species diversity), air deposition, land use, water use, sediment issues and monitoring data acquisition and presentation to ensure we are focused on the right priorities. Environmental protection and sustainable development remain goals for the region. Well-coordinated efforts like the BNTS will be required during the current decade to address these broader, ecosystem-based issues and achieve these goals.

Great Lakes/ Great Region is produced for the Council of Great Lakes Industries. Comments and suggestions may be directed to Evelyn Strader, director of public relations for CGLI, at 248-340-7062 or fax 734-663-2424. CGLI website is cgli.org.

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populations are substantially improved. Contaminants in colonial nesting birds are also considered "good". Contaminants affecting reproduction of bald eagles are also assessed as "mixed, improving" and chemical contaminants in edible fish are also "mixed, improving".

The report states that "progress has been made both in cleaning up contaminants and in rehabilitating some fish and wildlife species", reflecting the concentrated efforts of all of us in the region at environmental management and pollution prevention.

The more challenging conclusion that the report identifies are the new, emerging problems that are impacting our region's sustainability. These include invasive species that threaten Great Lake biological communities; atmospheric deposition of contaminants, much of which comes from distant sources outside the basin; urban sprawl that threatens high quality natural areas, rare species, farmland and open space; and development drainage and

pollution; as well as shrinking coastal wetlands. Another issue to that list, the emerging problem of water use, is also outlined in this publication.

The State of the Lakes report clearly points out that ecosystem sustainability problems can not be solved by simply a focus on toxics. Great Lakes stakeholders, including industry, must look at how we can address the broader set of emerging issues.

CGLI believes a key to addressing these problems is how we work together. The existing numerous programs in which industry is engaged (SOLEC, BNTS, IJC, LaMPS, RAPS, ZIPS, to mention a few) address pieces of these issues.

The sustainability goal for the region will require new and well-coordinated efforts to address these emerging issues.

George H. Kuper



Simple Facts

Understanding the progress attained through the BNTS and other toxics reduction efforts can be confusing. Here are a few simple facts that illustrate the successes achieved:

Mercury

- The Chlor-Alkali industry has reduced mercury use by 44 percent.
- More than 160 hospital facilities in the Great Lakes states have pledged to become mercury-free.
- Since the late 1980s mercury has not been used in the manufacture of most household batteries. The industry once used more than 1000 tons of mercury per year in battery manufacturing. Today they use only two tons per year. Only button cells, for which no alternative exists, are currently manufactured containing from only three to 11 milligrams of mercury each.
- Old mercury batteries continue to be thrown away and enter the solid waste stream. But the number is dropping rapidly. The average mercury content of batteries being disposed of currently is 220 to 300 ppm (parts per million) as compared with 10,000 ppm when all batteries contained mercury.

- Mercury use in the manufacture of electric lamp bulbs has declined from roughly 27 tons in 1990 to 11 tons in 2000. National lamp recycling levels reached approximately 24 percent in 2000.

Dioxin

- The U.S. is expected to achieve a 92% release reduction by 2004 and Canada has achieved a 76 percent reduction.
- The single largest source of dioxin, 50 percent of new concentrations in the ecosystem is the result of backyard trash burning barrels and other backyard burning activities.
- Residential wood burning is the next largest source.
- Dioxin releases from large municipal incinerators have been reduced by 99 percent through application of new Maximum Available Control Technology (MACT) emission controls.

PCBs

- In Canada, as of April 2001 approximately 80 per cent of high level PCB wastes have been destroyed. The U.S. expects to meet the 90 percent PCB reduction goal by 2006.

HCB/B(a)P

- Significant reductions in hexachlorobenzene (HCB) and benzo(a)pyrene B(a)P have been made in the U.S. and Canada has also recorded significant progress toward their challenge goals. HCB contaminant levels in fish, wildlife and bird eggs have declined substantially, indicating that few sources remain.

OCS

- Observed decreases in environmental concentrations suggest that this substance is no longer released.

