

Status of Restoration Activities in Great  
Lakes Areas of Concern: A Special Report

April 2003

Report of the  
International Joint Commission

FINAL

## **Executive Summary**

Nearly a decade after the revised 1978 Great Lakes Water Quality Agreement was signed by Canada and the United States to "restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem," the two nations agreed that the worst areas would be given priority attention. Subsequently, 43 such areas were designated as Areas of Concern because they contained contaminated sediment, inadequately treated wastewater, nonpoint source pollution, inland contaminated sites or degraded habitat to a greater degree than the rest of the Great Lakes. Twenty-six of these are solely in the United States, 10 are solely in Canada, and five are binational waterways.

Annex 2 of the Great Lakes Water Quality Agreement directs Canada and the United States, working with state and provincial governments, to develop plans (known as Remedial Action Plans) to restore and protect ecosystem health so that the water is drinkable, beaches are swimmable and fish are safe to eat, among other such beneficial uses. Pursuant to the commitment made in the Commission's 2002 Eleventh Biennial Report on Great Lakes Water Quality and the requirements of the Great Lakes Water Quality Agreement, the International Joint Commission produced this report to inform the public on how much has been done in restoring beneficial uses in Areas of Concern. The Commission greatly appreciates the cooperation and assistance of the two governments in its preparation.

In many cases, information on remedial action to date, on future activities, and on the restoration of beneficial uses is unavailable or incomplete. Moreover, it is difficult to determine the actual impact of work done in the Great Lakes basin outside of the Remedial Action Plan program on the restoration of beneficial uses in Areas of Concern. However, we do know that the general direction toward restoration is positive. While the Great Lakes Water Quality Agreement does not prescribe the means to implement the restoration called for in Remedial Action Plans, it does call on governments to ensure that such plans are implemented. As such, the approach in each country is different. Although a significant level of effort toward Remedial Action Plan implementation has been observed in the Great Lakes Areas of Concern, much more work remains to be done. For the best information available on indicators of progress for each Area of Concern, see the Matrix of Restoration Activities that accompanies this report. These indicators include sediment remediation, wastewater infrastructure, habitat rehabilitation, nonpoint source pollution control, and remediation of hazardous waste sites.

The Commission observes that the magnitude of restoration required in the United States is greater than in Canada, and therefore, the resources allocated to remediation tend to reflect this distinction.

The findings of the Commission are as follows.

1. Two Areas of Concern in Canada have been delisted, and two Areas of Concern, one in Canada and one in the United States, are recognized as being Areas of Concern in a Recovery Stage.

2. In Canada, work to remediate sediment has taken place or is ongoing in two of 10 Canadian-only Areas of Concern. Natural recovery<sup>a</sup> has been selected as the remedial strategy in seven Canadian-only Areas of Concern. To date, approximately \$33 million (CAD) has been spent on sediment remediation in Areas of Concern. In addition, approximately \$270 million (CAD) has been spent on wastewater infrastructure in Areas of Concern.
  
3. In the United States, work to remediate sediment has taken place or is ongoing in 14 of the 26 United States-only Areas of Concern. To date, the United States reports that \$160 million (USD) has been spent in Areas of Concern, and several billion dollars has been spent on wastewater treatment. Aside from Presque Isle Bay (Pennsylvania) and Torch Lake (Michigan), no United States Area of Concern has decided whether natural recovery will be its strategy for remediating sediment. Cleanup of contamination at nonaquatic sites that contribute to restoration of Areas of Concern has occurred under other programs, such as the United States Superfund program, but cleanup of these nonaquatic sites is not always specifically associated with Remedial Action Plans.

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<sup>a</sup> Allowing natural physical, chemical or biological processes to reduce the mass, toxicity, mobility, volume or concentration of contaminants in sediment.

4. Work to remediate contaminated sediment has taken place or is ongoing in two of the five binational Areas of Concern in Canada and in four of the five binational Areas of Concern in the United States.
5. The governments are not adequately reporting biennially on progress in developing and implementing Remedial Action Plans and in restoring beneficial uses, as called for in Annex 2 of the Agreement.
6. Key challenges facing the governments in implementing Remedial Action Plans and restoring beneficial uses are:
  - securing the resources to implement the plans;
  - identifying accountability and responsibility;
  - defining restoration targets where they do not exist;
  - setting priorities; and
  - monitoring recovery.
7. Information gaps on what has been implemented and what needs to be done limit the governments' ability to estimate and successfully acquire resources necessary to restore beneficial uses in the Areas of Concern.
8. Many Areas of Concern, particularly those in the United States, do not have clearly defined geographic boundaries as required by Annex 2 of the Great Lakes Water Quality Agreement, thereby making it difficult to

determine a full accounting of restoration activities within the Areas of Concern.<sup>b</sup>

9. The governments' management of Remedial Action Plans requires more clearly delineated accountability and responsibility, however, some recent progress in this regard is noted.
10. The criteria and rationale for selecting natural recovery as the method of sediment remediation are not clear.
11. Although the Agreement does not use the term, the two governments are recognizing or designating Areas of Concern as being in a recovery stage.
12. Without clear restoration targets for each impaired beneficial use in each Area of Concern, particularly in the United States, it is difficult to quantify the specific costs of the remaining work. The United States government, however, has currently estimated that costs of \$7.4 billion (USD) will be required to address the wastewater infrastructure and sediment improvements necessary to restore beneficial uses in selected Areas of Concern for which detailed information is available. No information is available on future costs in its remaining Areas of Concern. The Canadian

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<sup>b</sup> The Commission is encouraged by the United States Environmental Protection Agency's expectation to develop GIS boundaries for each Area of Concern by June/July 2003

government has estimated a cost of \$1.9 billion (CAD) to address these improvements across all Canadian Areas of Concern.

In view of our obligations, studies and discussions with the parties, the recommendations of the Commission are as follows.

1. The two governments should document their considerable investment and achievements to date in order to provide the public with a true reflection of their accomplishments.
2. The two governments should meet their responsibility to formally report biennially on the degree to which each impaired beneficial use in each Area of Concern has been restored, as required by Annex 2, Paragraph 7(b), of the Great Lakes Water Quality Agreement.
3. The two governments should ensure that monitoring, data support and information management systems are in place and that the governments soon provide an update of the Matrix of Restoration Activities to the Commission. The Commission believes that the utility of the matrix would be greatly enhanced by maintaining it as a living, web-based document available to governments and the public, and invites governments to help make this happen.

4. The two governments should report to the Commission and the public on the criteria and rationale for selecting natural recovery as the method of sediment remediation.
5. The United States government should soon provide the Commission with a schedule for the development of restoration targets for each impaired beneficial use in each Area of Concern.
6. Federal, state and provincial governments should ensure accountability and responsibility for Remedial Action Plan implementation and set clear lines of authority for each of the Areas of Concern.
7. Federal, state and provincial governments should ensure that maps for the Areas of Concern clearly define the geographic boundaries of each Area of Concern, particularly in the United States, and that they identify the sources of degradation.
8. Federal, state and provincial governments should report to the Commission and the public on their rationale for determining priorities for remedial measures and identify those priorities within and among the Areas of Concern.
9. The two governments should report to the Commission and the public the criteria and rationale for recognizing or designating Areas of Concern in a Recovery Stage.

In the Canada-Ontario Agreement of 2002 and the United States Great Lakes Strategy of 2002, both Environment Canada and the United States Policy Committee identify plans to address several of these recommendations. The Commission looks forward to reporting on their implementation.