



U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INSPECTOR GENERAL

*Catalyst for Improving the Environment*

## Evaluation Report

# EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern

Report No. 09-P-0231

September 14, 2009



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## Abbreviations

AOC	Area of Concern
BUI	Beneficial Use Impairment
EPA	U.S. Environmental Protection Agency
FY	Fiscal Year
GLNPO	Great Lakes National Program Office
MCY	Million Cubic Yards
OIG	Office of Inspector General

**Cover photo:** Great Lakes National Program Office's R/V Mudpuppy sampling in the Buffalo River near the Smith Street habitat restoration site, Buffalo, New York, August 2005 (photo from EPA Website).



# At a Glance

*Catalyst for Improving the Environment*

## Why We Did This Review

We conducted this evaluation to determine how effectively the U.S. Environmental Protection Agency (EPA) has fulfilled its role for managing Great Lakes Areas of Concern (AOCs) clean-ups, particularly for remediating contaminated sediments. We examined the results of EPA's Great Lakes AOC effort and assessed whether EPA has an effective strategy to meet its goals.

## Background

Thirty-one AOCs have been identified around the U.S. border of the Great Lakes. All but one are polluted with contaminated sediments. To provide a funding source for sediment remediation, Congress passed the Great Lakes Legacy Act (Legacy Act) in 2002. EPA, through the Great Lakes National Program Office, is responsible for working with the States, localities, and other stakeholders to remove this contaminated sediment.

**For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.**

To view the full report, click on the following link:  
[www.epa.gov/oig/reports/2009/20090914-09-P-0231.pdf](http://www.epa.gov/oig/reports/2009/20090914-09-P-0231.pdf)

## **EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern**

### What We Found

Since 2004, EPA has completed five Legacy Act-funded contaminated sediment clean-ups and remediated approximately 800,000 cubic yards of contaminated sediment. However, EPA is challenged by the overall extent of the contaminated sediment problem in the Great Lakes AOCs. EPA is the designated lead Agency for the clean-ups; however, we found EPA does not have a regime for coordinating remediation activities across its program offices as well as with States, localities, and other stakeholders. While some results have been achieved in cleaning up individual sediment sites, EPA has not developed or implemented a coordinated approach to manage clean-ups.

EPA does not know the full extent of the contaminated sediment problem. Accurate sediment estimates for more than 30 percent of the remediation sites remain unknown. Potential Great Lakes Legacy Act clean-up sites have an estimated federal cost of \$2.25 billion. Local partners will have to come up with a total of \$1.21 billion in non-federal matching funds before Legacy Act assistance is provided. We estimate that at the current rate of progress, it may take more than 77 years to complete all of these clean-ups. Moreover, remediation will be conducted in the order that individual local governments and stakeholders can afford, rather than with regard to the risks posed to human health or the environment. Without improved management, coordination, and accountability, EPA will not succeed in achieving the results intended for the AOC program.

### What We Recommend

We recommend that the Great Lakes National Program Manager: (1) establish an AOC management plan that includes written designations of authority and responsibility for each EPA program office with regard to remediating contaminated sediment; (2) assign a lead EPA office to each Sediment Remediation Site and determine the volume of contaminated sediment at each site; and (3) annually measure and publish estimates of Sediment Remediation Site sediment volumes, clean-up costs, and stakeholder progress for each site.

EPA concurred with developing a limited management plan (but not designating site-specific leadership authorities), and proposed that this management plan would also be updated to include annual reporting on Sediment Remediation Sites. However, these actions are insufficient and do not meet the intent of the recommendations. The recommendations are unresolved.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
INSPECTOR GENERAL

September 14, 2009

**MEMORANDUM**

**SUBJECT:** EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern  
Report No. 09-P-0231

**FROM:** Wade T. Najjum  
Assistant Inspector General, Office of Program Evaluation

**TO:** Bharat Mathur  
Acting Great Lakes National Program Manager

A handwritten signature in black ink that reads "Wade T. Najjum".

This is our report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The estimated cost of this report – calculated by multiplying the project's staff days by the applicable daily full cost billing rates in effect at the time – is \$381,379.

