



From the Great Lakes Water Quality Agreement
to the Binational Toxics Strategy:
An Assessment of NGO Perspectives on
Chemicals Policies in the Great Lakes

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EXECUTIVE SUMMARY

Toxic chemicals, first recognized as a problem in the Great Lakes four decades ago, continue to threaten human health and the broader ecosystem in the Great Lakes region. To address these threats, programs at local, state/provincial, national and binational levels have been adopted in the U.S. and Canada. Much of the work addressing chemicals policy has occurred under the Great Lakes Water Quality Agreement (GLWQA), first signed in 1972 and revised twice since then, and incorporating aggressive goals for toxic chemicals. One means of coordinating efforts towards these goals has been the Canada–U.S. Binational Toxics Strategy (BTS), signed in 1997. An important component in the development of chemicals policies in the region has been public involvement, including through the work of environmental nongovernmental organizations (ENGOS). Many organizations were active in earlier chemicals policy work, including International Joint Commission meetings, negotiations around the 1987 GLWQA revisions, and involvement in the BTS in its first several years.

More recently, there has been increasing attention to broader Great Lakes threats, as reflected in both research and policy/program developments (such as the Great Lakes Regional Collaboration Strategy and the Great Lakes Restoration Initiative on the U.S. side). Given these developments and other factors (such as the economic downturn and organizational changes), it has not been clear to what extent ENGO attention to chemicals policy activities has changed, and whether capacity and interest in individual organizations remain sufficient to engage in these broad chemicals policy discussions and activities.

In order to assess ENGO capacity, trends, and activities on chemicals policy issues, an online survey was developed and administered to groups in the region, with a focus on groups likely to have had some previous chemicals policy involvement. The principal objectives were to assess the extent and type of chemicals policy work currently undertaken by ENGOS, any changes in the past decade, involvement in and assessment of the BTS (and recommendations for a BTS-type strategy going forward), and assessment of characteristics believed to be important in a revised GLWQA. The survey was made available to 180 groups in Canada and the U.S., ranging from smaller watershed groups to national organizations, and over 40% of the groups (73) responded. Among the findings:

- 16% of groups indicated that chemicals policy work constituted at least a significant part (40% or more) of their time, with another 15% indicating a moderate part (20–40%), with the plurality (45%) indicating a smaller part (5–20%).
- Concerning voluntary/other programs, 44 percent of respondents indicated at least moderate involvement in state- or province-led programs. In addition, a majority of respondents indicated at least minor involvement in a number of programs, including Areas of Concern, national and other regional or binational efforts, environmental preferable purchasing, extended producer responsibility, and general consumer products work.
- Chemicals of greater focus included mercury and chemicals of emerging concern (such as brominated flame retardants), with 36% of respondents in both cases indicating a major emphasis on these chemicals/classes.
- Concerning changes in chemicals policy work over the past decade, one-quarter of respondents indicated less work, one-quarter more work, and most of the remainder unchanged. For groups reporting less work, reconsideration following a planning process and staff changes were rated higher as reasons than belief that adequate progress had been made on chemicals policy, or that opportunities did not still exist.
- 21% of respondents indicated some familiarity and previous involvement in the Binational Toxics Strategy, and some positive aspects of the process were identified as binational/international coordination, the collaborative nature of the process, the development of targets and timelines, and achievement of demonstrable progress in some cases.
- Concerning characteristics in a BTS-type strategy that would encourage involvement of former participants, there was unanimity on the importance of clear and aggressive goals, objectives, and time frame, while the majority of respondents indicated it was at least very important that there be clearly defined responsibilities of stakeholders and opportunities to directly influence the type and scope of activities in the process. Regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness were identified uniformly as very important at a minimum.
- Among 30 groups responding to questions on the Great Lakes Water Quality Agreement, involvement appears to have increased during the current renegotiation process. In addition, there was overwhelming support (over 70% indicating very important at a minimum) that a revised Agreement should maintain its current central purpose of restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes, have an emphasis on toxic chemicals

and water quality, and contain zero discharge and virtual elimination goals for toxic chemicals. Respondents also indicated strong support for an Agreement structured to be able to address emerging issues, as well as a clear governance and accountability framework and ample opportunities for public engagement.

In synthesizing results from this assessment, some overarching recommendations concerning advancing Great Lakes chemicals policy include the following:

- Characteristics that would encourage increased engagement by ENGOs in a Binational Toxics Strategy-type effort in the future include clear goals, objectives and timeframe in the process, a foundation in a Great Lakes Water Quality Agreement with aggressive goals and objectives, and regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness.
- Characteristics that should be present in a revised Great Lakes Water Quality Agreement include a central purpose of restoring and maintaining the chemical, physical, and biological integrity of the lakes, zero discharge and virtual elimination toxic chemicals goals, an ability to address emerging issues, and a clear governance and accountability framework as well as ample opportunities for public engagement.
- Regarding chemicals policy more broadly, policymakers should consider development of a more precautionary chemicals policy approach, strengthening chemicals legislation (in particular on the U.S. side), increased bans/phase-outs, increased promotion and support of green chemistry, and further work addressing chemicals in products.



Photo by Colleen Brown.

INTRODUCTION

Decades after attention was first directed at them, toxic chemicals continue to be an issue concerning human health and the ecosystem in the Great Lakes. Fish consumption advisories exist for chemicals of longstanding concern, including mercury and polychlorinated biphenyls (PCBs). All of the eight Great Lakes states have some type of statewide advisory in place (in most cases for mercury), and all of the Great Lakes states also have numerous individual advisories for PCBs and other organic chemicals.¹ The province of Ontario also has numerous individual advisories for mercury, PCBs, and other chemicals, as well as general advice on restricting consumption of certain fish for women of childbearing age and children under 15.²

In spite of progress on a number of fronts, threats from mercury, PCBs and other persistent chemicals in the region remain. In addition to threats from these chemicals of longstanding concern, there is increasing awareness of the threats from chemicals of emerging concern (CECs). Such chemicals include brominated flame retardants (such as polybrominated diphenyl ethers), perfluorinated compounds, pharmaceuticals and personal care products, and other chemicals that have been increasingly observed in the Great Lakes environment and elsewhere over the past two decades.³ Although many questions remain about the ecological and human health implications of these chemicals, it is clear that a number of policy efforts are needed to address threats from these types of chemicals.⁴

While a number of policies are in place in both the U.S. and Canada to address chemical threats nationally, much of the management attention concerning chemicals in the Great Lakes region over the past three decades has operated under the umbrella of the Great Lakes Water Quality Agreement (GLWQA, or Agreement). The Agreement, first signed by the countries in 1972, revised in 1978, and amended by protocol in 1987, has as its central purpose “to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem.”⁵ Furthermore, Article II of the Agreement states that it is the purpose of the Parties (the U.S. and Canadian governments) that “the discharge of toxic substances in toxic amounts be prohibited and the

discharge of any or all toxic substances be virtually eliminated.”⁶ Implementation of programs to meet the goals of the GLWQA has occurred in a number of ways, including through Remedial Action Plans for Areas of Concern (AOCs), Lakewide Management Plans (LaMPs) to address broader, lakewide issues, and through other prevention, control, cleanup, research, monitoring, and other programs.

Following on earlier recommendations from the International Joint Commission (IJC), including to promote binational programs to meet the virtual elimination goals of the GLWQA, the Canadian and U.S. governments signed in 1997 the Canada-United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes (or Great Lakes Binational Toxics Strategy (BTS, or Strategy)), with a purpose defined as:

“...to set forth a collaborative process by which Environment Canada (EC) and the United States Environmental Protection Agency (USEPA), in consultation with other federal departments and agencies, Great Lakes states, the Province of Ontario, Tribes, and First Nations, will work in cooperation with their public and private partners toward the goal of virtual elimination of persistent toxic substances resulting from human activity, particularly those which bioaccumulate, from the Great Lakes Basin, so as to protect and ensure the health and integrity of the Great Lakes ecosystem.”⁷

The BTS has promoted coordinated programs across chemical reduction activities as well as other activities, including information sharing, research, and monitoring (see box to right). While the first decade of BTS activities focused largely around a core group of substances (including mercury, PCBs, dioxins and several legacy pesticides), in 2008, the Integration Workgroup made the decision to shift focus to substances of emerging concern, work which would be facilitated through a newly developed Substance/ Sector Group,⁸ and much of the work since that time has involved activities and discussions around CECs.

The increasing attention to chemicals of emerging concern through fora such as the BTS more recently has occurred during a period of flux concerning both chemicals policy and broader recognition of ongoing and emerging threats in the Great Lakes. In 2005 in the U.S., following development of the Interagency Task Force, a stakeholder process led to development of the Great Lakes Regional Collaboration Strategy, with restoration and protection recommendations across eight issues areas, including AOCs and toxic chemicals.¹² Also in 2005, Great Lakes researchers produced a white paper highlighting the multiple stresses affecting the lakes, with toxic chemicals one component among several major threats (which included invasive species, nutrient loadings and eutrophication, and hydrologic alterations).¹³

Increasing interest in other stresses was also reflected in the 2006–07 Canadian/U.S. public review of the GLWQA. Following extensive stakeholder involvement in a number of review working groups—which included addressing aquatic invasive species and other issues beyond toxic chemicals—a final Agreement Review Report was approved by the Canada–U.S. Binational Executive Committee in September 2007.¹⁴ In June 2009, the U.S. and Canadian governments announced their decision to renegotiate the GLWQA, and negotiations began in January 2010, with several listening sessions and public comment opportunities having taken place to date.¹⁵

Throughout many of these developments and activities, there has been active public interest and involvement, including through participation of environmental nongovernmental organizations (ENGOS) and thousands of individuals. ENGOS became active on Great Lakes policy issues in particular in the 1970s, with an extensive level of activity and organizing binationally in the 1980s, including around the 1987 renegotiation of the GLWQA, and in the 1990s, including at IJC biennial meetings.¹⁶ ENGOS were also active in the development of federal legislation and other initiatives, including the Great Lakes Initiative (on

The Canada-U.S. Binational Toxics Strategy

The Canada-U.S. Binational Toxics Strategy (BTS), signed in 1997 and chaired by Environment Canada and U.S. EPA, was developed as a collaborative, stakeholder process to advance implementation of programs to meet the virtual elimination goal for toxic chemicals in the Great Lakes Water Quality Agreement.

The Strategy notes that “Virtual elimination will be sought within the most expedient time frame through the most appropriate, common sense, practical and cost-effective blend of voluntary, regulatory or incentive-based actions. All feasible options will be considered, including pollution prevention, phase-outs and bans.”⁹ The Strategy outlined a four-step process to work towards virtual elimination:

- Information gathering, involving identifying, to the extent feasible, the range of point and nonpoint sources (and by economic sector) contributing to the presence of specific substances in the Great Lakes basin;
- Assessment of current laws, regulations and programs relevant to the presence of substances in the basin, including assessing gaps;
- Identification of cost-effective options to achieve further reductions in substances of concern, including through pollution prevention and other approaches;
- Implement actions to work toward goal of virtual elimination.¹⁰

The BTS was originally structured around substance-specific workgroups (addressing what were identified as 12 “Level 1” substances such as mercury, PCBs, and dioxins and furans) as well as an Integration Workgroup to consider broader topics (such as cross-cutting issues and additional chemicals), with specific reduction goals for Level 1 chemicals (or chemical classes) identified in the Strategy. While the Strategy noted that a number of approaches would be considered, the emphasis of the BTS in practice has been on pollution prevention activities, and in addition to supporting such activities (with various public and private partners) as well as various research and monitoring efforts, the lead agencies have produced regular reports summarizing activities and progress towards Strategy goals.¹¹

water quality standards (1995)) and the Great Lakes Legacy Act (addressing contaminated sediments (2002)) in the U.S., and the Canadian Environmental Protection Act (primary federal statute addressing toxic chemicals (1999)).¹⁷

ENGOS have also been involved in other chemicals policy assessment/review efforts over the last decade, involving both the BTS and the GLWQA. In an early

assessment of the BTS done for the IJC in 2000, NGO representatives were part of a broader group of 25 representatives interviewed on the Strategy. Issues that arose in the review (not necessarily exclusive to NGO participants) included questions on the purpose of the Strategy itself (e.g., information sharing vs. more active promotion of chemical reduction and elimination programs), its voluntary nature, its ability to help focus and coordinate efforts, its ability to drive inventory and research initiatives, and challenges due to limited resources.¹⁸

Concerning the GLWQA, the IJC in 2005 solicited public input on the GLWQA (in preparation for the 2006-07 government review process) through workshops and Web-based exchanges, producing a synthesis of the results, with a number of ENGOs providing input.¹⁹ Among other findings, including indication of strong public support for the GLWQA and efforts to implement it, the summary noted that many believed the Agreement should be broadened to address issues such as climate change, water quantity, and aquatic invasive species.²⁰

While ENGO involvement in chemicals policy issues in the Great Lakes has been extensive over the past three decades, questions remain about ongoing organizational

capacity and interest in these issues, due to potential factors that include fatigue with stakeholder efforts such as the BTS (in comparison to other chemicals policy efforts), funding limitations, and shift in focus to other environmental priorities.

To better understand organizational capacity and interest in chemicals policy efforts, including potential increased involvement in stakeholder efforts such as the BTS, NWF developed and administered an online survey of Great Lakes ENGOs. The principle objectives of the survey were to assess the extent and type of chemicals policy work currently undertaken by ENGOs, any changes in the past decade, involvement in and assessment of the BTS (and recommendations for a BTS-type strategy going forward), and assessment of characteristics believed to be important in a revised GLWQA. Because of the focus in this project on chemicals policy, the survey was particularly targeted at groups that might be more active in chemicals policy efforts, and was not intended to be a broad, representative survey of all ENGOs in the Great Lakes region. Details on the methodology are provided in Appendix A.



