

AREAS OF CONCERN/SEDIMENTS

I. Problem Statement

In 1987, the U.S. and Canada committed to restoring the most degraded portions of the Great Lakes basin. Working through the International Joint Commission (IJC), the Great Lakes states and provinces designated 43 Areas of Concern (AOCs), including 26 in U.S. waters and five in binational waterways. AOCs were identified based on 14 types of impairment, reflecting human uses -- such as eating fish, drinking water and swimming -- and ecological impacts, such as loss of diversity in aquatic life and destruction of fish and wildlife habitat.

AOCs vary widely in geographic scope and extent of environmental problems. Some are confined to small harbors; others encompass an entire river watershed. Some are impacted primarily by one large contaminated sediment site; others face multiple sources of pollution and extensive loss of habitat.

The most common sources of impairment are contaminated sediments; sewage treatment plant discharges and combined sewer overflows; nonpoint source runoff; runoff from hazardous waste sites; and habitat degradation and destruction. Many of the sources that impact the AOCs are addressed in the other chapters of the Great Lakes Regional Collaboration report. Contaminated sediment is linked to impairments in all 31 U.S. AOCs. Due to the widespread, severe impacts of contaminated sediments, and because no other chapter covers them, this is the only pollution source this chapter will address.

Though progress has been made in the AOCs, much remains to be done. Restoration of AOCs has historically been approached through an array of programs, most designed for other purposes and none adequately funded. This is particularly true for the remediation of contaminated sediments. In January 2005, the U.S. Policy Committee for the Great Lakes identified 75 remaining sites in the AOCs with a total estimated volume of nearly 75 million cubic yards of contaminated sediments. Depending on the remedy, total cleanup costs for these sites could range from \$1.5 billion to \$4.5 billion.

There are three primary barriers to achieving further progress in restoring the AOCs: 1) optimizing program administration and effectiveness; 2) addressing contaminated sediments (including disposal and destruction technology issues); and 3) establishing final restoration targets to facilitate “delisting” of AOCs – formally removing them from the list of designated Areas of Concern in the Great Lakes.

Program Administration and Effectiveness: At its inception, the AOC program generated much enthusiasm as a comprehensive, ecosystem-based approach with a strong emphasis on community leadership and stakeholder involvement. Federal funding has supported much of the planning, restoration, research and monitoring conducted in the AOCs. The states, capably assisted by local advisory councils in most AOCs, played an important role in engaging stakeholders, advising federal agencies, and implementing many planning and restoration efforts.

By the late 1990s, however, progress in some AOCs slowed due to diminished funding and a lack of organized federal program direction. Consequently, state, tribal and local efforts declined. In 2002, the General Accounting Office (GAO, now called the Government Accountability Office) produced a report (www.gao.gov/new.items/d02563.pdf) documenting administrative problems in the AOC program. Since then, significant changes have begun to reinvigorate the program. However, there remains a need for more efficient processes and adequate, stable funding for federal, state, local and tribal partners to carry out and achieve complete restoration and delisting of the AOCs.

Contaminated Sediment Issues: It is critical to address unstable and/or bioavailable concentrated deposits of contaminated sediments before they reach the lakes, where cleanup can be much more difficult and expensive. Many remediation projects are constrained by the complexity and cost of design and

implementation, limited alternatives to contaminated sediment dredging and disposal, limited disposal capacity, and a lack of clear standards for beneficial re-use of some sediments.

Delisting: Despite the time and effort invested in the AOC program, no U.S. AOCs have been delisted and there is no consistent way to track progress in restoring these waterways. Further, most impacts are not clearly aligned with existing federal water quality regulations, making it difficult to meaningfully document environmental improvements in the AOCs. AOCs need scientifically justified, measurable delisting targets that address AOC-specific conditions and are consistent with federal, state, local and tribal regulations and policies. Research, remediation and monitoring needed to achieve these restoration targets must be identified, funded, and implemented.