**Action Required**

In accordance with EPA Manual 2750, you are required to provide a written response to this report within 90 calendar days. You should include a corrective actions plan for agreed upon actions, including milestone dates. However, as discussed in the report, we do not believe your planned actions meet the intent of the recommendations and all recommendations are unresolved. We ask that you review our comments and reconsider your responses. We have no objections to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff has any questions regarding this report, please contact me at 202-566-0827 or [najjum.wade@epa.gov](mailto:najjum.wade@epa.gov); Jeffrey Harris, Director, at 202-566-0831 or [harris.jeffrey@epa.gov](mailto:harris.jeffrey@epa.gov); or Jill Ferguson, Project Manager, at 202-566-2718 or [ferguson.jill@epa.gov](mailto:ferguson.jill@epa.gov).

## ***Table of Contents***

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### **Chapters**

<b>1</b>	<b>Background .....</b>	<b>1</b>
	Purpose .....	1
	Background .....	1
	Noteworthy Achievements.....	3
	Scope and Methodology.....	4
<b>2</b>	<b>Current EPA Approach Not Effective for Extent of Sediment Problem .....</b>	<b>5</b>
	EPA Lacks Strategy for Coordinating AOC Clean-ups.....	5
	Size and Responsibility for Clean-ups Undetermined .....	6
	Current Fund Management Impacts Clean-up Progress.....	7
	Conclusions.....	8
	Recommendations .....	8
	Agency Comments and OIG Evaluation .....	9
	<b>Status of Recommendations and Potential Monetary Benefits.....</b>	<b>10</b>

### **Appendices**

<b>A</b>	<b>List of Beneficial Use Impairments.....</b>	<b>11</b>
<b>B</b>	<b>Agency Comments on Draft Report and OIG Responses .....</b>	<b>12</b>
<b>C</b>	<b>Distribution .....</b>	<b>16</b>

# Chapter 1

## Introduction

### Purpose

The purpose of this evaluation was to determine whether the U.S. Environmental Protection Agency (EPA), through the Great Lakes National Program Office (GLNPO), was fulfilling its assigned role to effectively address the Great Lakes Areas of Concern (AOCs), and whether these efforts achieved the expected results. Our specific objectives were to determine:

1. How effectively is GLNPO fulfilling its assigned role for managing contaminated sediment clean-ups in the AOCs?
2. How effectively does GLNPO coordinate AOC clean-ups within EPA, with States, and with non-federal stakeholders?
3. How effective is GLNPO's strategy in meeting its goals?

### Background

The Great Lakes watershed is the largest freshwater lake basin in the world. The five lakes (Erie, Huron, Michigan, Ontario, and Superior) cover 94,000 square miles and hold 5,500 cubic miles (18 percent) of the Earth's fresh water supply. The Great Lakes border two countries, nine U.S. States, and the Province of Ontario. The U.S. Government first engaged in Great Lakes management by signing the 1909 Boundary Waters Treaty with Canada.

In 1972 and 1978,<sup>1</sup> the United States and Canada signed the Great Lakes Water Quality Agreement (the "Agreement") to help reduce pollution in the Great Lakes. In 1987, amendments to the Agreement defined an AOC as "a geographic area that fails to meet the General or Specific Objectives of the Agreement where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life." The AOC requirements of the Agreement were included in the 1987 Amendments to the Clean Water Act. At that point, the Act became the controlling authority over the AOC requirements. The Agreement signatories, using the Beneficial Use Impairment (BUI) criteria from the Agreement, identified 43 AOCs: 26 located entirely within the United States, 12 located wholly within Canada, and 5 that are shared by both countries (see Figure 1.1 for AOC locations).

In 2002, Congress enacted the Great Lakes Legacy Act (Legacy Act) to provide a funding source for cleaning up sites with contaminated sediment that did not fall under the jurisdiction of other environmental statutes. Through the Act, when a

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<sup>1</sup> The United States and Canada renewed the Great Lakes Water Quality Agreement in 1978.

State or local sponsor commits 35 percent or more of the clean-up cost, the remaining amount (up to 65 percent) is provided in federal funds. The Legacy Act was reauthorized in 2008, extending funding through Fiscal Year (FY) 2010.