IJC Biennial Meeting. Photo courtesy of the International Joint Commission.



ENGO CHEMICALS POLICY ACTIVITIES

Organizational Overview

A number of environmental NGOs in the Great Lakes region remain active on policy issues in a number of ways, based on the survey. Response rates were reasonable, with an overall response rate of 40.6% (73 individuals/groups out of 180), with 35% of Canadian groups and 45% of U.S. groups responding. There was good representation across different types of groups. As indicated in **Figure 1**, there was no clear dominance of a particular group type, with roughly equal representation by local or watershed/subwatershed organizations, state- or province-wide

organizations, regional organizations, and national organizations. (Note that in this and other figures, percentages may not add to 100% due to rounding.) Other types of organizations or offices (e.g., basin or sub-basin, state or provincial offices of national organizations, and regional offices of national organizations) had slightly lower but still appreciable (7–11%) representation.²¹ There was also reasonable geographic diversity in organizations responding—not surprisingly, the plurality of organizations were based in Ontario (given that the focus of this assessment was on work in the Great Lakes proper), but there were significant numbers of offices based in both Michigan and Illinois (16 and 15%, respectively), a smaller number in Ohio and Minnesota (8%), and fewer in the other states. For some organizations with broader reach (e.g., national organizations, regional offices of national organizations), the organization location is generally less relevant concerning the geographic scope of issues in which they engage.

Staffing levels of organizations responding also varied, ranging from about 10% with no full-time staff, to 7% indicating over 30 staff in their organization (see **Figure 2**). The plurality of organizations had small staffs (i.e., 29% with 2–4 staff persons), and the majority of organizations (56%) had four or fewer staff persons. A substantial portion of responding organizations (29%) had slightly larger offices (5–19 staff persons). Of 72 organizations responding, 35 (or 48.6%) were members of the Healing Our Waters (HOW) Great Lakes Coalition, which as noted previously, is made up largely of U.S.-based groups.

FIGURE 1

Breakdown of survey respondents by organization type (N = 73 total respondents).

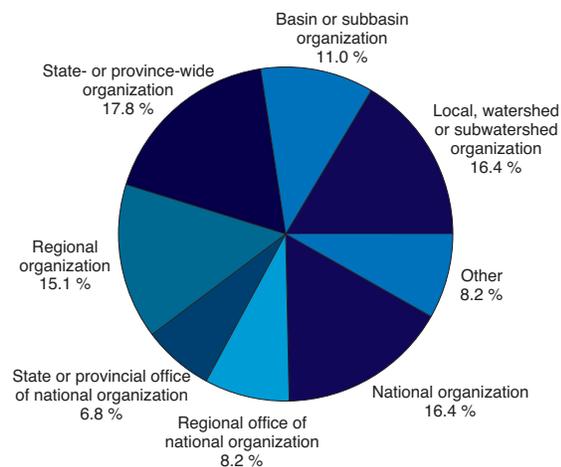
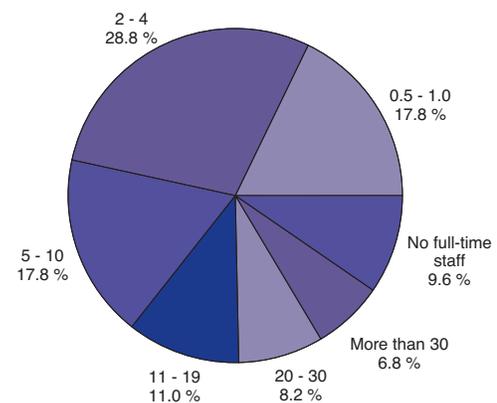


FIGURE 2

Breakdown of number of staff members in organizations/offices of survey respondents (N=73)



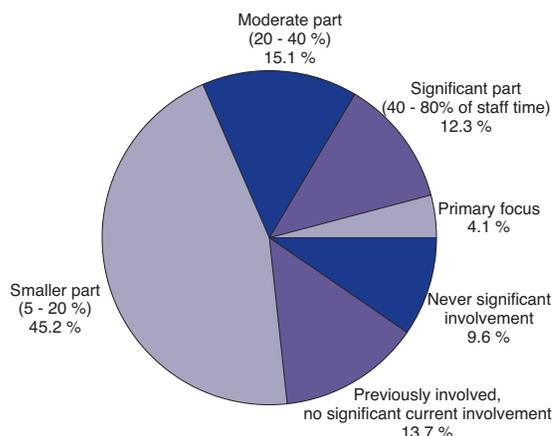
General Organizational Chemicals Policy Activities

Respondents indicated a range of extent of current work addressing toxic chemicals (Figure 3). Four percent of groups indicated it was their primary focus, with 12% indicating it constituted a significant part (40–80%) of staff time, and 15% indicating a moderate part (20–40%). A large plurality of respondents (45%) indicated that toxic chemicals work represented a small portion (5–20%) of their work, while 14% indicated they were previously (but not currently) involved. Ten percent of respondents indicated they had never had any significant involvement in toxic chemicals work. (These respondents then jumped to the end of the survey and a question on factors that would encourage their involvement in chemicals policy work—see further discussion below). While it is assumed that these results likely represent a higher limit on extent of toxic chemicals work (given that groups with greater involvement would presumably have a greater interest in responding to a chemicals policy survey), no assessment of perspectives of non-respondents was undertaken to assess this possibility.

Organizations reported a range of activities involving regulatory issues in which they had engaged in the past decade (Figure 4). Respondents reported the greatest involvement in state or provincial policies (such as rule-making comments or advisory groups), with 62% of

FIGURE 3

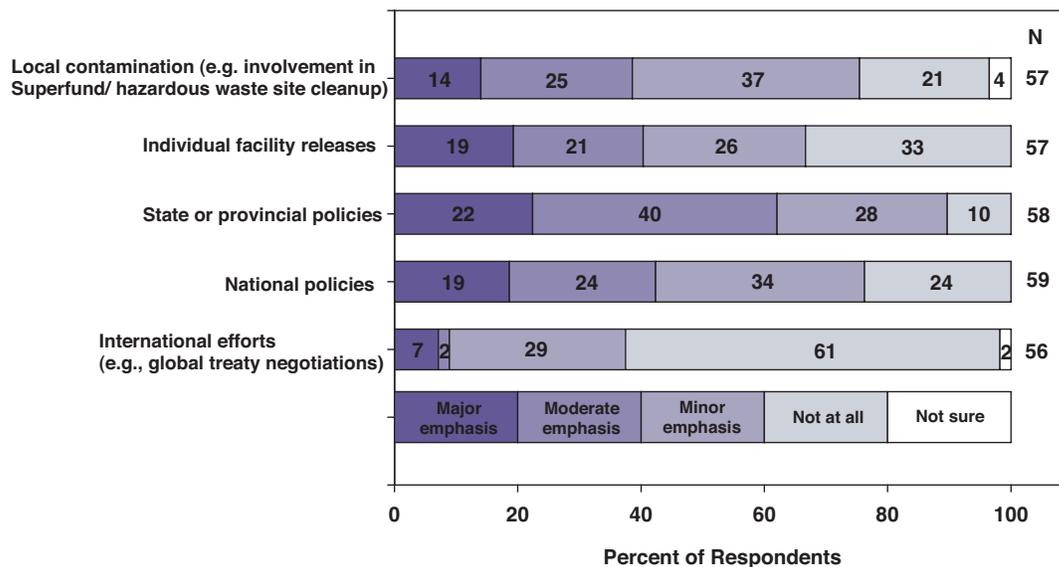
Relative emphasis of organization/office's work on chemicals policy issues in past decade (N=73).



respondents indicating at least a moderate and 90% indicating at least a minor organizational emphasis in this area. Respondents indicated relatively similar involvement in several other issues, namely on local contamination (such as involvement in hazardous waste site cleanup activities), individual facility releases, and national policy development (i.e., at least 39% moderate activity in each case). Respondents reported relatively less activity on international efforts (such as global treaty negotiations), with only 9% indicating at least moderate activity.

FIGURE 4

Relative emphasis of organization's work in the past decade related to regulatory programs addressing toxic chemicals. (N = number of respondents)



Concerning other regulatory activities not listed, respondents noted activities in particular at the local level (such as sewer use bylaws).

Organizations also reported a range of activity levels on voluntary/other programs addressing toxic chemicals over the past decade (Figure 5). More respondents indicated at least moderate involvement in Areas of Concern (AOCs) work relative to Lakewide Management Plan activities (32 vs. 23% of respondents, respectively). As in the case with regulatory programs, respondents indicated relatively significant involvement in state or province-led programs (44% with at least a moderate emphasis), with slightly less involvement in other regional or binational efforts and national efforts (37% with at least moderate emphasis). Respondents reported some activities working with industry and in green chemistry/engineering (20 and 14% with at least a moderate emphasis, respectively), and higher activity levels on product-related activities, with a majority of respondents reporting at least a minor emphasis

on environmentally preferable purchasing, extended producer responsibility, and consumer products, and one-third of respondents indicating at least moderate involvement in the latter. Though only 7% of respondents reported a major emphasis of their work on fish consumption advisories, a large majority (70%) reported at least minor involvement on the issue.

Concerning specific chemicals or chemical groups, organizations reported the highest activity level on mercury, with 36% of respondents indicating major involvement, 61% indicating at least moderate involvement, and over 86% indicating at least minor involvement (Figure 6 on the next page). In a somewhat surprising finding, 36% of respondents also indicated a major emphasis on work directed at chemicals of emerging concern. High percentages of respondents also indicated at least moderate and minor involvement with these chemicals (51% and 83%, respectively), figures similar to those identified for work on pesticides. Over one-third of respondents reported at least

FIGURE 5

Relative emphasis of organization's work in the past decade related to voluntary/other programs addressing toxic chemicals. (N = number of respondents)

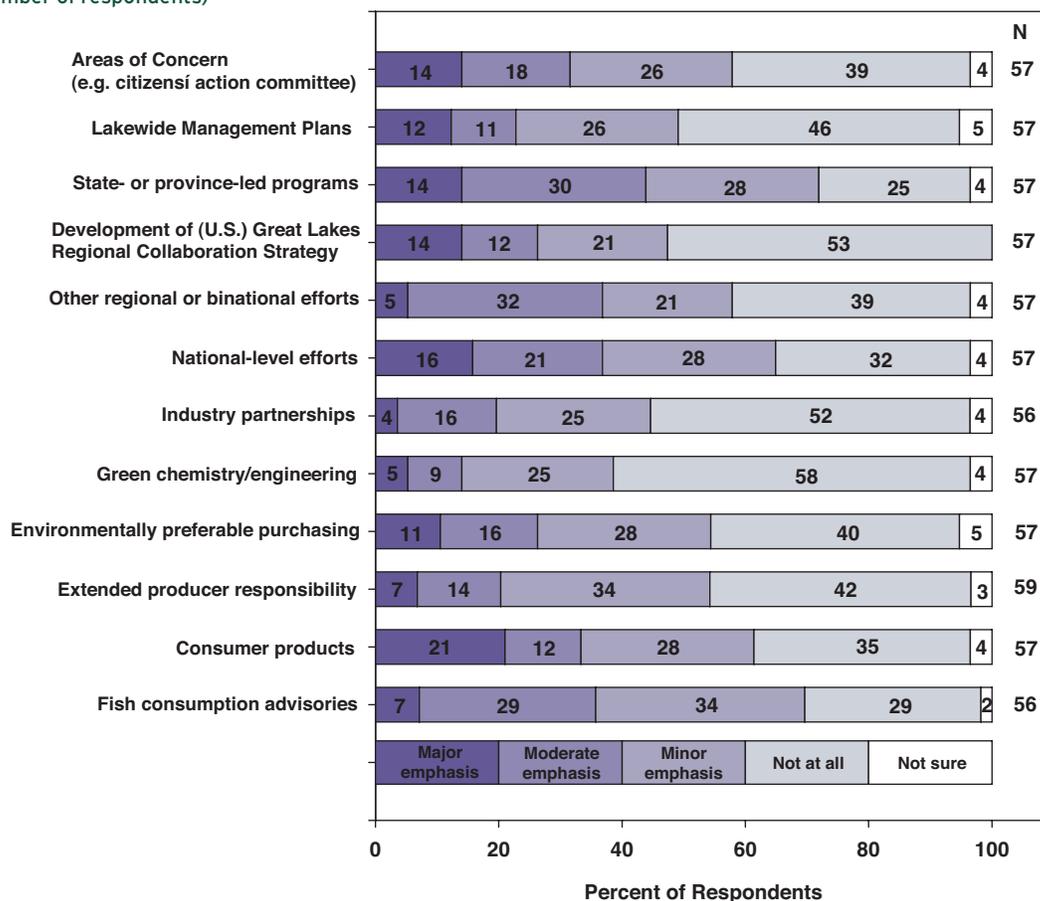
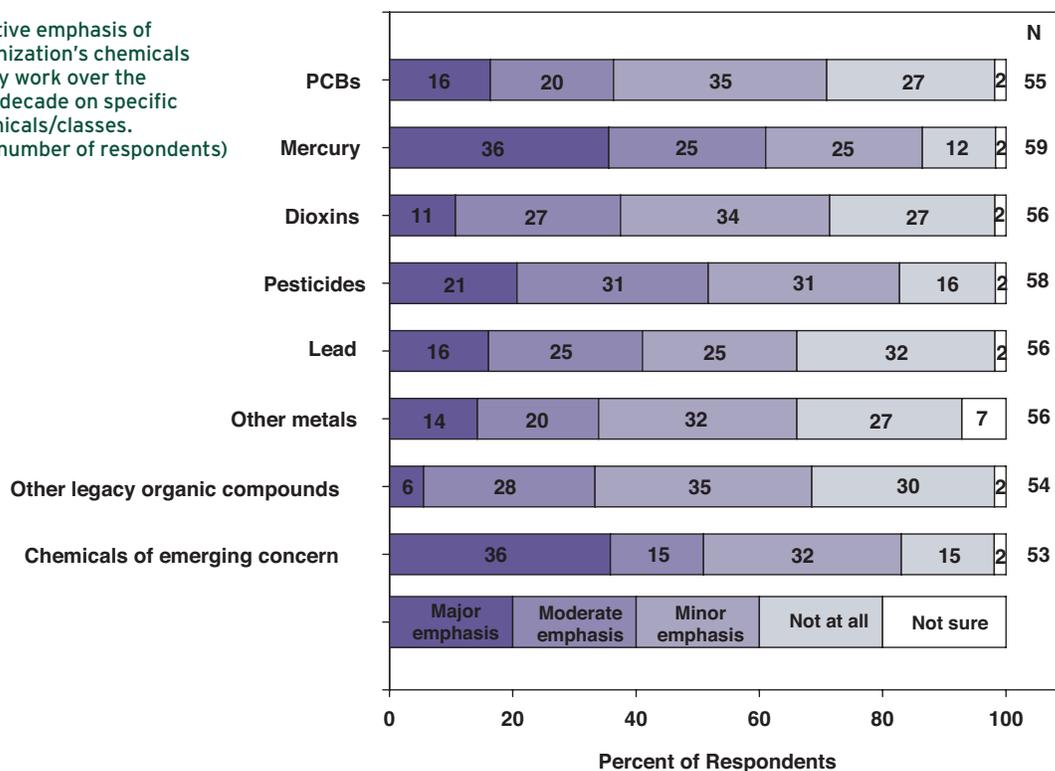