II. Goals and Milestones

The goal of the Great Lakes Regional Collaboration is to restore all the U.S. Great Lakes AOCs. Milestones toward this ultimate goal include:

- By the end of 2006, U.S. EPA should expand the existing U.S. EPA-State RAP Workgroup into a Federal-State AOC Coordinating Committee to better coordinate efforts and optimize existing programs and authorities to advance restoration of the AOCs.
- By the end of 2007, Congress should revise and reauthorize the Great Lakes Legacy Act.
- By the end of 2008, delisting targets for each U.S. AOC should be developed collaboratively by federal, state, local and tribal partners.
- By the end of 2010, 10 AOCs should be delisted (restored to target goals).
- By 2020, all known contaminated sediment sites in the AOCs should be remediated. Coupled with restoration measures identified in other chapters, this will facilitate complete restoration of the AOCs.

III. Recommendations

The following recommendations address obstacles to restoring the AOCs by:

- addressing inefficiencies in the Great Lakes Legacy Act and increasing available funding to a level sufficient to reach the goal of cleaning up all contaminated sediment sites in the AOCs by 2020;
- providing for the program capacity needed to develop measurable endpoints, design and implement remedial actions, and measure results;
- making better use of existing programs and funds through increased coordination at the federal, state, local and tribal levels; and
- working toward better alternatives to removal and disposal of sediments.

1) Great Lakes Legacy Act Funding, Amendments, Reauthorization and Guidance

- **Over the next five years, the Administration should request and Congress should appropriate \$150 million annually for the Great Lakes Legacy Act to remediate contaminated sediment sites in the AOCs. Continued funding at this level over an additional ten years will be needed to achieve the goal of cleaning up all known contaminated sediment sites in Great Lakes AOCs by 2020.**
- **The Great Lakes Legacy Act should enhance and accelerate the pace of sediment remediation in the AOCs by serving as the primary remediation authority or supplementing existing remediation programs addressing contaminated sediments (such as CERCLA, RCRA, state remediation statutes and WRDA § 312, among others). Congress should amend the Act to allow for more efficient implementation of the program, as follows:**

- **The “maintenance of effort” language in the Legacy Act should be dropped because it is not appropriate in the context of sediment remediation where costs often vary widely from year to year and, as a result, it can lead to inadvertent disqualification of otherwise eligible and valuable projects.**
- **The life of appropriated Legacy Act funds should be extended beyond two years (as envisioned by the Legacy Act) to accommodate both responsible remediation and long-term monitoring of the effectiveness of implemented remedies, which is consistent with the 2002 *Great Lakes Strategy*.**
- **The current 35 percent level of matching funds/in-kind services required under the Legacy Act from the nonfederal sponsor at “orphan sites” should be adjusted to 25 percent, or at a minimum, Legacy Act funds should be available for planning and design work with no match or reduced match, in order to “tee-up” projects and maintain momentum.**
- **The current limitation in the Legacy Act which requires exclusive federal agency project implementation precludes disbursement of funds to other entities to assume the lead in project implementation. This requirement restricts the efficient implementation of remedial work in some cases, and should be amended to allow direct disbursement of project funds, which would allow for greater flexibility in implementing the program.**
- **U.S. EPA should develop guidance to clarify and reiterate the Legacy Act’s original intent to permit potentially responsible parties (PRPs) to participate as the nonfederal sponsor for projects funded under the Act. The guidance should confirm that PRPs are neither excluded from eligibility to serve as nonfederal sponsors nor absolved from their liability for remediation of contaminated sediments under federal and state remediation programs. The eligibility of PRPs to provide some or all of the nonfederal share of a Legacy Act package should be evaluated on its merits on a site-specific basis, in the context of the concept of “added value.” Examples of circumstances where PRP participation in Legacy Act project funding would provide “added value” include, but are not limited to, sites where an “orphan share” exists or where the remedy will be enhanced (such as where the scope -- quality or quantity -- of the remediation is improved, innovative methods are employed or the remediation will be accelerated).**

Rationale: Before the Great Lakes Legacy Act, there was no specific federal authorization for a contaminated sediments remediation program for the AOCs. The Act fills this gap and holds the potential for an accelerated sediment remediation program that builds on considerable preparatory work by federal, state, local and tribal agencies and PRPs to evaluate contaminated sediments and to design and implement remedial options.