**Figure 1.1: Geographic location of U.S. and Canadian AOCs**

Source: GLNPO Website

In addition to the Clean Water Act and Legacy Act, federal environmental statutes that impact the remediation of AOCs include the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) and the Resource Conservation and Recovery Act. In AOC clean-ups where these other funding sources or mechanisms are available, the Legacy Act requires GLNPO to coordinate with applicable regulatory or enforcement activities to ensure that Legacy Act funds are used in a way that adds value and maximizes environmental benefits. In addition to these statutory overlaps, three separate EPA regions (2, 3, and 5) contain AOCs within their geographic boundaries.

The AOCs are managed by the GLNPO, which reports directly to EPA's Region 5 Administrator. The Region 5 Administrator is also the Great Lakes National Program Manager. GLNPO monitors the Great Lakes ecosystem indicators, manages and provides public access to Great Lakes data, and provides assistance for community-based Remedial Action Plans for AOCs. GLNPO's role is to

coordinate with stakeholders and encourage non-federal partners to initiate clean-ups in the AOCs.

AOCs range in size from less than 1 square mile to hundreds of square miles. All but 1 of the 31 U.S. AOCs have some volume of contaminated sediments. The remaining AOC, Oswego River, was impaired for restrictions on fish and wildlife consumption, degradation of fish and wildlife populations, and loss of fish and wildlife habitat. It has since been delisted.

Based on the most recent State estimates, the AOCs have 68 Sediment Remediation Sites that contain more than 76 million cubic yards (MCY) of contaminated sediment. Because they are located along rivers or harbors that feed into the Great Lakes, AOCs act as a source of contaminated sediment to the body of the lakes. In a few cases an AOC is managed as a single Sediment Remediation Site, but in most cases several Sediment Remediation Sites are within each AOC.

GLNPO's role is to assist States in developing the community-based remedial action plans for each AOC. These plans outline the scope of the problems in the AOCs and determine which of the Beneficial Uses are impaired. In addition, the plans identify what work needs to be completed to allow for those impairments, and ultimately the entire AOC to be cleaned up and "delisted." States must demonstrate that all 14 specific BUIs are restored to get an area removed from the "list" (see Appendix A for a description of the impairment). Eleven of the 14 impairments can be caused by contaminated sediment, and no AOC with contaminated sediment has been delisted.

The Clean Water Act requires the EPA Administrator to enter into agreements with the other agencies involved in Great Lakes clean-up activities. Internally, EPA leadership is responsible for assigning the duties and responsibilities of each program office and region. With respect to the Great Lakes, EPA management assigns the time periods and resources committed to accomplish assigned duties and responsibilities.

## **Noteworthy Achievements**

GLNPO has completed five Legacy Act-funded contaminated sediment removals and another three projects are in the development phase. The five completed clean-up projects have removed approximately 800,000 cubic yards of contaminated sediment. To date, GLNPO has delisted one AOC (without contaminated sediments), delisted 11 BUIs, and has assisted States in developing more than 250 BUI delisting targets. GLNPO has also provided staff liaisons that help to facilitate each AOC's Remedial Action Plan. The role of the Remedial Action Plan Liaisons is to work with other EPA offices, as well as States and local stakeholders, to clean up the AOCs. Those other EPA offices include the Office

of Solid Waste and Emergency Response; Office of Water; and Office of Prevention, Pesticides, and Toxic Substances.

## **Scope and Methodology**

This evaluation focused on managing contaminated sediment in the Great Lakes AOCs. The AOC requirements of the Clean Water Act include other factors besides contaminated sediment, many of which are beyond the scope of the data collected for this evaluation. We understand that the entire ecological recovery and restoration of the Great Lakes is a complex and lengthy process whereby measurable success will be difficult to expedite. However, contaminated sediment is a primary concern in AOC management, as EPA has determined that as many as 11 of the 14 BUIs can be caused by contaminated sediment. Large amounts of contaminated sediments are across the Great Lakes; we evaluated EPA efforts to remove and remediate those sediments in AOCs.

During field work, we conducted numerous interviews with a wide variety of EPA and State staff. These included GLNPO staff; staff from EPA Regions 2 and 5; Headquarters staff in the Office of Water; and State staff responsible for AOC clean-ups in Michigan, New York, Ohio, and Wisconsin.