FIGURE 6

Relative emphasis of organization's chemicals policy work over the past decade on specific chemicals/classes. (N = number of respondents)



moderate involvement with other identified chemical groups (PCBs, dioxins, and lead), as well as other metals and other legacy organic compounds. Additional chemicals/substances of focus identified by individual respondents included nanoparticles, prescription drugs, endocrine disrupting chemicals, airborne toxic chemicals generally, and nonylphenol ethoxylates.

Changes in Organizational Emphasis on Toxic Chemicals

In a finding counter to what was hypothesized, respondents overall indicated no significant change overall in organizational emphasis on toxic chemicals over the past decade. Among 60 respondents, 25% reported an increase in toxics chemicals work compared to previously, 25% reported decreased work, and 47% reported essentially no change. While it is possible that the actual proportion of organizations experiencing decreased chemicals work was underestimated, if a significant number of non-respondents were in fact in that category (which may have contributed to lack of interest in completing the survey), we were not able to assess this possibility.

Similar questions were posed to groups reporting both increased and decreased chemicals policy work. For

organizations reporting increased chemicals policy work over the past decade, there was very strong agreement with two explanations—belief that there were opportunities for further progress on chemicals policy and awareness of new research findings (over 40% in both cases, and 87 and 72%, respectively indicating agreement at some level) (Figure 7 on the next page). A similarly large fraction (65%) of respondents agreed that insufficient progress had been made in chemicals policy, while 47% agreed there were still adequate funding opportunities for chemicals policy work.

Results were quite different for groups reporting decreased chemicals policy work over the past decade (Figure 8 on the next page; note that responses in this subgroup were slightly lower than for the previous subgroup). Two-thirds of respondents agreed that their shift away from chemicals policy work followed a planning process or other reassessment, while a smaller percentage (28%) indicated the shift was associated with staff changes. In contrast, there was relatively little agreement that sufficient progress had been made on chemicals policy and that there were challenges to further progress on chemicals policy (14 and 15%, respectively); in fact, nearly one-third of respondents strongly disagreed that sufficient progress had been made on chemicals

FIGURE 7

For organizations with increased emphasis on chemicals policy work in the past decade, extent of agreement with particular reasons for the changed emphasis. (N = number of respondents)

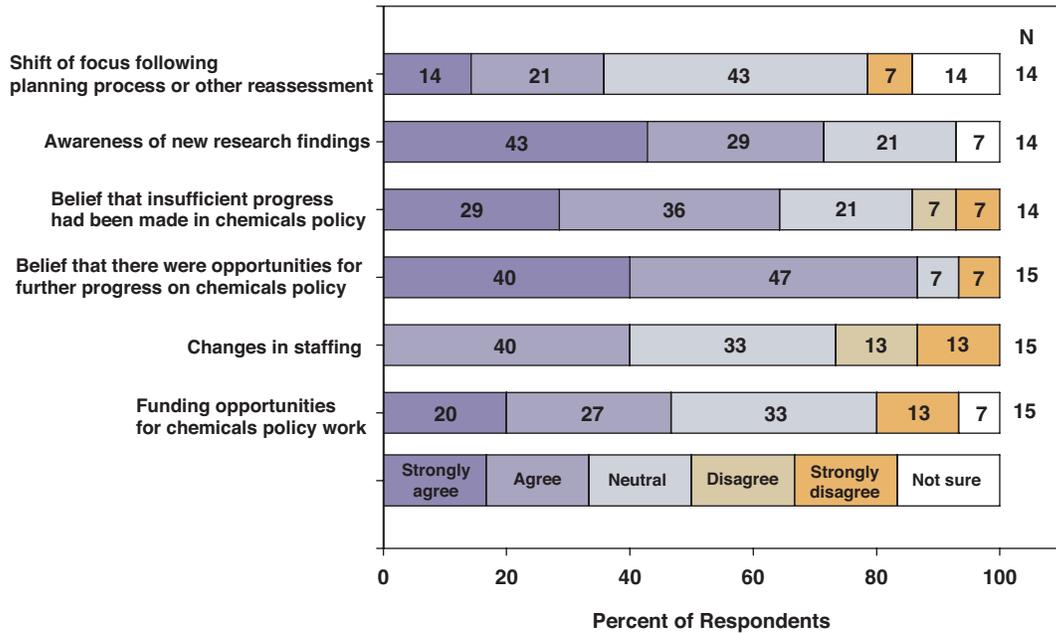
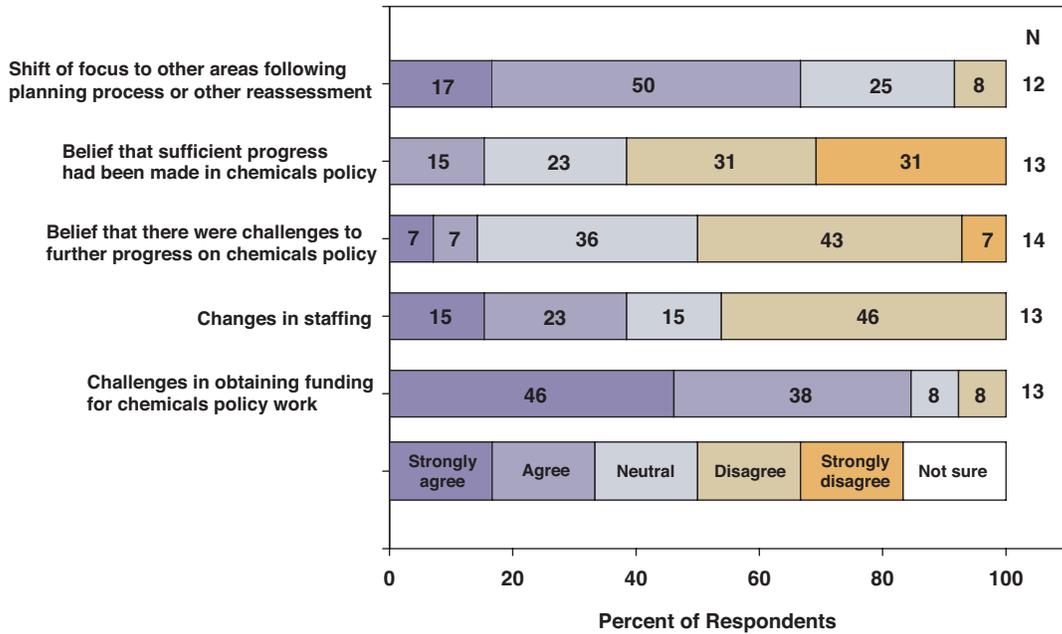


FIGURE 8

For organizations with decreased emphasis on chemicals policy work in the past decade, extent of agreement with particular reasons for the changed emphasis. (N = number of respondents)



policy. Furthermore, 46% of these respondents strongly agreed (and an additional 38% agreed) that there were challenges in obtaining funding for chemicals policy work,

percentages that were significantly larger than the level of agreement about funding opportunities among respondents reporting increased chemicals policy work.

Binational Toxics Strategy

Among 58 respondents, 12 (21%) indicated familiarity with and previous involvement in the Binational Toxics Strategy, while 62% answered in the negative, and 17% were not sure. (A relatively high percentage in the latter category might be explained in part by the relative longevity of the BTS compared to, at least in some cases, tenure of respondents within their organizations.)

Among organizations indicating familiarity with and previous involvement in the Binational Toxics Strategy, ten responded with open-ended perspectives on the positive aspects of the Strategy. Positive aspects mentioned (in

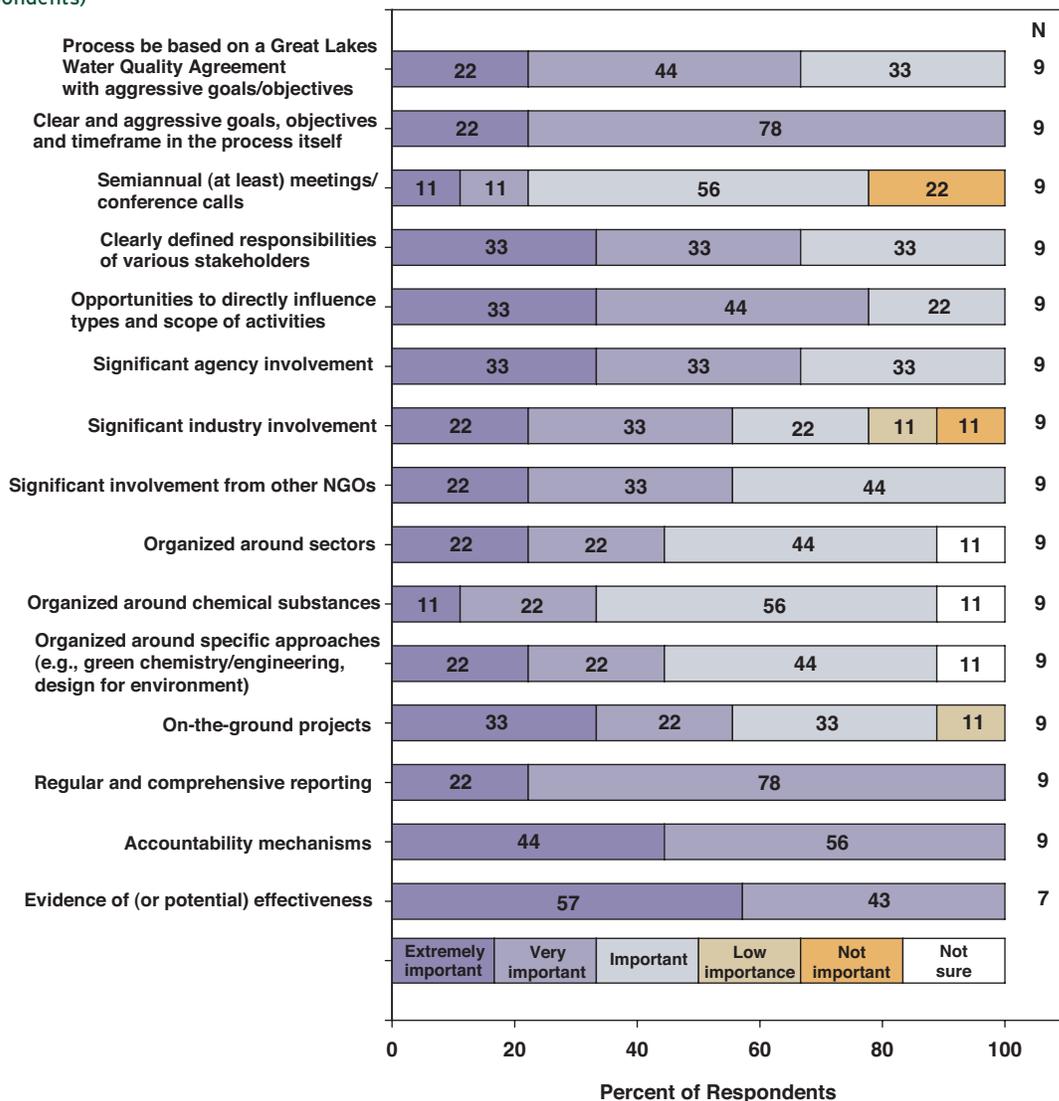
some cases, similar aspects were mentioned by more than one respondent) included:

- Binational/international coordination
- Collaborative nature of the process
- Information gathering and sharing
- Development of targets and timelines
- Identification of low-hanging fruit, development of creative, voluntary programs
- Achievement of demonstrable progress
- Reporting

Among the same group of respondents, nine respondents provided diverse reasons for disengaging from the Strategy. Reasons for disengaging (in some cases, similar

FIGURE 9

For organizations with previous involvement in the Binational Toxics Strategy, and potential interest in engaging in a BTS-like strategy in the future, relative importance of various characteristics that would encourage involvement. (N = number of respondents)



reasons were provided by more than one respondent) included:

- All-voluntary nature
- Failure to address most significant sources/problems
- Too narrow a focus (on small number of substances)
- Limited progress
- Lack of accountability and independent assessment of progress
- Shift in programmatic work to more nonpoint source pollution
- Staff and travel limitations; other priorities

In response to a question to the same group of respondents, on their interest in engaging in a BTS-type process in the future, of 10 responses, five organizations responded affirmatively, one in the negative, and four were not sure. The nine organizations that responded either in the affirmative or not sure were given the opportunity to rate characteristics of a BTS-type strategy that would encourage their involvement, with the overall results indicated in **Figure 9** on the previous page.