Appropriations under the Legacy Act have lagged substantially behind authorized levels. U.S. EPA received \$9.9 million in FY 2004 and \$22.3 million in FY 2005, compared to authorized funding of \$50 million annually for remedial activities. If Congress were to appropriate the full \$50 million annually, the interim milestone of delisting 10 AOCs by 2010 can be achieved. However, this spending level will not be adequate to reach the ultimate goal of remediating all contaminated sediment sites in the AOCs by 2020. Based on estimated volumes of contaminated sediments and depending on the remediation options selected, \$150 million (on average) each year matches up with both resource needs and state, local, and tribal capacity to plan and implement remedial projects.

2) AOC Program Capacity

- **The Administration should request and Congress should appropriate \$10 million annually to the Great Lakes states and community-based coordinating councils in the AOCs; and \$1.7 million to U.S. EPA's Great Lakes National Program Office for regional coordination and program implementation.**
- **Furthermore, the U.S. Army Corps of Engineers Great Lakes Remedial Action Plan Program, authorized in Section 401 of the Water Resources Development Act of 1990, should be included in the President's budget to enable the Corps to participate in the Federal-State AOC Coordinating Committee and to request funding for projects that advance restoration of the AOCs.**

Rationale: Restoration of the AOCs is critical to the restoration of the Great Lakes, yet the Clean Water Act provides no specific regulatory authority or funding for the AOC program. The decline in program effectiveness in the late 1990s, which corresponds directly to declining federal financial support and the associated loss of federal, state, tribal and local programmatic capacity, is testament to the need to build and maintain core capacity among the partners involved in AOC restoration. Current funding levels should be enhanced to the recommended levels to ensure adequate technical capacity at the federal, state, local and tribal levels so that large-scale cleanup programs, such as the Great Lakes Legacy Act, are utilized effectively.

To further enhance AOC program capacity, U.S. EPA and each state, in consultation with local AOC advisory groups, should establish cooperative agreements that outline their respective roles and responsibilities, priorities, anticipated outcomes, resource needs, staffing levels, and procedures for documenting and reporting progress.

The core funding recommended above also will enable more rapid development of the delisting targets that are a necessary foundation of remedial projects. Federal, state, local and tribal partners should collaboratively develop delisting targets for each U.S. AOC by the end of 2008, in accordance with the Delisting Principles and Guidelines adopted by the U.S. Policy Committee in December 2001.

3) Federal-State Collaboration

The existing U.S. EPA/State RAP Work Group should be expanded to a Federal-State AOC Coordinating Committee to better coordinate efforts and optimize existing programs and authorities to advance restoration of the AOCs.

Rationale: No single agency at any level of government has the legal authority or programmatic resources to fully restore the AOCs. Further, the current lack of a coordinating mechanism means existing resources are not used as effectively as they could be. A sustained, outcome-oriented collaborative process is needed to effectively consolidate existing resources available for restoring the AOCs.

The Federal Interagency Task Force is charged under the Executive Order with coordinating the Great Lakes activities of federal agencies. While this is a valuable objective, much of the work to restore the AOCs is administered at the state, tribal and local levels. Therefore, a broader collaborative framework is needed. The Coordinating Committee should act as a clearinghouse to move specific projects forward through technical assistance; data collection and sharing; identification of available resources; and joint work efforts. States should help local AOC councils and tribes access the support of the Coordinating Committee, plan and schedule restoration work, and identify nonfederal matching funds as necessary.

4) Promote Development of Environmentally-Sound Sediment Treatment and Destruction Technologies, Beneficial Re-Use of Sediments, and Best Available Disposal Options.

U.S. EPA, the U.S. Army Corps of Engineers and the states and tribes should actively examine innovative approaches to the ultimate disposition of contaminated sediments as an alternative to the current practice of disposing of them in Confined Disposal Facilities (CDFs) or landfills. Congress should fully fund at \$3 million annually over the next five years the research and development program authorized in Section 306 of the Great Lakes Legacy Act. This research will test and promote viable treatment technologies that allow for the separation, immobilization, neutralization or destruction of contaminants in sediments, in-situ or upon removal. A significant focus of this work should be on the development of technologies that produce no new contaminants and do not release contaminants to the environment.