The OIG reviewed the Clean Water Act; the Legacy Act and its 2008 reauthorizing language; and Executive Order 13340, which established the Great Lakes Interagency Task Force. We reviewed information presented by the Great Lakes Regional Collaboration and the International Joint Commission, which facilitates the official AOC relationships between the United States and Canada. We collected sediment volume and remediation cost estimates from GLNPO. We also reviewed the EPA Strategic Plan and identified the annual and strategic targets for AOC clean-ups.

We performed our evaluation between October 2008 and July 2009 in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## **Chapter 2**

### **Current EPA Approach Not Effective for Extent of Sediment Problem**

At the current rate of progress, it may take more than 77 years to complete estimated work at all Great Lakes Legacy Act clean-up sites. However, EPA does not know the full extent of the contaminated sediment problem. Accurate sediment estimates for more than 30 percent of the remediation sites remain unknown. EPA has not established a regime or systematic process to manage remediation activities across its program offices. EPA has not defined responsibilities and authorities over site clean-up among the program offices; remediation efforts are not conducted in a coordinated approach. Consequently, the results intended from the AOC program will not be achieved.

#### **EPA Lacks Strategy for Coordinating AOC Clean-ups**

GLNPO has not developed an effective management framework to address cleaning up contaminated sediments in the Great Lakes AOCs. It is further challenged by the number of overlapping federal environmental statutes that have jurisdiction over the AOC sediment clean-ups. EPA has not assigned a lead program office for half of the remediation sites located in the AOCs. Currently, the programs responsible for these overlapping statutes coordinate within the AOCs informally. Complexities related to the overlapping statutes include:

- Superfund jurisdiction over numerous sites within the AOCs,
- Clean Water Act enforcement actions that are pending,
- Resource Conservation and Recovery Act contamination removal, and
- Statutory limitation of Legacy Act funds to remediate a site that is being cleaned up using Superfund money.

The Clean Water Act requires EPA to develop coordinated planning processes and ensure the implementation of State Remedial Action Plans. It also requires EPA to ensure related programs within the Agency (Water, Superfund, and any EPA Program Office involved in the clean-up) enter into agreements for work to be completed. EPA is also required to delineate duties, timelines, and resources committed to AOC work among its Program Offices and regions as well as other stakeholders.

To date, the Great Lakes National Program Manager has not established a formal strategy for how GLNPO will coordinate and plan efforts with the States. GLNPO told us that it engages in regular dialogue with States and other potential sponsors on project submittals. GLNPO staff said that they prefer this informal

management approach and will continue to use it, rather than a more structured strategy, to address all sediment issues.

Overlapping program responsibilities and unclear lines of authority between EPA program offices and others, combined with a lack of accountability, result in an ineffective program for AOC clean-up. EPA has not determined its likely course of action for each AOC and Sediment Remediation Site. GLNPO has focused its efforts on an informal approach, engaging in dialogue with stakeholders, but has not developed specific coordination regimes. Many Sediment Remediation Sites remain unassessed, impacting the accuracy of cost, volume and completion date estimates. Consequently, the true extent of sediment contamination and scope of work at each site is unknown.

In the absence of coordinated planning, costs can escalate, resources are wasted, and risks to human health and the environment increase due to delays in site clean-ups. Regardless of the amount of funding available, it is unlikely that EPA's efforts to clean up these sites will be successful until EPA assigns responsibility and accountability for each Sediment Remediation Site to a specific program office.