Pesticides

- The named pesticides are banned in both countries and no longer manufactured in the U.S. (They were not manufactured in Canada.)

Alkyl-Lead

- The U.S. and Canada have confirmed no-use of alkyl-lead in on-road automotive gasoline. The only remaining use is in some auto racing fuels and aviation gasoline where suitable alternatives are not yet available.

Water Use - a New Great Lakes Focus

New interest in water diversion in the Great Lakes region was triggered three years ago by an Ontario company receiving a permit to transport a tanker full of Great Lakes water to Asia. The permit was withdrawn; the water never left the lakes but the issue of water withdrawals from the Great Lakes caused the Great Lakes Governors and Premiers to respond to the public's concern for our great fresh water resource.

Annex 2001

With an eye to increasing world-wide water shortages and the growing demand for the region's water, the Great Lakes Governors decided to review their authorities and mechanisms for ensuring protection of the Great Lakes. In June 2001 the Governors and the Premiers of Ontario and Quebec signed an Annex 2001 to the 1985 Great Lakes Charter designed to establish the guidelines for Great Lakes water use at the regional level. This Annex sets a framework for future policies with a goal of a binding document to be signed by the Governors within three years. The intent of the Annex was to ensure that control of the water resource remained at the state and provincial level and that criteria for the management of the sale and other diversions of bulk amounts of water outside the basin are in compliance with international trade rules.

Industry, via CGLI, supports the efforts of the Governors and Premier to maintain control of the

region's water. But CGLI believes application of some of the policy principles in the current version of the Annex 2001 could present problems for the future economic vitality and the sustainability of the region. Specifically, the annex is currently open-ended and broad in its adoption of environmental and conservation standards that could result in water use limits and permitting delays, both with the potential to drive-up costs and restrict availability for all water users. The Annex also calls for all newly proposed or increased water withdrawal activities to result in undefined improvement to the ecosystem not just the lack of adverse impact. The terms "improvement" and "adverse impact" have not been defined to date.

This type of vague policy could directly impact manufacturers, energy generators, municipalities, developers and new economic development projects with negative spin-off felt for the entire regional economy. The new standards are to apply to, not only surface water from any Great Lake or tributary, but groundwater in the region as well.

Industry attention

Because of the potential impact on industry, CGLI has been encouraging U.S. and Canadian water users to become involved in the debates that will lead to the design of an implementation methodology for the Annex 2001 principles.

The new focus on water use requires business in the region to take a more proactive role. The

Governors' and Premiers' efforts to protect the region's water from diversion have focused heavily on conservation and ecosystem improvements. It is important that each water user concentrate individual efforts to conserve water as well as improve the quality of water returned to the ecosystem. The substance of industry commitment to sustainable development requires a successful conservation of all natural resources, including fresh water.



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Binational Toxics Strategy Challenges and Status (Table 1)

Pesticides

US challenge:

Confirm by 1998 that there is no longer use or release, from sources entering the Great Lakes.

Canadian challenge:

Report by 1997 that there is no longer use, generation or release from Ontario sources, that enter the Great Lakes.

Status:

Met for the named pesticides: aldrin, chlordane, DDT and metabolites, dieldrin, mirex and toxaphene. All uses have been cancelled and production facilities in the U.S. (there were none in Canada) have been closed. Governments are still concerned about unused stocks and contaminated sites.

Alkyl lead

US challenge:

Confirm by 1998 that there is no longer use of alkyl-lead in automotive gasoline. Support and encourage stakeholder efforts to reduce alkyl-lead releases from other sources.

Canadian challenge:

Seek by 2000, a 90% reduction in use, generation, or release of alkyl-lead consistent with the 1994 COA.

Status:

Specific challenges have been met in both countries. Negotiations are continuing to find substitute for leaded racing gasoline and a safe alternative to alkyl-lead aviation fuel.