While the sample size is very small, there was a general pattern indicating the majority of respondents believed all of the characteristics to be important, at a minimum. Respondents were unanimous in indicating that clear and aggressive goals, objectives, and time frame in a BTS-type process were at least very important, and there was also strong support for a process based in turn on a Great Lakes Water Quality Agreement with aggressive goals and objectives. Although there was less apparent sentiment concerning the importance of meeting structure (i.e., at least semi-annual meetings/conference calls), 78% did indicate that such a structure was important at a minimum. The majority of respondents indicated it was at least very important that there be clearly defined responsibilities of stakeholders and opportunities to directly influence the type and scope of activities in the process. A majority of respondents also believed it was at least very important to have significant involvement of agencies, industry, and NGOs, though support was slightly less clear for significant industry involvement. There was no clear preference concerning organizational structure (around sectors, chemical substances, or specific approaches (such as green chemistry/engineering), and emphasis of on-the-ground projects, though respondents indicated in each case the particular approach was important at a minimum. All respondents believed that regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness were very important at a minimum.

For respondents who had been involved in chemicals policy work but not the BTS (the majority of respondents,

up to 44 for a given characteristic), a similar overall pattern was seen concerning rating of the same characteristics in a BTS-type process (**Figure 10** on the next page). The majority of respondents rated as important (at a minimum) aggressive goals, objectives, and time frame in a BTS-type process, as well as having a process based in turn on a Great Lakes Water Quality Agreement with aggressive goals and objectives. A smaller majority (57%, as compared to respondents previously involved in the BTS (78%)) indicated the importance of semi-annual (at least) meetings/conference calls. Clearly defined responsibilities of stakeholders and opportunities to directly influence the type and scope of activities in a BTS-type process were identified as very important (at a minimum) by at least 46% of respondents, with at least 86% of respondents identifying those characteristics as important, at a minimum. Significant involvement by agency, industry and NGO representatives were thought to be somewhat less important by these respondents as compared to respondents previously involved in the BTS, but were still rated as important (at least) by over 73% of respondents in each case. As with organizations formally involved in the BTS, there was greater ambiguity concerning structure (e.g., organizing around sectors, substances, or specific approaches), though bare majorities in the cases of substances and specific approaches rated those characteristics as important (at a minimum). Seventy percent of respondents indicated that on-the-ground projects would be important (at a minimum). Finally, consistent with results for organizations formally involved in the BTS, large majorities (81% or greater) felt that regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness were important at a minimum.

Great Lakes Water Quality Agreement

The survey indicated relatively significant involvement in work related to the Great Lakes Water Quality Agreement. Thirty of 54 responding organizations (55.6%) indicated familiarity with the GLWQA and its toxic chemical goals, 17 answered no (31.5%), and 7 were not sure. For those familiar with the Agreement, approximately 80% of respondents indicated at least minor involvement in activities prior to the 2006–07 review process, and the same level of involvement in the review process itself (**Figure 11** on the next page). Concerning the current renegotiation process of the Agreement, a similar proportion of respondents indicated at least minor involvement, but substantially larger numbers indicated at

FIGURE 10

For organizations without previous involvement in the Binational Toxics Strategy, relative importance of various characteristics that would encourage involvement in a BTS-like strategy in the future. (N = number of respondents)

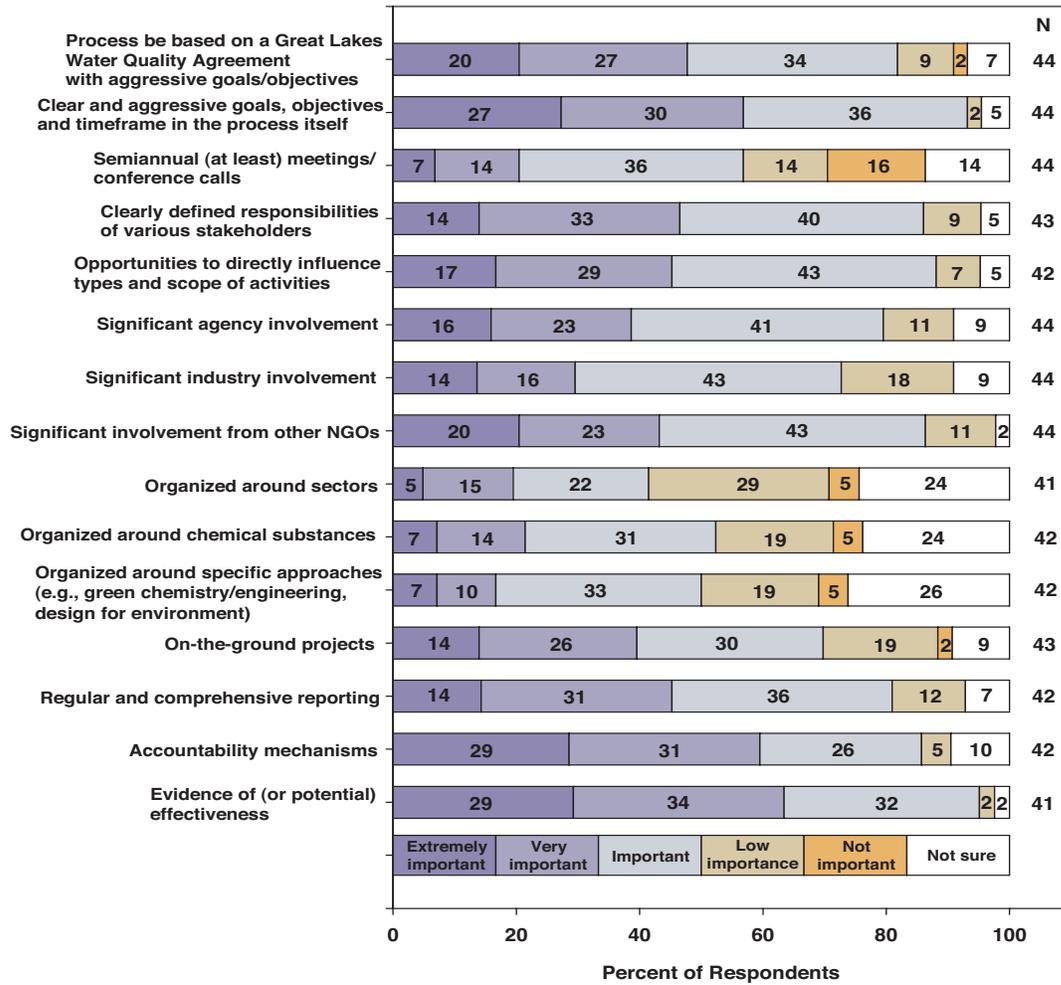


FIGURE 11

Extent of involvement in activities pertaining to the Great Lakes Water Quality Agreement. (N = number of respondents)

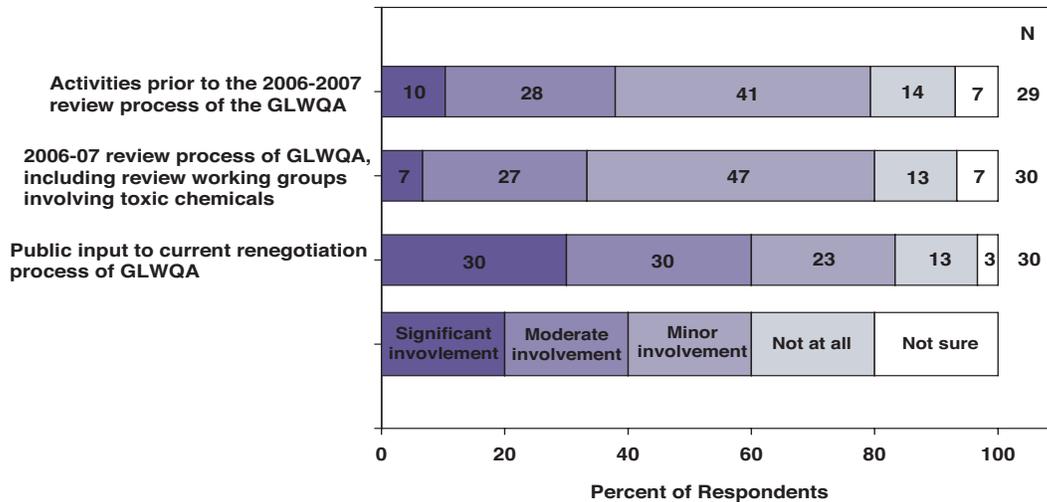
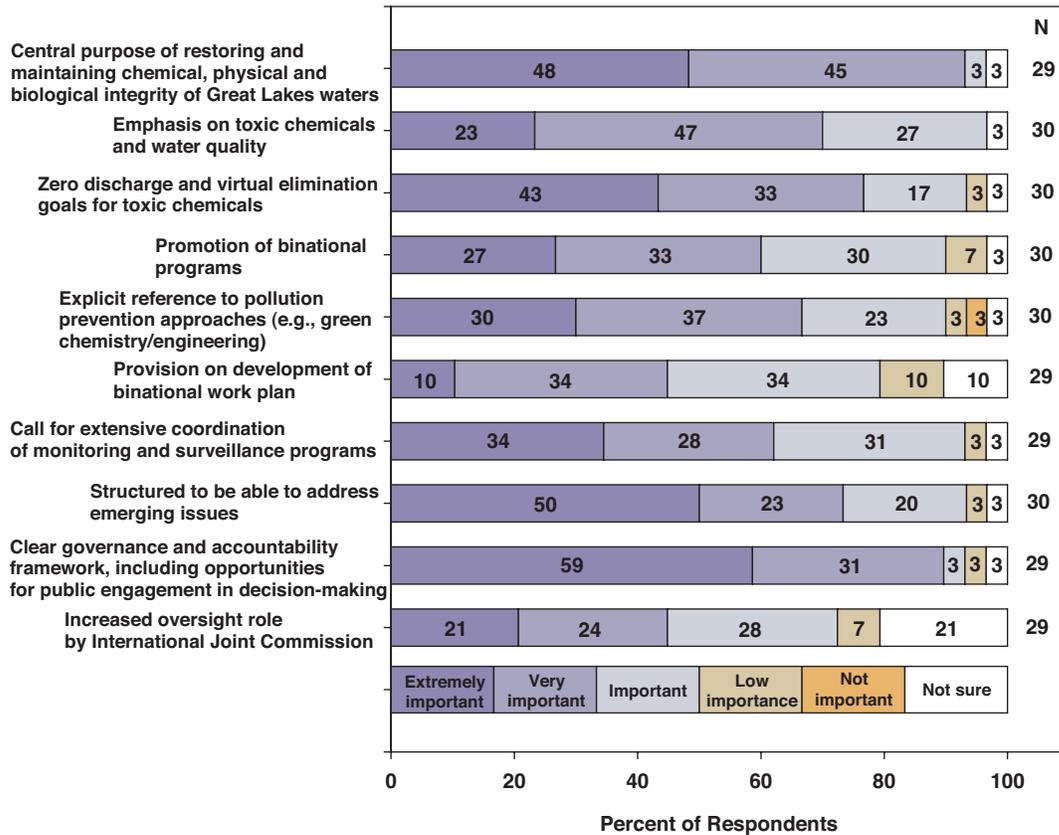


FIGURE 12

Importance of various characteristics (relating to chemicals policy) of a revised Great Lakes Water Quality Agreement, for those previously involved. (N = number of respondents)



least moderate and significant involvement (60% and 30%, respectively), which may reflect both increased interest among a number of organizations as well as success of education, outreach, and organizing efforts by ENGOs over the past year (in particular by Great Lakes United).

Summary results of desired characteristics of a revised GLWQA for respondents indicating familiarity with the Agreement are indicated in **Figure 12**. There was overwhelming support (over 70% indication of very important at a minimum) that a revised agreement should maintain its current central purpose of restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes, have an emphasis on toxic chemicals and water quality, and contain zero discharge and virtual elimination goals for toxic chemicals. (Concerning the emphasis on toxic chemicals, a broader survey of Great Lakes ENGOs with no explicit focus on toxic chemicals might lead to different results for this component.) Respondents also indicated strong support (over 60% indicating very important at a minimum) for promotion of binational programs and explicit reference to pollution prevention

approaches, such as green chemistry/engineering. There was slightly lower recognition of the importance of a provision on a binational work plan, though a large majority of respondents (78%) indicated it as at least important. Respondents supported a provision calling for strong coordination on surveillance and monitoring, with 62% calling such a provision very important at a minimum.