## **Size and Responsibility for Clean-ups Undetermined**

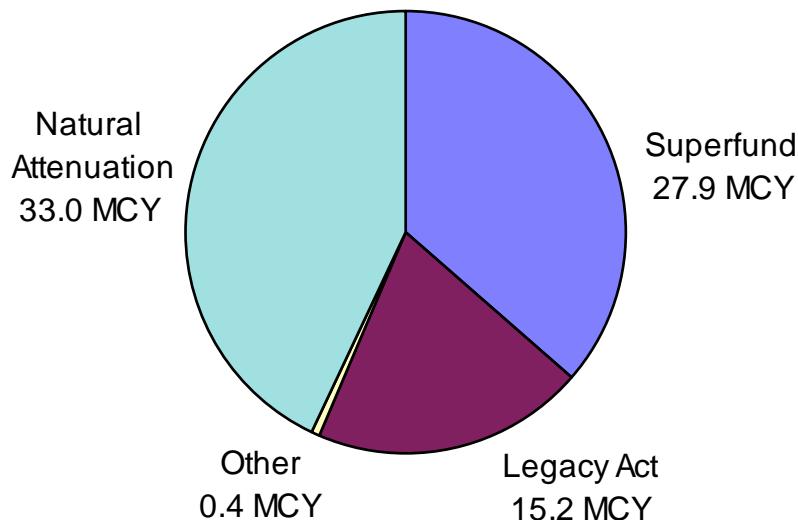
In 2005, the GLNPO asked States to provide estimates for the volume and cost of remediating contaminated sediment in the AOCs. The States estimated that approximately 76 MCY of contaminated sediment need to be managed across 68 Sediment Remediation Sites. However, States did not provide sediment volume estimates for 23 of these sites. Therefore, the 76 MCY estimate does not describe the total amount of sediment in the AOCs.

As discussed above, authority for remediation of AOC sediments can vary between Superfund, other environmental statutes, and the Legacy Act. While the 2005 sediment estimates are not complete, they are the only data available. Figure 2.1 on page 7 represents a GLNPO representative's predictions of site designation. Authority over and management of these estimated sediment volumes depend on the designation of each Sediment Remediation Site. There are 22 sites, comprising approximately 27.9 MCY of sediment, that are on the Superfund National Priorities List. GLNPO expects them to be managed by Superfund because they are on the National Priorities List. EPA decided two sites comprising approximately 33 MCY of contaminated sediment will be left in place and undisturbed, referred to as natural attenuation.<sup>2</sup> GLNPO, through the Legacy Act, will potentially be responsible for at least 15.2 MCY of sediment in sites where estimates are available, but could ultimately be responsible for significantly more sediment.

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<sup>2</sup> In natural attenuation, the contaminated sediment is left in place and until it is covered with clean sediment or degraded through natural processes.

**Figure 2.1: Distribution of Contaminated Sediments in AOCs by GLNPO-Anticipated Site Lead (in MCY)**



Source: GLNPO

## Current Fund Management Impacts Clean-up Progress

After receiving the State estimate data, the Great Lakes Regional Collaboration,<sup>3</sup> in 2005, estimated that it would take a total of \$3.46 billion to clean up Legacy Act sediment. The Regional Collaboration recommended that Congress appropriate \$2.25 billion of funding (or \$150 million per year over 15 years) to fund the federal portion of these clean-ups.

The complexity in accomplishing clean-ups is compounded by the Legacy Act requirement that each sediment remediation project have a non-federal sponsor. Such a sponsor must contribute at least 35 percent of the cost of the remediation, either in cash or through in-kind assistance before work begins. Using the \$3.46 billion cost estimate from the Great Lakes Regional Collaboration, the non-federal share of these clean-ups would total approximately \$1.21 billion.

These remediation projects depend upon local funds and support to produce the non-federal share. Remediation projects are not approved and site-specific planning does not begin until EPA is assured of the funding match. Consequently, the clean-ups are conducted in the order that individual local governments and stakeholders can afford them, rather than with regard to the risks posed to human health or the environment. As a result, this requirement creates an obstacle to progress, especially when local governments and partners are under

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<sup>3</sup> In 2004, the Great Lakes Regional Collaboration of National Significance was created with members from federal, State, and local governments; tribes; and other stakeholders. In accordance with Executive Order 13340, a strategic plan for the Great Lakes was developed.

financial stress. To date, at least four potential sediment remediation projects have been postponed because the non-federal partners were unable to reach the 35-percent match.

The average amount of Legacy Act funding between FYs 2005 and 2008 was \$29 million. Based on the Great Lakes Regional Collaboration estimated funding need and the average annual funding, we estimate that cleaning up the contaminated sediment sites through the Legacy Act will take over 77 years to complete. Moreover, restoring specific impairments may not occur for many years following sediment remediation, making the timeframe for complete recovery even longer.