Rationale: While it undoubtedly improves the condition of waterways, the removal and transporting of contaminated sediments to a disposal facility simply relocates the contamination. Disposal facilities can be difficult and expensive to site and build, and the lack of adequate disposal capacity keeps cleanups from moving forward. Alternatives to disposal would address these issues.

Federal, state, local and tribal agencies should examine the feasibility of developing facilities where dredged sediments can be managed for disposal, treatment, destruction and/or beneficial re-use at a single location. Treatment technologies for decontamination and/or beneficial re-use of the dredged material at the facility should be included in project costs. In order to increase limited disposal capacity, the Corps and state and tribal agencies should encourage local communities to “mine” existing CDFs to facilitate the environmentally-sound beneficial re-use of dredged materials. There should be early, broad public outreach in siting decisions regarding disposal or treatment of contaminated sediments.

Recommendation #1: Great Lakes Legacy Act Funding, Amendments, Reauthorization and Guidance

- **Over the next five years, the Administration should request and Congress should appropriate \$150 million annually for the Great Lakes Legacy Act to remediate contaminated sediment sites in the AOCs. Continued funding at this level over an additional ten years will be needed to achieve the goal of cleaning up all known contaminated sediment sites in Great Lakes AOCs by 2020.**
- **The Great Lakes Legacy Act should enhance and accelerate the pace of sediment remediation in the AOCs by serving as the primary remediation authority or supplementing existing remediation programs addressing contaminated sediments (such as CERCLA, RCRA, state remediation statutes and WRDA § 312, among others). Congress should amend the Act to allow for more efficient implementation of the program, as follows:**
- **The “maintenance of effort” language in the Legacy Act should be dropped.**
 - The “maintenance of effort” language in the Legacy Act is counterproductive, penalizing states and local communities that undertake major remediation projects because they will have a higher baseline number for maintenance of effort. The “maintenance of effort” requirement appears to have been inserted in the Legacy Act because such language is customary in situations where grant money is being provided on an ongoing basis. This provision could inadvertently preclude an eligible remediation project from receiving Legacy Act funding if the nonfederal sponsor had coincidentally spent greater funds in the prior year, which is entirely possible in large projects that take place over a number of years. Therefore, the maintenance of effort requirement should be either completely eliminated or more narrowly defined in order to avoid this inadvertent and unfortunate restriction.
- **The life of appropriated Legacy Act funds should be extended beyond two years (as envisioned by the Legacy Act) to accommodate both responsible remediation and long-term remedy effectiveness monitoring, which is consistent with the 2002 *Great Lakes Strategy*.**
- **The current requirement of a 35 percent level of matching funds from the nonfederal sponsor should be made more flexible.**
 - The current 35 percent level of matching funds/in-kind services required under the Legacy Act from the nonfederal sponsor at “orphan sites” (sites where no viable source of private or public funding exists to cover the nonfederal share) for all practical purposes precludes the use of Legacy Act funds at those sites. The match should be adjusted to 25 percent, or at a minimum Legacy Act funds should be available for planning and design work with no match or reduced match, in order to “tee-up” projects and maintain momentum. There are several pure “orphan sites” listed among the U.S. AOCs. At these sites, if the state, tribal or local government is unable to provide the resources for the 35 percent nonfederal match, there will be a “checkmate” situation -- even for the typical scoping work such as site assessment, site characterization and feasibility studies -- whereby those AOCs will never be able to qualify for Legacy Act funding due to the match requirement. Therefore, the matching funds requirement should be eliminated or reduced for some of the preliminary work that needs to be completed at a given site, such as site investigation or design work.