There was very strong support for an agreement structured to be able to address emerging issues (with one-half agreeing it was extremely important), as well as clear governance and accountability framework and ample opportunities for public engagement (90% calling such issues as very important at a minimum). Finally, results were somewhat more ambiguous concerning increased oversight role by the International Joint Commission, though 45% indicated this would be very important at a minimum, and 73% indicating such a role would be important at a minimum.

Concerning additional components of a revised, more effective GLWQA (via open-ended responses), eleven respondents identified a number of desired characteristics,

in a number of cases with similar themes, including the following:

- Visionary, aspirational, and precautionary framework
- Clear goals/targets/objectives
- Capability to adapt to most up-to-date scientific understanding (including on impacts)
- Consideration of multiple chemical impacts
- Increased industry involvement in resulting activities
- Increased public awareness work around Agreement activities, and provision calling for funding for increased NGO participation in activities
- Explicitly address major stresses (including nonpoint source pollution, agriculture, and climate change), and particular chemicals/classes (including phosphorus and endocrine disruptors)
- Increased enforcement and accountability mechanisms, and increased regulation as appropriate
- Increased power of IJC
- Increased oversight role of entities such as U.S.

Government Accountability Office and the Environmental Commissioner of Ontario.

For respondents not generally familiar with the GLWQA (and/or its goals regarding toxic chemicals), a similar general pattern was seen in response to the question on desired characteristics of a revised agreement (Figure 13), with overwhelming majorities identifying the various characteristics as important at a minimum in nine of ten cases. However, in each case, there were smaller proportions rating characteristics as “very important” as compared to respondents generally familiar with the GLWQA. There was strong support (over 69% indication of very important at a minimum in each case) that a revised agreement should maintain its current central purpose of restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes, and have an emphasis on toxic chemicals and water quality, and also relatively strong support for zero discharge and virtual elimination goals (82% indicating important at a

FIGURE 13

Importance of various characteristics (relating to chemicals policy) of a revised Great Lakes Water Quality Agreement, for those not previously involved. (N = number of respondents)

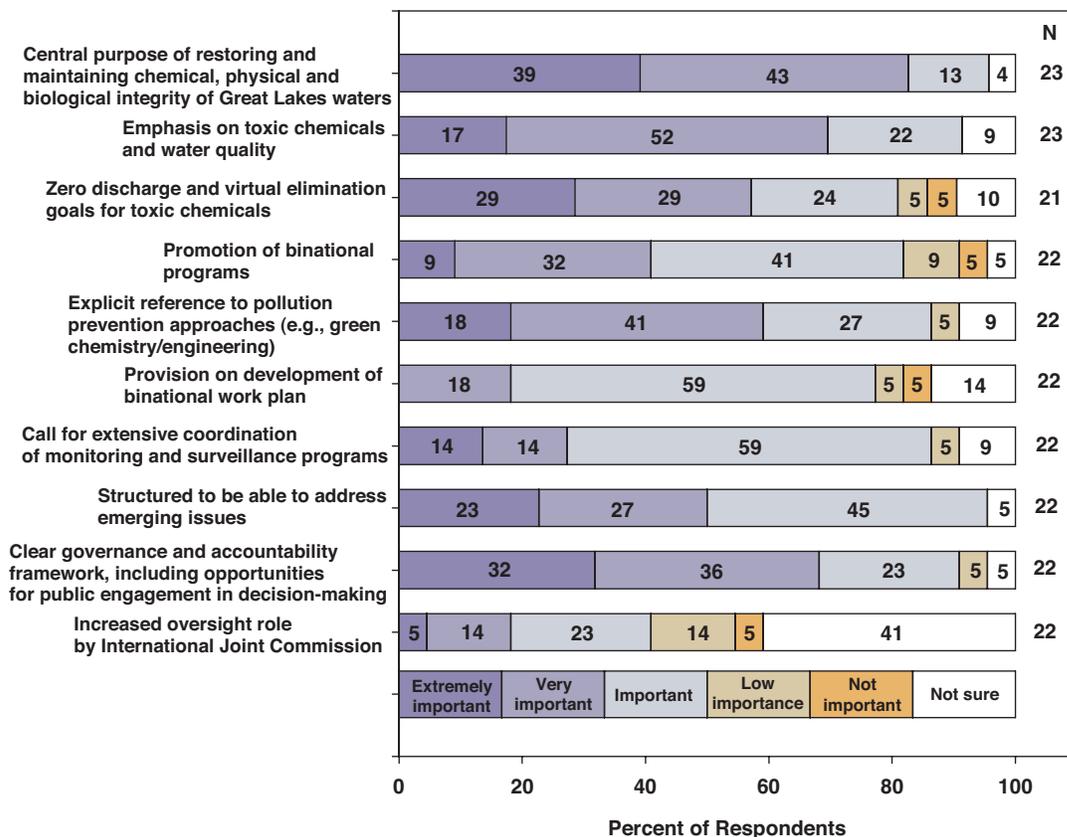




Photo by iStockPhoto.

minimum). Though less strong, support also existed for promotion of binational programs (82% stating important at a minimum) and explicit reference to pollution prevention approaches, such as green chemistry/engineering (59% indicating very important at a minimum). There was slightly lower recognition of the importance of a provision on a binational work plan, though a large majority of respondents (77%) stating it was important at a minimum. There was slightly stronger support for a provision calling for extensive coordination on surveillance and monitoring, with 28 and 87% calling such a provision very important and important, respectively, at a minimum.

There was strong support for an agreement structured to be able to address emerging issues (with one-half agreeing it was at least very important), as well as clear governance and accountability framework and ample opportunities for public engagement, with 68% calling such issues as very important at a minimum. Finally, as in

the case for respondents generally familiar with the GLWQA, results were somewhat more ambiguous concerning increased oversight role by the International Joint Commission, with only 42% indicating this would be important at a minimum, and 41% not sure.

Concerning additional components of a revised, more effective GLWQA (via open-ended responses), five respondents identified desired characteristics, many similar to those noted above for respondents with more familiarity with the GLWQA, including the following:

- Increased accountability for all involved
- Measurable goals, targets, and timeframes
- Equal representation in processes deriving from the Agreement, including with tribal/aboriginal representation
- Transparency in processes
- Programs targeting consumers

ADDITIONAL THOUGHTS ON ADVANCING CHEMICALS POLICY IN THE GREAT LAKES REGION

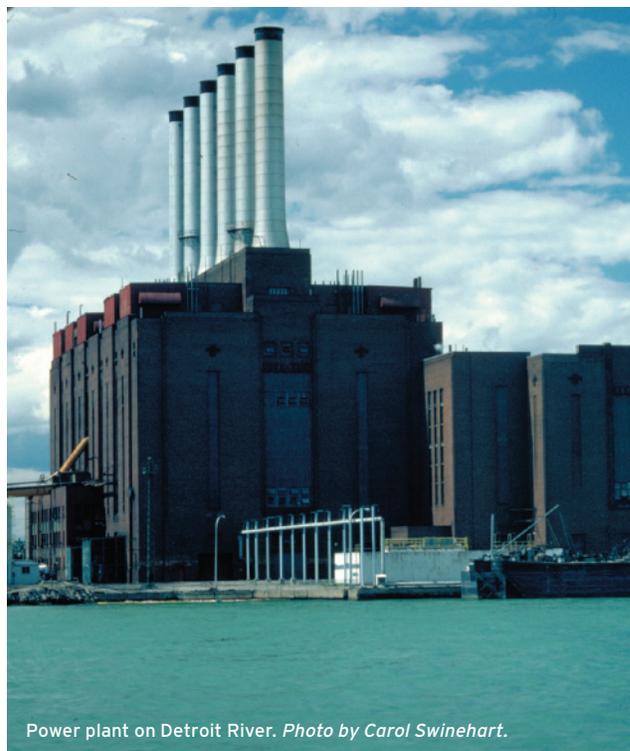
In responses to a request for additional thoughts on key developments/policy changes that would advance chemicals policy in the Great Lakes region, 17 respondents had one or more suggestions.

Recommendations provided by at least two respondents included the following:

- Reform of chemicals policy laws in the U.S., in particular the Toxic Substances Control Act
- Bans/phaseouts of problematic chemicals
- More precautionary chemicals approach, with increased burden of proof of safety on industry
- Increased activity around green chemistry (including passage of U.S. legislation to promote the field)
- Strong mercury regulation for coal-fired power plants
- Policies addressing chemicals of emerging concern, including pharmaceuticals
- Policies addressing consumer products (including labeling requirements)
- Increased requirements concerning product stewardship (such as extended producer responsibility)
- Increased funding/engagement of NGOs and broader public engagement in activities

Additional recommendations included the following:

- Increased attention to human health threats from chemicals in the Basin
- More international efforts, such as through the Stockholm Treaty (on persistent organic pollutants) and an international mercury treaty
- Flexibility to address additional chemicals that pose risks (e.g., chemicals that are less persistent but released relatively continuously)
- Changes in state and municipal purchasing policies
- Increased consumer education
- Adoption of a Freshwater Charter of Rights and Responsibilities
- Source reduction efforts addressing chemicals of emerging concern
- Better addressing stormwater and wastewater treatment plant systems as pollutant vectors



Power plant on Detroit River. Photo by Carol Swinehart.

Finally, while the bulk of this assessment concerned perspectives of organizations with at least some involvement in chemicals policy work in the past decade, the survey included one question assessing perspectives of the small number of organizations (7) responding that reported essentially no involvement in chemicals work. Concerning factors that would encourage their involvement in chemicals policy work, 85% rated as important (at least) a strategic planning process that considered multiple program areas, while 71% rated as important (at least) increased availability of funding. Among this group, there was stronger interest in opportunities to affect regulatory as opposed to voluntary/pollution prevention programs (71% vs. 14% rating as important (at least)). Concerning scale of impact, there were no major differences indicated between potential to have impact locally vs. state/province vs. in the Great Lakes/binationally.

SUMMARY AND RECOMMENDATIONS

In this period of flux regarding chemicals policy in the Great Lakes region, the survey indicated many environmental NGOs in the region remain active on a diverse range of issues and with varying degrees of emphasis. Among organizations with at least some recent involvement in chemicals policy work, regulatory efforts at the state/provincial level were particularly noted, as were certain voluntary efforts, in particular concerning products, and mercury and chemicals of emerging concern were identified as chemicals attracting significant attention. In a surprising finding, the proportion of respondents reporting decreased chemical policy work over the past decade was the same as that reporting increased work (one-quarter each); interestingly, the respondents reporting decreased work generally disagreed that the changes were due to belief that chemicals policy issues had largely been addressed or that no further opportunities remained.

Among the small fraction (21%) of those indicating awareness of the Binational Toxics Strategy, the binational/collaborative nature of the process, information sharing, and establishment of targets and timeframes were among positive components identified. The majority of this subgroup of respondents indicated potential interest in engaging in a BTS-type process in the future; among characteristics that would be highly desired were clear and aggressive goals, objectives, and time frame in a BTS-type process, a process based in turn on a Great Lakes Water Quality Agreement with aggressive goals and objectives, and regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness.

Concerning the Great Lakes Water Quality Agreement, there was evidence of increased activity in the current renegotiation process, among respondents aware of the GLWQA and its toxic chemical goals. Respondents indicated overwhelming support that a revised agreement should maintain its current central purpose of restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes, have an emphasis on toxic chemicals and water quality, and contain zero discharge and virtual elimination toxic chemicals goals. There was also very strong support for an agreement structured to be able to address emerging issues, as well as a clear governance and accountability framework and ample opportunities for public engagement. Among responses to

an open-ended question on Agreement characteristics were a visionary, precautionary framework, clear goals/targets/objectives, consideration of multiple chemical impacts, and increased oversight role of the International Joint Commission and other institutions/bodies. Concerning efforts to advance chemicals policy more generally in the region, respondents indicated a number of priorities, including revision to U.S. chemicals policy legislation (the Toxic Substances Control Act), a more precautionary chemicals policy approach, adoption of more bans/phase-outs, increased promotion of green chemistry, increased attention to chemicals in products, and increased funding/engagement of NGOs and broader public involvement in chemicals policy activities.

Based on the findings in this assessment of ENGOs in the region, several general recommendations regarding advancing chemicals policy in the Great Lakes include the following:

- In addition to continuing work on particular chemicals of longstanding concern, increased efforts are needed to address chemicals of emerging concern.
- Regarding increased ENGO engagement in a Binational Toxics Strategy-type effort in the future, components that would encourage participation include clear goals, objectives and timeframe in the process, a foundation in a Great Lakes Water Quality Agreement with aggressive goals and objectives, and regular and comprehensive reporting, accountability mechanisms, and evidence of (or potential) effectiveness.
- Regarding a revised Great Lakes Water Quality Agreement, ENGOs generally agreed it was important a revised Agreement maintain the current central purpose of restoring and maintaining the chemical, physical, and biological integrity of the lakes, contain zero discharge and virtual elimination toxic chemicals goals, have an ability to address emerging issues, and have a clear governance and accountability framework as well as ample opportunities for public engagement.
- Regarding chemicals policy more broadly, policymakers should consider development of a more precautionary chemicals policy approach, strengthening chemicals legislation (in particular on the U.S. side), increased bans/phase-outs, increased promotion and support of green chemistry, and further work addressing chemicals in products.



Photo courtesy of C.J. Li Laboratory, McGill University.