## **Conclusions**

Cleaning up the contaminated sediments in the Great Lakes AOCs is a large, complex, and expensive undertaking; the full scope of the resources required remains unknown. EPA has not developed the specific strategies or management control processes necessary to implement a successful sediment remediation effort of that magnitude. Further, EPA has not conducted site assessments to determine the full scope of the sediment contamination, which prevents accurately estimating resources needed to complete sediment clean-ups. EPA has also not formally designated which Program Offices will be responsible for each clean-up. This informal AOC management approach results in a lack of accountability for achieving results. Resource challenges at both the federal and local levels will impact the clean-up progress. While EPA has made progress cleaning up some Sediment Remediation Sites, the program could be more effective by implementing management processes and completing site assessments to determine the extent of resources needed to manage the AOC sediment problem.

## **Recommendations**

We recommend that the Great Lakes National Program Manager:

- 2-1 Establish an AOC management plan that includes written designations of authority and responsibility for each EPA program office with regard to remediating contaminated sediment.
- 2-2 Assign a lead EPA office to each Sediment Remediation Site, responsible for developing a site-specific action plan, completing site assessments if needed, and determining the clean-up timeframes and resource needs of the project.
- 2-3 Annually measure and publish estimates of Sediment Remediation Site sediment volumes, clean-up costs, and stakeholder progress for each Sediment Remediation Site.

## Agency Comments and OIG Evaluation

GLNPO responded to our draft report by stating that the Great Lakes Legacy Act program is being strategically and effectively managed, and is producing environmental results while working within the resource limitations and programmatic structure and requirements provided by the Act. EPA disagreed it had not developed an effective management framework to address cleaning up contaminated sediments in the Great Lakes AOCs. Further, EPA stated that it believes the type of management framework which is recommended in the draft report would not result in greater progress for achieving contaminated sediment remediation goals.

We outline our findings, as well as descriptions of a lack of strategy and coordination and the undetermined size and responsibility of the clean-ups, in Chapter 2. GLNPO has acknowledged a need to understand the “full scope” of the sediment contamination by conducting additional site assessments. Nevertheless, there is no formal process or Agency policy document at the regional and National Program Management level that specifically defines the roles, responsibilities, and authorities required to conduct assessment and planning at each Sediment Remediation Site.

Further, as noted in Chapter 1, since the AOCs were first designated in 1987, only one AOC has been delisted, and that AOC did not require the removal of contaminated sediments. EPA has yet to exercise all of its authorities to ensure that available resources are optimally allocated and program effectiveness is maximized. After 5 years, EPA has not conducted all of the site assessments necessary to determine the full scope of sediment contamination and cannot accurately estimate the resources needed to complete sediment clean-ups. We believe making informed decisions about spending public funds requires realistic plans based on facts with progress measured against specific baselines.

See Appendix B for a copy of the Agency response and OIG comments.

## ***Status of Recommendations and Potential Monetary Benefits***

Rec. No.	Page No.	RECOMMENDATIONS			POTENTIAL MONETARY BENEFITS (in \$000s) <sup>2</sup>	
		Subject	Status <sup>1</sup>	Action Official	Planned Completion Date	Claimed Amount
2-1	8	Establish an AOC management plan that includes written designations of authority and responsibility for each EPA program office with regard to remediating contaminated sediment.	U	Great Lakes National Program Manager		
2-2	8	Assign a lead EPA office to each Sediment Remediation Site, responsible for developing a site-specific action plan, completing site assessments if needed, and determining the clean-up timeframes and resource needs of the project.	U	Great Lakes National Program Manager		
2-3	8	Annually measure and publish estimates of Sediment Remediation Site sediment volumes, clean-up costs, and stakeholder progress for each Sediment Remediation Site.	U	Great Lakes National Program Manager		

<sup>1</sup> O = recommendation is open with agreed-to corrective actions pending;  
 C = recommendation is closed with all agreed-to actions completed;

U = recommendation is undecided with resolution efforts in progress

<sup>2</sup> Identification of potential monetary benefits was not an objective of this evaluation

**Appendix A*****List of Beneficial Use Impairments***

Impairment of beneficial use(s) means a change in the chemical, physical, or biological integrity of the Great Lakes System sufficient to cause any of the following:

1. restrictions on fish and wildlife consumption;
2. tainting of fish and wildlife flavor;
3. degradation of fish and wildlife populations;
4. fish tumors or other deformities;
5. bird or animal deformities or reproduction problems;
6. degradation of benthos;
7. restrictions on dredging activities;
8. eutrophication or undesirable algae;
9. restrictions on drinking water consumption, or taste and odor problems;
10. beach closings;
11. degradation of aesthetics;
12. added costs to agriculture or industry;
13. degradation of phytoplankton and zooplankton populations; and
14. loss of fish and wildlife habitat.