Octachlorostyrene (OCS)

US challenge:

By 1998 that there is no longer use or release from sources entering the Great Lakes.

Canadian challenge:

Report by 1997 that there is no longer use, generation or release from Ontario sources, that enter the Great Lakes.

Status:

Massive decline in environmental levels of OCS has been documented and indicates virtual elimination of releases. In Canada potential sources have been identified that still require testing to confirm that releases do not exist.

Dioxin

US challenge:

Seek by 2006 a 75% reduction in total releases from sources resulting from human activity. (The release challenge applies to nationwide aggregate of air releases and water releases within the Great Lakes Basin.)

Canadian challenge:

Seek by 2000 a 90% reduction (focusing on the 2,3,7,8 substituted congeners) from sources resulting from human activity in the Great Lakes Basin, consistent with the 1994 COA.

Status:

A 77% reduction was achieved by 1995 and a 92% reduction is expected by 2004, exceeding the 2006 challenge. In Canada, the stretch 2000 challenge goal was met for water releases but releases to air and soil have not yet been met. Progress is being made and they continue to seek reductions from anthropogenic sources to meet the target. Efforts are concentrating on public information campaigns to eliminate backyard burn barrels, the highest remaining release source. Additional information may be provided by the Toxics Release Inventory (TRI) in the U.S. and the National Pollutant Release Inventory (NPRI) in Canada.

Mercury

US challenge:

Seek by year 2006 a 50% reduction in the deliberate use of mercury and a 50% reduction in the release of mercury from sources resulting from human activity. (The release challenge applies to nationwide aggregate of air releases and water releases.)

Canadian challenge:

Seek by 2000 a 90% reduction in the release of mercury, or where warranted the use of mercury, from polluting sources resulting from human activity in the Great Lakes Basin.

Status:

The U. S. is close to currently meeting the release challenge of 50% by 2006 in 2001. The use challenge is very difficult to verify. Work continues on the pursuit of release and use reductions in the U.S. and Canada. The Canadian challenge of 90% reduction in releases was not met by 2000, but reduction efforts are continuing and have reached 78%. There is a focus on information sharing about cost-efficient reduction opportunities.

PCBs

US challenge:

Seek by 2006 a 90% reduction, nationally of high-level PCBs (>500ppm) used in electrical equipment.

Canadian challenge:

Seek by 2000, a 90% reduction of high level PCBs (>1 %) that were once or currently are, in service. Accelerate destruction of stored high-level PCB wastes with potential to enter the Great Lakes, consistent with the 1994 COA.

Status:

U.S. challenge is expected to be met by 2006. Efforts are focusing on electrical equipment removal commitments. Canada was unable to meet the 90% challenge but 80% of high level wastes were destroyed. Progress was stalled by the lack of disposal facilities in Canada. Removal commitments and destruction quantities will continue to be tracked.

Benzo(a)Pyrene [B(a)P] and hexachlorobenzene [HCB]

U.S. challenge:

Seek by 2006 reductions in releases that are within, or have the potential to enter, the Great Lakes Basin.

Canadian challenge:

Seek by 2000 a 90% reduction from sources resulting from human activity in the Great Lakes basin, consistent with the 1994 COA.

Status:

In the U.S. the challenge has been met by taking steps toward reductions of HCB and B(a)P releases to the basin. The U.S. is seeking to confirm that petroleum refining is not a significant B(a)P source. MACT standards are being implemented. The HCB target has also been met but pesticide release concerns are still being addressed and inventory reports are being finalized. In Canada, B(a)P releases have been reduced by 30-40% compared to the goal of 90% by 2000. New NPRI reporting requirements are in place to help continue to track reduction progress. Canada is close to meeting its 90% goal for HCB recording 60-90% reductions. Strategic Option Reports (SOPs) are being implemented for steel mills and wood preservers and concerns regarding releases through pesticide use are being pursued.

(From U.S. EPA/Environment Canada Binational Toxic Strategy Reports)

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