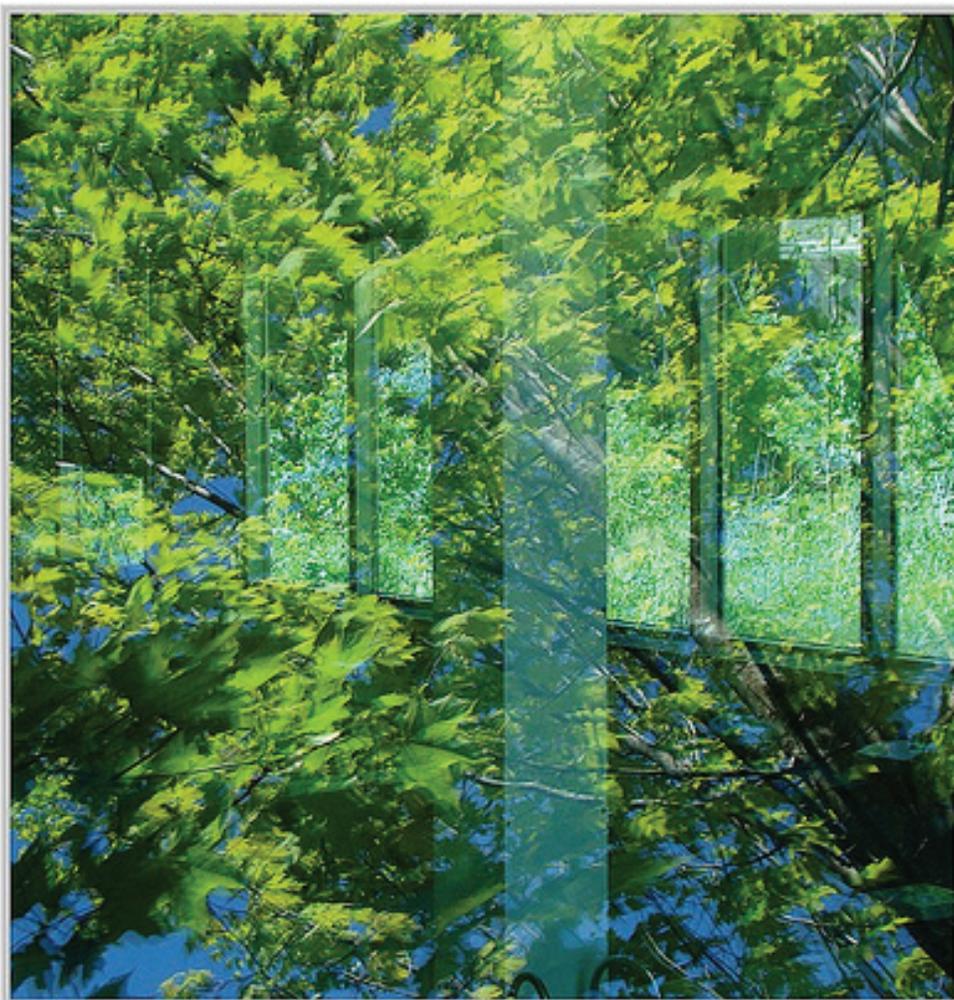


Photo by Walter A. Aue, via Flickr (Creative Commons license).

Walter A. Aue

Green Chemistry
(First-Year Chem Labs,
Ballhousie H., M.S.)

June 2009

APPENDIX A

SURVEY METHODOLOGY

Information on chemicals policy work by environmental/conservation nongovernmental organizations (ENGOS) in the Great Lakes region was collected via an online survey. As stated in the Introduction, objectives included assessing extent and any trends in activities related to chemicals policy work, involvement in and assessment of the Canada–U.S. Binational Toxics Strategy (BTS), and work related to the Great Lakes Water Quality Agreement (GLWQA). Text of the survey is provided following this section.

The survey consisted largely in a combination of single-answer multiple choice questions and multi-component questions using attitude scales. For the latter, Likert-type scales were used, where a respondent had the option of selecting an attitude (ranging, for example, from strongly disagree to strongly agree) in reference to a statement connected to a broader theme. Some questions in the survey also allowed for manual addition (open-ended) of other selections, and in several cases, purely open-ended questions were used. The survey utilized skip logic frequently, separating respondents based on their stated extent of activities and/or their extent of awareness of broad topics (e.g., the BTS). (The overall survey design with the skip logic questions is shown schematically in Figure A1 on p. 23.) Because of the use of skip logic, no respondent answered all questions, and response numbers varied significantly between sections. Even within a multi-component matrix question, response rates varied, though not significantly.

The survey was setup with an overview page that provided a brief narrative on the survey purpose and approach, and then the subsequent pages contained one or more survey questions (Section 1). Initial questions assessed the type of organization (e.g., local/watershed group, state- or province-wide group, etc.), the organization or office location, the staffing level, and whether the organization was a member of the Healing Our Waters–Great Lakes Coalition (Section 2). A question then assessed extent of organizational work on chemicals policy issues over the past decade (Section 3). For organizations that have never had any extensive work in the field, they skipped directly to a multipart question assessing potential involvement in chemicals policy (Section 15). The main portions of the survey then were addressed to all other respondents, with initial questions

on their extent of recent chemicals policy work in both regulatory and voluntary/other program areas, the types of chemicals on which they had focused, and whether there had been any substantial changes in their focus on chemicals policy work in the recent past (Section 4). Subsequent questions then assessed reason for changes, for those respondents indicating greater (Section 5) or less (Section 6) emphasis on chemicals policy work.

The subsequent section assessed the BTS, with an initial question on organizational awareness and previous involvement in the BTS (Section 7). For those indicating an affirmative response, open-ended questions assessed their perceptions of both strengths and shortcomings of the BTS (Section 8). Following a subsequent question on their interest in participating in a BTS-type forum, affirmative respondents answered a question on the types of desired characteristics in such a forum (Section 9). For those without involvement in or familiarity with the BTS, a brief description of the process was given, and respondents were given the opportunity to answer a question on desired characteristics of a BTS-type forum (Section 10).

The survey then addressed the GLWQA, with an initial question assessing familiarity with the GLWQA and understanding of goals with respect to toxic chemicals (Section 11). For those indicating familiarity, the following section then assessed involvement in several activities involving the GLWQA, desired characteristics of a revised GLWQA, and an open-ended question on additional characteristics of a revised GLWQA (Section 12). For those who did not indicate familiarity with the GLWQA and its toxic chemicals goals, a brief description of the Agreement was provided, followed by questions assessing desired characteristics of a revised GLWQA (Section 13). Then, all respondents that had moved through this main section of the survey (i.e., those with at least some previous chemicals policy experience) were given the opportunity to list any key developments/policy changes they felt would advance chemicals policy work in the region, through an open-ended question, and also mention any other thoughts on chemicals policy (Section 14). Finally, these respondents skipped to the last section containing the thank you and contact page (Section 16), where the other main group of respondents (those who jumped directly to Section 15) also landed. The last page also contained a reminder for those interested of the availability of funding

to support attendance at the June 2010 Green Chemistry and Engineering Conference.

Analysis generally involved qualitative analysis of the response data (e.g., general comparisons of data in multiple choice or attitude rating questions). More involved quantitative analysis may be conducted in a follow-up assessment.

Survey Recipients

It was desired to survey all types of organizations that might have some involvement in chemicals policy work in the region, which might range from a very limited staff organization to large, national organizations with state/provincial or regional presence. Based on an assumption that higher-level chemicals policy work would typically be more time-consuming than some other activities, it was generally assumed that organizations to be surveyed would have at least one staff person. In the end, a master list of organizations to be surveyed was developed based on the following considerations:

- Evidence of some general current or historic involvement in chemicals policy work in the Great Lakes region (e.g., through assessment of meeting attendance, experience of NWF staff);
- Some previous involvement in Binational Toxics Strategy work (assessed, for example, through earlier BTS meeting notes and experiences of NWF staff);
- Member of Healing Our Waters–Great Lakes Coalition (<http://healthylakes.org/>) or the Ontario Environment Network (<http://www.oen.ca/>) (in particular those filtered based on work on toxic chemicals);
- Groups which engaged in the 2006-2007 review of the Great Lakes Water Quality Agreement (ascertained via the synthesis report by the International Joint Commission);
- Groups indicating some level of current activity (e.g., through a Web site with reasonably recent activity).
- Additional groups not otherwise identified, for whom recommendations were provided by colleagues.

Because the focus of this effort was on chemicals policy (also reflected in first three bullets above), the goal was not to survey all ENGOs in the region, but rather conduct something closer to a census of groups active to varying extents on chemicals policy issues. Because of incomplete information on groups *a priori*, there was some chance of capturing some groups with essentially no involvement in chemicals policy work.

In the end, a total of 100 U.S. groups/offices and 80

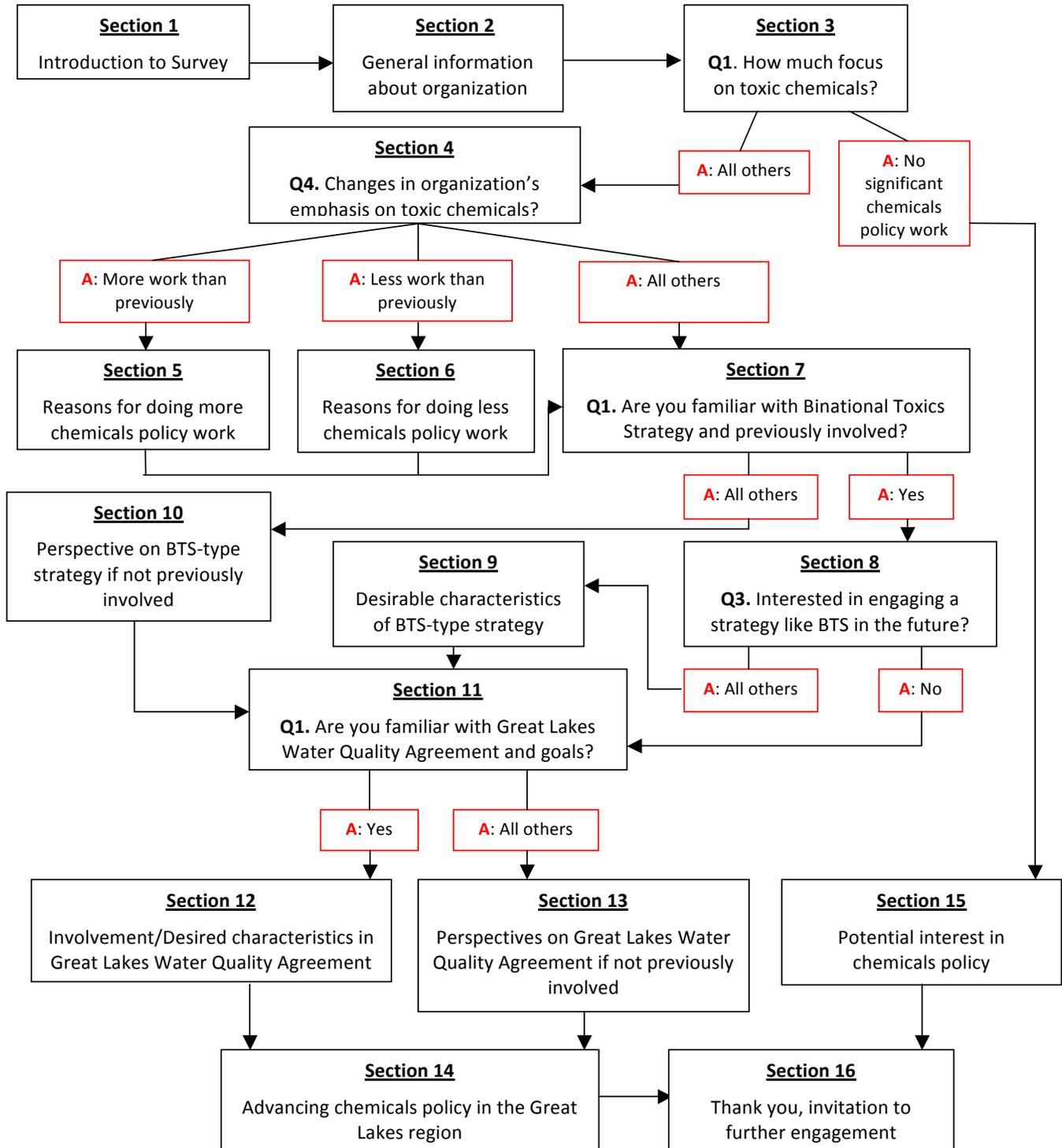
Canadian groups/offices were identified. Because of the emphasis on the Great Lakes proper, there were limited efforts to identify groups in Quebec active on St. Lawrence River issues. In addition, three groups that have been active in the BTS more recently and have already provided detailed input on the direction of the BTS and related matters to agency staff (Canadian Environmental Law Association, Great Lakes United, and Indiana Toxics Action) were not surveyed.

Following identification of groups, identification of the appropriate staff person was done (and contact information obtained), based on above databases, Internet searches, correspondence with colleagues and in some cases direct correspondence with the organization. In most cases, early notification about the survey (via email) was done in winter-spring 2010. (Some groups were added to the database later in the spring).

The survey was conducted online using SurveyMonkey (<http://www.surveymonkey.com>), and was available from June 18, 2010 to June 30, 2010, with personal requests to respond sent (via email) to all individuals surveyed in the two days prior to commencement of the survey period. (The initial closing date of June 28 was extended two days in the middle of the survey). Several reminder emails (sent through SurveyMonkey) were sent to non-respondents through the course of the survey. Responses were collected through two separate collectors (i.e., for Canadian and U.S. groups), but analyses considered both groups together. All responses were collected anonymously; SurveyMonkey tracked which individuals/organizations responded, but individual responses were coded numerically (e.g., not by email). A list of those organizations responding is provided in Appendix B.