Source: Great Lakes Water Quality Agreement of 1978, as amended, 1987.

**Appendix B*****Agency Comments on Draft Report  
and OIG Responses*****MEMORANDUM****DATE:** September 04, 2009**SUBJECT:** Great Lakes National Program Office response to Office of Inspector General (OIG) draft report entitled “EPA Needs a Cohesive Plan to Clean Up the Great Lakes Area of Concern; Assignment No: 2008-00600”**FROM:** Bharat Mathur  
Acting Great Lakes National Program Manager**TO:** Jeffrey Harris, Director for Program Evaluation, Cross Media Issues

Thank you for the opportunity to review and provide comments on the draft report entitled, “EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern; Assignment No: 2008-00600.” Please consider this as our official response in accordance with EPA Manual 2750. Below are some general comments and the Program’s response to the proposed recommendations.

Overall, it is our belief that the Great Lakes Legacy Act (“Act”) program is strategically and effectively managed, and is producing environmental results while working within the resource limitations and programmatic structure and requirements provided by the Act. We believe that EPA has developed an effective management framework to address contaminated sediments in the Great Lakes Areas of Concern (“AOCs”). However, we have outlined below some actions that we plan to take that we believe are responsive to your recommendations, and should enhance the transparency of the Program.

Recommendation 2-1 in the draft report states that the Great Lakes National Program Manager, “establish an AOC management plan that includes written designations of authority and responsibility for each EPA program office with regard to remediating contaminated sediment.” We concur in part with this recommendation. We will develop a management plan that will describe the overall processes by which contaminated sediment remediation projects are developed by various programs. Much of the information recommended for inclusion in an AOC management plan exists and is publicly available. This information can be assembled into one consolidated report and will be made available to the public. This report will outline our approach for how the Program will address the contaminated sediment problem in the Great Lakes AOCs. The report will describe the nature of the sediment problem in the Great Lakes AOCs; our current authorities for managing contaminated sediments; and how we coordinate with other EPA program offices as well as other entities involved in remediating contaminated

sediments in the Great Lakes. It will also provide a compilation of all known contaminated sediment sites in the Great Lakes and provide information for each of these sites on: estimated volumes; current authorities being used at each site; and status of work as currently known. The report will document both what is being addressed by all programs including the Legacy Act Program, and all known sites that are not currently being addressed. This report will not include predictions of which program will address which site in the future, since EPA: a) does not have control over which non-Federal partner will amass sufficient cost-sharing funds for Legacy Act projects; b) does not know or have control over which state governors will request listing of Superfund sites in the future; or, c) cannot predict future Congressional actions giving authorization and funding the U.S. Army Corps of Engineers to undertake contaminated sediment projects. The report will provide a summary of all the sediment remediation work that has been done to date in the Great Lakes AOCs since 1997 including volumes remediated as well as average clean-up costs. This report, which we will update regularly, will provide the public with information on the status and planned actions for Great Lakes contaminated sediment sites. It will also chronicle progress as results are achieved. We would like you to consider modifying this recommendation to eliminate the part of the management plan requiring the site by site determinations of responsibility for each EPA program office. We believe that this would not be helpful in remediating contaminated sediment sites in Great Lakes AOCs. As will be explained further under the following recommendation, EPA has an approach to track sites that are actively being worked on or are in some stage of development (along with the office responsible for this work) along with an approach to keep abreast of the status of sediment remediation activities in the remaining sites throughout the AOCs.

**OIG Response:** GLNPO's development of a management plan to address Great Lakes AOCs is a reasonable first step. However, we do not believe that simply reporting GLNPO's "current authorities," "coordination processes," and the "status of work as currently known" is sufficient to address this recommendation. We concluded that the current management strategy was ineffective. Our findings and descriptions of the lack of strategy and formal coordination, and the undetermined size and responsibility of the clean-ups, are explained in Chapter 2. The Clean Water Act provides that the Administrator shall ensure that GLNPO enters into agreements, not merely coordinate, with the various organizational elements of the Agency. We recommend that a management plan designate the leadership authority for each of the remaining Sediment Remediation Sites. Informal coordination between GLNPO and other EPA Program Offices does not constitute effective oversight. Due to the differences between GLNPO's remedy and the OIG's outlined expectations in Recommendation 2-1, we consider this Recommendation to be unresolved.