- **Provisions should be provided in the Legacy Act to allow discretion in disbursement of project implementation funds to address the current limitation requiring federal agency project implementation.**
 - Under existing language, the Act does not allow disbursement of funds to the nonfederal sponsor. Currently, due to administrative restrictions, the U.S. EPA Great Lakes National Program Office (GLNPO) cannot disburse funds to the nonfederal sponsor of a Legacy Act project to cover some or all of the 65 percent federal share. This is very problematic in situations where the nonfederal sponsor's contractors are doing most of the work. There are some situations, for example, where the nonfederal sponsor would likely contribute a very high percentage toward the overall project through implementation of a sediment remediation activity. Under the current approach, GLNPO would be forced to use its own contractors to complete the work covered by the federal share. Having two different contractors is inefficient and often problematic.
- **U.S. EPA should develop guidance to clarify and reiterate the Legacy Act's original intent to permit potentially responsible parties (PRPs) to participate as the nonfederal sponsor for projects funded under the act. The guidance should confirm that PRPs are neither excluded from eligibility to serve as nonfederal sponsors nor absolved from their liability for remediation of contaminated sediments under federal and state remediation programs.**
 - The Legacy Act's original intent to permit potentially responsible parties (PRPs) to participate as the source of some or all of the nonfederal sponsor share should be clarified and reiterated. The Great Lakes Legacy Act was passed through the strong cooperative efforts of a diverse array of stakeholders. It was the understanding and expectation of industry and other stakeholders that PRPs could serve as the nonfederal sponsor under appropriate circumstances. This is consistent with the Legacy Act's goal of encouraging accelerated progress in remediating contaminated sediments in the Great Lakes region. The Act refers to the eligibility of funding for the nonfederal share as including "monies paid pursuant to or the value of any in-kind service performed under, an administrative order on consent or judicial consent decree ..."
 - Despite the strong multi-stakeholder support for the passage of the Legacy Act and the express terms of the Act supporting PRP eligibility for funding under the Act, some have asserted that the "polluter pays" principle should preclude PRPs from being eligible to participate in GLLA funding. The Legacy Act does not absolve PRP liability under federal and state remediation programs. A diverse array of stakeholders agree that a balanced approach is appropriate, where PRPs are neither precluded nor entitled to be eligible to participate as a nonfederal sponsor at a Legacy Act sediment site. To do otherwise would cut off one of the best resources to obtain the 35 percent nonfederal share and an opportunity to achieve the important objective of the Legacy Act -- to accelerate the remediation of contaminated sediment in the Great Lakes.
 - Therefore, the eligibility of PRPs to provide some or all of the nonfederal share of a Legacy Act package should be evaluated on its merits on a site-specific basis, in the context of the concept of "added-value." Examples of circumstances where PRP participation in Legacy Act project funding would provide "added value" include: where an "orphan share" exists or where the remedy will be enhanced or accelerated such as where the scope (quality or quantity) of the remediation is improved, innovative methods are employed or the remediation will be accelerated. Therefore, clarification regarding PRP eligibility as the nonfederal sponsor consistent with these suggested guidelines should be included in guidance developed by the agencies responsible for administering the Act. Implications of Legacy Act funding on Natural Resource Damage Assessment (NRDA) issues should be weighed in developing this guidance.

- In cases where implementing the Legacy Act is not feasible, if additional resources are necessary to complete a cleanup, and for sediment sites outside the AOCs, the Federal Interagency Task Force should develop effective mechanisms to address contaminated sediment sites through a collaborative process, leveraging resources from multiple partners and using authorities under all applicable statutes (e.g. WRDA, CWA, CERCLA -- including NRDA provisions -- RCRA, OPA, etc.).
- The Council of Great Lakes Governors, the Great Lakes Legislative Caucus and the Great Lakes Cities Initiative should form a task force to explore innovative options and create regional mechanisms for meeting nonfederal funding requirements under the Great Lakes Legacy Act, Corps of Engineers authorities, and other federal programs.

Recommendation #2: AOC Program Capacity

The Administration should request and Congress should appropriate \$10 million annually to the Great Lakes States and community-based coordinating councils in the AOCs; and \$1.7 million to U.S. EPA's Great Lakes National Program Office for regional coordination and program implementation.