Schematic of survey design, indicating skip logic questions (Q1, etc.) within given sections.

Survey Start



Chemicals Policy Survey

The following is text of the survey incorporated into the SurveyMonkey framework. Questions are organized within sections, and there were typically one or two questions per online page. Skip logic steps are identified at several points in the text below—in the survey itself, the steps were applied automatically (i.e., sending a respondent ahead to a section depending on the response). The overall skip logic design is indicated in Figure A1. The survey was available online from June 18–30, 2010. (Note that the survey close date was extended from the date initially identified.)

1. INTRODUCTION

The National Wildlife Federation (NWF) is conducting a survey of environmental/conservation nongovernmental organizations (ENGOS) concerning toxic chemicals policy work, in particular in the Great Lakes region. The goal is to assess engagement on chemicals policy issues in the region, including relating to the Canada–U.S. Binational Toxics Strategy, issues around the Great Lakes Water Quality Agreement, and additional interests. The emphasis is on persistent, bioaccumulative, toxic chemicals, and in particular pollution prevention approaches. We will summarize results of the survey in a public report. The survey is being conducted anonymously—any individual perspectives offered in the report will be unattributed. However, we will include a list of those responding to the survey in an appendix to the report.

If your organization has not had any significant involvement in chemicals policy work, you will skip most sections of the survey, and in either case, you will not complete all pages. Note that you can go back if necessary. The survey should take anywhere from 5 to 20 minutes to complete (depending on your organizational involvement in chemicals policy work). Your survey will only be complete upon clicking the “Done” button at the end. In addition, if you are attending the Green Chemistry and Engineering Conference in Washington D.C. on June 21–23, there is information on potential travel assistance available from NWF at the end of the survey—you would need to respond to Michael Murray by Monday June 21.

Given a tight time frame, we would appreciate your completion of the survey by Monday June 28. Thank you for your time.

Michael Murray, Ph.D.
National Wildlife Federation, Great Lakes Regional
Center, Ann Arbor, MI
734-887-7110, murray@nwf.org

2. GENERAL ORGANIZATIONAL INFORMATION

The following questions assess general information on your organization. If you represent a state or regional office of a national organization, questions 2–4 apply to that state or regional office. Question 4 deals with the Healing Our Waters–Great Lakes Coalition, the coalition of NGOs developed on the U.S. side to promote Great Lakes restoration and protection.

1. Please select the box below that best describes the type of organization:
 - Local or watershed or subwatershed organization (e.g., covering 10 or 12 digit U.S. HUC codes)
 - Basin or subbasin organization (e.g. covering 6 or 8 digit U.S. HUC codes, or tertiary watershed in Canada)
 - State- or province-wide organization
 - Regional organization (e.g. across multiple states, entire province, binational)
 - State or provincial office of national organization
 - Regional office of national organization
 - National organization
 - Other ENGO
2. Please identify the state or province where your office is based:
 - Illinois
 - Indiana
 - Michigan
 - Minnesota
 - New York
 - Ohio
 - Ontario
 - Pennsylvania
 - Quebec
 - Wisconsin
3. Please indicate the number of full-time staff in your organization/office:
 - 0.5–1
 - 2–4
 - 5–10
 - 11–19
 - 20–30
 - More than 30
 - No full-time staff

4. Is your group a member of the Healing Our Waters—Great Lakes Coalition?

- Yes
 No

3. ASSESSING EXTENT OF CHEMICALS POLICY WORK

For state or regional offices of a national organization, the question pertains to your office's work.

1. How much focus is currently given in your organization to issues relating to toxic chemicals?
- It is our primary focus.
- It constitutes a significant part (approx. 40–80% of staff time) of our work.
- It constitutes a moderate part (20–40%) of our work.
- It constitutes a smaller part (5–20%) of our work
- Though previously involved, we currently have essentially no involvement in work on toxic chemicals.
- We have never had any significant involvement in work on toxic chemicals.

[If you chose the last option, skip to Section 15.]

4. GENERAL CHEMICALS POLICY WORK

Questions 1–3 below address the relative emphasis of your organization's work concerning toxic chemicals in the specified areas.

1. Please indicate the relative emphasis of your organization's work in the past decade related to regulatory programs addressing toxic chemicals in the following areas:
- (Response options are: Not at All, Minor Emphasis, Moderate Emphasis, Major Emphasis, Not Sure)*
- Local contamination (e.g. involvement in Superfund/hazardous waste site cleanup, brownfields, municipal ordinances)
 - Individual facility releases (e.g. commenting on draft permits, reviewing chemical release data)
 - State or provincial policies (e.g., rulemaking comments, advisory groups)
 - National policies (e.g., rulemaking comments, advisory groups, chemical listing, chemical management plans)
 - International efforts (e.g., global treaty negotiations)
 - Other (please specify)
2. Please indicate the relative emphasis of your organization's work in the past decade related to voluntary/other programs addressing toxic chemicals in the

following areas:

(Response options are: Not at All, Minor Emphasis, Moderate Emphasis, Major Emphasis, Not Sure)

- Areas of Concern (e.g. citizens' action committee)
 - Lakewide Management Plans
 - State- or province-led programs
 - Development of (U.S.) Great Lakes Regional Collaboration Strategy
 - Other regional or binational efforts
 - National-level efforts
 - Industry partnerships
 - Green chemistry/engineering
 - Environmentally preferable purchasing
 - Extended producer responsibility
 - Consumer products
 - Fish consumption advisories
 - Other (please specify)
3. Please indicate the relative emphasis of your organization's chemicals policy work on the following chemicals/classes over the past decade.
- (Response options are: Not at All, Minor Emphasis, Moderate Emphasis, Major Emphasis, Not Sure)*
- PCBs
 - Mercury
 - Dioxins
 - Pesticides
 - Lead
 - Other metals
 - Other legacy organic compounds
 - Chemicals of emerging concern (e.g., brominated flame retardants, phthalates, pharmaceuticals and personal care products)
 - Other chemicals (please specify chemicals/types and emphasis)
4. How would you characterize any changes in your organization's emphasis on toxic chemicals in the past decade?
- We are currently doing more toxic chemicals work than previously.
 - We are currently doing less toxic chemicals work than previously.
 - About the same.
 - Not sure.
- [If you chose the first option, skip to Section 5.]
[If you chose the second option, skip to Section 6.]
[If you chose the third or fourth option, skip to Section 7.]

5. REASONS FOR DOING MORE CHEMICALS POLICY WORK

1. Given that your organizational efforts to address toxic chemicals have increased in the past decade, please indicate your extent of agreement with the following reasons:

(Response options are: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree, Not Sure)

- Shift of focus following planning process or other reassessment
- Awareness of new research findings
- Belief that insufficient progress had been made in chemicals policy
- Belief that there were opportunities for further progress on chemicals policy
- Changes in staffing
- Funding opportunities for chemicals policy work
- Other (please specify)

[Page skip to Section 7.]

6. REASONS FOR DOING LESS CHEMICALS POLICY WORK

1. Given that your organizational efforts to address toxic chemicals have decreased in the past decade, please indicate your extent of agreement with the following reasons:

(Response options are: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree, Not Sure)

- Shift of focus to other areas following planning process or other reassessment
- Belief that sufficient progress had been made in chemicals policy
- Belief that there were challenges to further progress on chemicals policy
- Changes in staffing
- Challenges in obtaining funding for chemicals policy work
- Other (please specify)

7. ASSESSING FAMILIARITY WITH BINATIONAL TOXICS STRATEGY

The following question pertains to the Canada-U.S. Binational Toxics Strategy (BTS).

1. Are you familiar with the BTS, and was your organization previously involved in it?
 Yes
 No
 Not sure

[If you chose no or not sure, skip to 10.]

8. ASSESSMENT OF BINATIONAL TOXICS STRATEGY

The following questions continue to address the Canada–U.S. Binational Toxics Strategy (BTS).

1. What were the positive aspects of the BTS in your view (list up to eight aspects)?
2. If you are no longer involved, why did your involvement in the BTS end (list up to eight aspects)?
3. Might your organization be interested in engaging in a strategy like the BTS in the future?
 Yes
 No
 Not sure

[If you chose no, skip to Section 11.]

9. DESIRABLE CHARACTERISTICS OF BINATIONAL TOXICS STRATEGY-TYPE FORUM

The following question continues to address the Canada–U.S. Binational Toxics Strategy (BTS).

1. Given that your organization might be interested in engaging in a BTS-like strategy in the future, indicate below the importance of the listed characteristics that would encourage your involvement:
(Response options are: Not Important, Low Importance, Important, Very Important, Extremely Important, Not Sure)
 - Process be based on a Great Lakes Water Quality Agreement with aggressive goals/objectives
 - Clear and aggressive goals, objectives and timeframe in the process itself
 - Semiannual (at least) meetings/conference calls
 - Clearly defined responsibilities of various stakeholders
 - Opportunities to directly influence types and scope of activities
 - Significant agency (including municipal, state/provincial, federal, tribal) involvement
 - Significant industry involvement
 - Significant involvement from other NGOs
 - Organized around sectors
 - Organized around chemical substances
 - Organized around specific approaches (e.g., green chemistry/engineering, design for environment)
 - On-the-ground projects
 - Regular and comprehensive reporting
 - Accountability mechanisms
 - Evidence of (or potential) effectiveness
 - Other (please specify)

[Page skip to Section 11.]

10. PERSPECTIVES ON BINATIONAL TOXICS STRATEGY IF NOT PREVIOUSLY INVOLVED

1. The Binational Toxics Strategy was signed in 1997 by the U.S. and Canada to facilitate a collaborative process — with an emphasis on pollution prevention — to work towards the goals for persistent toxic chemicals identified in the Great Lakes Water Quality Agreement. If your organization were to engage in chemicals policy work in the future through the BTS or another binational strategy, indicate below the importance of the listed characteristics in encouraging your involvement:

(Response options are: Not Important, Low Importance, Important, Very Important, Extremely Important, Not Sure)

- Process be based on a Great Lakes Water Quality Agreement with aggressive goals/objectives
- Clear and aggressive goals, objectives and timeframe in the process itself
- Semiannual (at least) meetings/conference calls
- Clearly defined responsibilities of various stakeholders
- Opportunities to directly influence types and scope of activities
- Significant agency (including municipal, state/provincial, federal, tribal) involvement
- Significant industry involvement
- Significant involvement from other NGOs
- Organized around sectors
- Organized around chemical substances
- Organized around specific approaches (e.g., green chemistry/engineering, design for environment)
- On-the-ground projects
- Regular and comprehensive reporting
- Accountability mechanisms
- Evidence of (or potential) effectiveness
- Other (please specify)

11. ASSESSING FAMILIARITY WITH GREAT LAKES WATER QUALITY AGREEMENT

This final set of questions pertains to the Great Lakes Water Quality Agreement (GLWQA) and additional chemicals policy issues.

1. Are you generally familiar with the GLWQA and its goals relating to toxic chemicals?

- Yes
- No
- Not sure

(If you chose no or not sure, skip to 13.)

12. INVOLVEMENT/DESIRED CHARACTERISTICS IN GREAT LAKES WATER QUALITY AGREEMENT

These questions address previous involvement and interests in the Great Lakes Water Quality Agreement (GLWQA).

1. Indicate below the extent of your involvement in activities pertaining to the GLWQA:
(Response options are: Not at All, Minor Involvement, Moderate Involvement, Significant Involvement, Not Sure)
 - Activities prior to the 2006–2007 review process of the GLWQA
 - The 2006–07 review process of the GLWQA, including review working groups involving toxic chemicals
 - Public input to current renegotiation process of the GLWQA
2. Rate the importance of the following characteristics as potential components of a revised GLWQA, concerning chemicals policy aspects:
(Response options are: Not Important, Low Importance, Important, Very Important, Extremely Important, Not Sure)
 - Central purpose of restoring and maintaining the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem
 - Emphasis on toxic chemicals and water quality
 - Zero discharge and virtual elimination goals for toxic chemicals
 - Promotion of binational programs
 - Explicit reference to pollution prevention approaches (e.g., green chemistry/engineering, extended producer responsibility, design for environment)
 - Provision on development of binational work plan
 - Call for extensive coordination of monitoring and surveillance programs
 - Structured to be able to address emerging issues
 - Clear governance and accountability framework, including opportunities for public engagement in decision-making
 - Increased oversight role by International Joint Commission
3. List any other additional characteristics you believe should be present in an effective GLWQA (list up to five characteristics):

(Skip to Section 14.)

13. PERSPECTIVES ON GREAT LAKES WATER QUALITY AGREEMENT IF NOT PREVIOUSLY INVOLVED

The Great Lakes Water Quality Agreement was first signed by the U.S. and Canadian Governments in 1972, and was subsequently revised twice, most recently in 1987. The purpose of the Agreement is to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem. Following an extensive review process, the Governments agreed in 2009 to renegotiate the Agreement, a process that is occurring now.

1. Based on your understanding of the GLWQA, rate the importance of the following characteristics as potential components of a revised GLWQA, concerning chemicals policy aspects:

(Response options are: Not Important, Low Importance, Important, Very Important, Extremely Important, Not Sure)

- Central purpose of restoring and maintaining the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem
- Emphasis on toxic chemicals and water quality
- Zero discharge and virtual elimination goals for toxic chemicals
- Promotion of binational programs
- Explicit reference to pollution prevention approaches (e.g., green chemistry/engineering, extended producer responsibility, design for environment)
- Provision on development of binational work plan
- Call for extensive coordination of monitoring and surveillance programs
- Structured to be able to address emerging issues
- Clear governance and accountability framework, including opportunities for public engagement in decision-making
- Increased oversight role by International Joint Commission

2. List any additional characteristics you believe should be present in an effective GLWQA (list up to five characteristics):

14. ADVANCING CHEMICALS POLICY IN THE GREAT LAKES REGION

1. List any key developments (e.g. policy changes) you believe would best advance chemicals policy in the Great Lakes Region (list up to eight):
2. Any additional comments on Great Lakes chemicals policy and/or this survey can be provided here.

15. POTENTIAL INTEREST IN CHEMICALS POLICY WORK FOR ORGANIZATIONS NOT ALREADY ENGAGED.

1. Given that your organization has never had any extensive involvement in work on toxic chemicals, identify in the list below developments/factors that might encourage you to engage in this area:

(Response options are: Not Important, Low Importance, Important, Very Important, Extremely Important, Not Sure)

- Continued/increased publication of research on human health impacts of toxic chemicals
- Continued/increased publication of research on ecological impacts of toxic chemicals
- Internal strategic planning process that considered multiple program areas
- Increased availability of funding
- Opportunity to affect regulatory programs
- Opportunity to engage in voluntary/pollution prevention programs
- Potential to have impact locally
- Potential to have impact in state/province
- Potential to have impact in Great Lakes/binationally
- Other (please specify)

16. SUMMARY

Thank you for completing the survey.

The National Wildlife Federation has limited funding available to support travel by environmental NGO representatives planning on attending the Green Chemistry and Engineering Conference in Washington D.C. on June 21-23, 2010. Funding can be made available based on the order of those requesting. If you are interested in this opportunity, please contact Michael Murray as soon as possible.

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In addition, for more information on both the Binational Toxics Strategy and the Great Lakes Water Quality Agreement, please visit <http://www.binational.net/>.

APPENDIX B

RESPONDING ORGANIZATIONS

ORGANIZATION	CITY	STATE/ PROVINCE
Alliance for the Great Lakes	Chicago	IL
American Rivers	Washington	DC
Assuring Protection For Tomorrow's Environment	Elmira	Ont.
Bay Area Restoration Council	Hamilton	Ont.
Bruce Peninsula Bird Observatory	Lions Head	Ont.
Canadian Cancer Society	Ottawa	Ont.
Canadian Institute for Environmental Law and Policy	Toronto	Ont.
Canadian Partnership for Children's Health and Environment	Toronto	Ont.
Center For Environmental Information	Rochester	NY
Citizens Environment Alliance of Southwestern Ontario	Windsor	Ont.
Clean Water Action – Midwest Office	Minneapolis	MN
Clean Wisconsin	Madison	WI
Clinton River Watershed Council	Rochester	MI
Comité ZIP Jacques-Cartier	Montreal	Que.
Conservation and Restoration Network	Port Huron	MI
Doan Brook Watershed Partnership	Cleveland	OH
Ducks Unlimited – Great Lakes Office	Ann Arbor	MI
Ducks Unlimited Canada – Ontario	Kingston	Ont.
Ecojustice Canada	Toronto	Ont.
Ecology Center	Ann Arbor	MI
Environment Illinois	Chicago	IL
Environment Network	Collingwood	Ont.
Environmental Advocates of New York	Albany	NY
Environmental Defence	Toronto	Ont.
Environmental Health Watch	Cleveland	OH
Environmental Law and Policy Center	Chicago	IL
Federation of Ontario Cottagers' Association Inc.	Peterborough	Ont.
Freshwater Future	Petoskey	MI
Friends of Fort Erie's Creeks	Fort Erie	Ont.
Friends of the Bayfield River	Bayfield	Ont.
Friends of the Detroit River	Trenton	MI

ORGANIZATION (CONTINUED)	CITY	STATE/ PROVINCE
Friends of the Spanish River	Webbwood	Ont.
Futurewatch Environment and Development Education Partners	Toronto	Ont.
Georgian Bay Forever	Toronto	Ont.
Green Communities Canada	Peterborough	Ont.
Green Venture	Hamilton	Ont.
Illinois Public Interest Research Group	Chicago	IL
Indiana Wildlife Federation	Zionsville	IN
Institute for Agriculture and Trade Policy	Minneapolis	MN
Izaak Walton League of America – Midwest Office	St.Paul	MN
KAN Centre for Environment and Development	Toronto	Ont.
Lake Ontario Waterkeeper	Toronto	Ont.
League of Women Voters of Illinois	Chicago	IL
League of Women Voters of Indiana	Indianapolis	IN
League of Women Voters of Michigan	Lansing	MI
League of Women Voters of Wisconsin	Madison	WI
Michigan Land Use Institute	Traverse City	MI
Midwest Environmental Advocates	Madison	WI
Minnesota Conservation Federation	St.Paul	MN
Minnesota Environmental Partnership	St.Paul	MN
My Sustainable Canada	Kitchener	Ont.
National Parks Conservation Association	Chicago	IL
Natural Resources Defense Council	Chicago	IL
Ohio Environmental Council	Columbus	OH
Ohio League of Conservation Voters	Gahanna	OH
PennFuture	Pittsburgh	PA
Pollution Probe	Toronto	Ont.
Prairie Rivers Network	Champaign	IL
Residents for Responsible Government	Youngstown	NY
Rideau Environmental Action League	Smith Falls	Ont.
RiverSides Stewardship Alliance	Toronto	Ont.
Save Lake Superior Association	Two Harbors	MN
Save the River/Upper St. Lawrence RiverKeeper	Clayton	NY
Sierra Club Great Lakes Program	Madison	WI
Sierra Club of Canada – Ontario Chapter	Toronto	Ont.
St. Clair Channelkeeper	Harrison Twp	MI

ORGANIZATION (CONTINUED)	CITY	STATE/ PROVINCE
Tip of the Mitt Watershed Council	Petoskey	MI
Union of Concerned Scientists	Cambridge	MA
Wastewater Education Onsite Wastewater	Traverse City	MI
Watershed Center Grand Traverse Bay	Traverse City	MI
Western Lake Erie Waterkeeper Association	Oregon	OH
Windfall Ecology Center	Aurora	Ont.
Wisconsin League of Conservation Voters	Madison	WI
York Region Environmental Alliance	Thornhill	Ont.



Photo courtesy of U.S. EPA



Photo courtesy of U.S. EPA

APPENDIX C

SELECTED RESOURCES ADDRESSING GREAT LAKES CHEMICALS POLICY

Reports/Publications

Botts, L., and Muldoon, P. 2005. Evolution of the Great Lakes Water Quality Agreement, Michigan State University Press, East Lansing, MI, 377 p.

Canadian Environmental Law Association and Lowell Center for Sustainable Production, 2009. The Challenge of Substances of Emerging Concern in the Great Lakes Basin: A review of chemicals policies and programs in Canada and the United States: A report prepared for the International Joint Commission Multi-Board Work Group on Chemicals of Emerging Concern in the Great Lakes Basin. Available from http://www.chemicalspolicy.org/downloads/IJC_FINAL92009.pdf.

Chemicals of Emerging Concern Work Group to the International Joint Commission (IJC), 2011. Great Lakes Water Quality Agreement Priorities 2009–11 Series. 2009–2011 Priority Cycle Report on the Chemicals of Emerging Concern, 2011. IJC, Special Publication 2011–05, Windsor, Ontario, Canada. Available from <http://meeting.ijc.org/sites/default/files/flash-book/chemicals.pdf>.

Great Lakes Chemicals of Emerging Concern Advisory Work Group to the International Joint Commission (IJC), 2009. Great Lakes Water Quality Agreement Priorities 2007–09 Series. Work Group Report on Great Lakes Chemicals of Emerging Concern, 2009. IJC, Special Publication 2009–01, Windsor, Ontario, Canada. Available from <http://www.ijc.org/en/priorities/2009/reports/2009-chemicals.pdf>.

Organizations/Initiatives/Programs

Binational Public Engagement for the Negotiations to Amend the Great Lakes Water Quality Agreement
http://binational.net/glwqa_2011public_e.html

Canadian Centre for Pollution Prevention
<http://www.c2p2online.com/>

Chemicals Policy & Science Initiative
<http://www.chemicalspolicy.org/home.php>

Environment Canada, Great Lakes
<http://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En>

Great Lakes Binational Toxics Strategy
<http://binational.net/bns/menu-e.html>

Great Lakes Green Chemistry Network
<http://www.glgc.org/>

Great Lakes Regional Pollution Prevention Roundtable
<http://www.glrppr.org/>

Green Centre Canada
<http://www.greencentrecanada.com/>

International Joint Commission
<http://www.ijc.org/>

National Pollution Prevention Roundtable
<http://www.p2.org/news/>

U.S. Environmental Protection Agency, Great Lakes Pollution Prevention and Toxics Reduction
<http://epa.gov/greatlakes/p2.html>

U.S. Environmental Protection Agency, Pollution Prevention and Toxics
<http://www.epa.gov/oppt/>

ENDNOTES

(URLs current as of November 26, 2011)

- 1 U.S. EPA, 2010 Biennial National Listing of Fish Advisories, available (along with state advisory database) from http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/advisories_index.cfm; New York State Department of Health, Chemicals in Sportfish and Game, available from http://www.health.ny.gov/environmental/outdoors/fish/health_advisories/; Commonwealth of Pennsylvania, Fish Consumption Advisories – 2011, available from http://www.portal.state.pa.us/portal/server.pt/community/fish_consumption/10560/fish_advisory/554001.
- 2 Ontario Ministry of the Environment, Guide to Eating Ontario Sport Fish, 2011–2012, available from http://www.ene.gov.on.ca/environment/en/resources/collection/guide_to_eating_ontario_sport_fish/index.htm.
- 3 See for example Hites R. 2004. Polybrominated diphenyl ethers in the environment and in people: a meta-analysis of concentrations. *Environ Sci Technol* 38(4):945–956; Fields, S., Great Lakes: Resource At Risk, *Environmental Health Perspectives*, 113(3):A165-A173; Great Lakes Chemicals of Emerging Concern Advisory Work Group to the International Joint Commission (IJC), 2009. Great Lakes Water Quality Agreement Priorities 2007-09 Series. Work Group Report on Great Lakes Chemicals of Emerging Concern, 2009. IJC, Special Publication 2009-01, Windsor, Ontario, Canada, available from <http://www.ijc.org/en/priorities/2009/chemicals>.
- 4 Great Lakes Chemicals of Emerging Concern Advisory Work Group to the International Joint Commission (IJC), 2009, *Op. Cit.*
- 5 U.S., Canada, Great Lakes Water Quality Agreement, Article II, available from http://www.ijc.org/en/activities/consultations/glwqa/GLWQA_e.pdf
- 6 *Ibid.*
- 7 Canada-United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes, available from http://binational.net/bns/strategy_en.pdf.
- 8 See U.S. EPA, Environment Canada, Great Lakes Binational Toxics Strategy, December 2008 Status Report, available from http://binational.net/bns/2008/2008GLBTS_en.pdf.
- 9 *Ibid.* Concerning regulatory actions, the Strategy document notes: “In the U.S., existing and currently planned regulatory actions will contribute to meeting the goal of virtual elimination; however, this Strategy is not a regulatory action, nor is it expected, in and of itself, to lead to the promulgation of any rule or regulation. To the extent that regulatory actions are taken with regard to Strategy substances, they will be governed by the statutes authorizing the actions.”
- 10 *Ibid.*
- 11 Great Lakes Binational Toxics Strategy, available from <http://binational.net/bns/menu-e.html>.
- 12 Great Lakes Regional Collaboration Strategy, available from <http://www.glrca.us/>.
- 13 Bails, J., Beeton, A., Bulkley, J., DePhilip, M., Gannon, J., Murray, M., Regier, H., and Scavia, D., Prescription for Great Lakes Ecosystem protection and restoration, available at http://www.healthylakes.org/site_upload/upload/prescriptionforgreatlakes.pdf.
- 14 Agreement Review Committee, Report to the Great Lakes Binational Executive Committee, Vol. 1, available from http://binational.net/glwqa_2007_e.html.
- 15 Amending the Great Lakes Water Quality Agreement, available from http://binational.net/glwqa_2010_e.html.
- 16 Botts, L. and Muldoon, P., 2005. Evolution of the Great Lakes Water Quality Agreement, Michigan State University Press, East Lansing, MI, 377 p.
- 17 *Ibid.*
- 18 Thompson Gow & Associates, Evaluation of the Canada-United States Great Lakes Binational Toxics Strategy, Final Report, Prepared for the Binational Toxics Strategy Progress Review Work Group and International Joint Commission, July 12, 2001. Appendix C in Review of Progress Under the Canada-United States Great Lakes Binational Toxics Strategy: A Report to the Great Lakes Water Quality Board by the Progress Review Work Group, November 13, 2001, available from <http://www.ijc.org/php/publications/html/bts/>
- 19 International Joint Commission, Synthesis of Public Comment on the Forthcoming Review by the Federal Governments of Canada and the United States of the Great Lakes Water Quality Agreement, available from <http://www.ijc.org/php/publications/pdf/ID1588.pdf>.
- 20 *Ibid.*
- 21 Henceforth in the report, “organization” will generally reference either organizations or offices (e.g., regional office of a national organization).



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