Furthermore, the U.S. Army Corps of Engineers Great Lakes Remedial Action Plan Program, authorized in Section 401 of the Water Resources Development Act of 1990, should be included in the President's budget to enable the Corps to participate in the Federal-State AOC Coordinating Committee and to request funding for projects that advance restoration of the AOCs.

- The eight Great Lakes states, in collaboration with community-based coordinating councils in the AOCs, are vital to effectively implementing the Great Lakes Legacy Act and expediting restoration of the AOCs. The \$10 million annual funding will rebuild and sustain technical capacity at the state, tribal and local levels to ensure that resources – at all levels of government – are fully exploited to increase progress in cleaning up the AOCs. Annual funding for U.S. EPA's Great Lakes National Program Office is necessary to provide effective administration of the Legacy Act as well as consistent oversight and regional coordination of the AOC program. Specifically, this funding will support federal liaisons for each U.S. AOC while ensuring that resources in other federal agencies are fully leveraged to support AOC restoration efforts. The U.S. Army Corps of Engineers' Great Lakes Remedial Action Plan Program, authorized in Section 401 of the Water Resources Development Act of 1990, is specifically directed at AOC restoration. The program utilizes the Corps' unique experience in contaminated sediment remediation and supports planning and design work that is critical to preparing sites for large-scale remediation projects under the Legacy Act.
- A performance-based system should be developed to track progress in restoring the AOCs. Agreement needs to be reached on who is responsible for monitoring after site remediation work is complete. States, tribes and local RAP groups should identify monitoring and assessment needs, and use that information to develop and implement AOC monitoring plans. Where necessary, additional funding should be provided to supplement existing programs of pre- and post-remedial monitoring and assessment.
- The RAP process should be revised to ensure appropriate flexibility in planning and implementing restoration activities, and to utilize plans developed under other programs to accomplish RAP goals.
- Under the proposed Federal-State AOC Coordinating Committee, U.S. EPA and each of the Great Lakes states, in consultation with local AOC advisory groups, should establish five-year agreements for administering the AOC program. Such agreements should outline their respective roles and responsibilities, priorities, anticipated outcomes, resource needs, staffing levels, and procedures for documenting and reporting progress, and clearly communicate this to all interested parties, particularly local stakeholders.

- States should provide adequate staffing to coordinate funding opportunities for AOC work, either by maintaining adequate professional capacity at the state level and/or by passing funding through to the local level.

Recommendation #3: Federal-State Collaboration

The existing U.S. EPA/State RAP Work Group should be expanded to a Federal-State AOC Coordinating Committee to better coordinate efforts and optimize existing programs and authorities to advance the restoration of the AOCs.

- The Federal Interagency Task Force should develop effective mechanisms to leverage resources and technical assistance from federal agencies. Each federal agency should ensure that its annual budget request to Congress includes funding for AOC work anticipated during the fiscal year.

Recommendation #4: Promote Development of Environmentally-Sound Sediment Treatment and Destruction Technologies, Beneficial Re-Use of Sediments, and Best Available Disposal Options.

U.S. EPA, the U.S. Army Corps of Engineers and the states and tribes should actively examine innovative approaches to the ultimate disposition of contaminated sediments as an alternative to the current practice of disposing of them in Confined Disposal Facilities (CDFs) or landfills. Congress should fund at \$3 million annually over the next five years the research and development program authorized in Section 306 of the Great Lakes Legacy Act. This research will test and promote viable treatment technologies that allow for the separation, immobilization, neutralization or destruction of contaminants in sediments, in-situ or upon removal. A significant focus of this work should be on the development of technologies that produce no new contaminants and do not release contaminants to the environment.

- The Council of Great Lakes Governors, the Great Lakes Legislative Caucus and the Great Lakes Cities Initiative should work with the Federal Interagency Task Force on mechanisms for providing disposal capacity for contaminated sediments.
- There must be multi-stakeholder involvement in the identification and approval of contaminated sediment disposal sites within the Great Lakes Basin.
- U.S. EPA, the U.S. Army Corps of Engineers and the states and tribes should develop guidance for the beneficial re-use of sediments and encourage sediment remediation projects that utilize alternatives to disposal.
- Explore and implement beneficial re-use of sediment when feasible and practical.