Recommendation 2-2 in the draft report states that the Great Lakes National Program Manager, "assign a lead EPA office to each Sediment Remediation Site, responsible for developing a site-specific action plan, completing site assessments if needed, and determining the cleanup timeframes and resource needs of the project." We concur in part with this recommendation. We will go through the list of sites actively being worked on and identify the program responsible for the work (i.e., Superfund or GLLA). For the remaining sites, the staff serving as liaisons for each of the U.S. AOCs will report through their respective management chains to the Great Lakes National Program Office Director on the status of needed sediment assessment/remediation activities within their respective AOCs. This will keep the sediment

remediation program informed of progress being made and allow EPA management to assign staff to sites when it becomes appropriate. Additionally, we agree that it is valuable to complete additional site characterizations. We believe that in the Great Lakes region we have a good understanding, in general terms, of the nature and extent of contaminated sediments, based upon the work we have done in conjunction with the states and others over the past 15 years. However, we will be utilizing a new provision under the reauthorized Legacy Act (October 8, 2008) to assist us in gathering additional information. This new provision states that, "The Administrator, in consultation with any affected State or unit of local government, shall carry out at Federal expense the site characterization of a project under this paragraph for the remediation of contaminated sediment." This will allow us to increase our understanding of the "full scope" of the sediment contamination at particular sites. As newer information is generated from this site characterization work, we will be able to update our site information in the report generated in recommendation 2-1. We have recently conducted conference calls with the Great Lakes states to help us in our selection of our first round of sites under this provision (Federal - State AOC Coordinating Committee – FEDSTACC) and we expect to begin these assessments in the next few months. This is not only going to provide us more information on the magnitude and extent of sediment contamination, it will allow us to potentially move sites closer to a co-funded GLLA project and let the non-federal sponsor work to raise the required amount of funds for the active remediation of these sites. We believe this will be an effective tool in the development of additional projects under the Legacy Act. Staff assigned to individual projects undertaken by all programs will be identified in the report described in the preceding paragraph. We would like you to consider modifying this recommendation to eliminate the need for site-specific plans for sites not currently in the Superfund or GLLA programs. For the reasons stated, we believe our resources would be better spent on the activities outlined above.

**OIG Response:** Additional site assessments are needed; however, we do not believe that the remedy outlined meets the intent of Recommendation 2-2. GLNPO's response does not address the assignment of a lead EPA Office to each Sediment Remediation Site, the development of a site-specific action plan or the determination of the clean-up timeframes, and resources needed to complete each project. The Clean Water Act provides that the Administrator shall ensure that GLNPO enters into agreements, not merely coordinate, with the various organizational elements of the Agency. We recommend that GLNPO assign leadership responsibilities for each Sediment Remediation Site to a specific EPA Program Office. Further, we recommend that an "action plan," list the actions necessary to take each respective site from its current condition through to clean-up. If there is insufficient information or other reasons not to develop a site plan; the lead office should be accountable for that decision and its review. Due to the differences between GLNPO's planned actions and the intent of Recommendation 2-2, we consider this recommendation to be unresolved.

Recommendation 2-3 in the draft report states that the Great Lakes National Program Manager, "Annually measure and publish estimates of Sediment Remediation Site sediment volumes, cleanup costs, and stakeholder progress for each Sediment Remediation Site." We concur with this recommendation. We agree that transparency is a critical component in the work we conduct at these contaminated sediment sites. An efficient way to provide annual reporting on sites is to update the report generated for recommendation 2-1. We will coordinate with other

EPA Program Offices to update the necessary site statistics for all sediment activities in AOCs and incorporate that information into the report. Additionally, having greater transparency on sites and having this information available to the public may help the Program identify new sources of non-federal match.

**OIG Response:** GLNPO's publishing of an annual report that provides regular updates regarding the status and conditions of each Sediment Remediation Site will be useful. However, we believe that the Program's customers would be better served by receiving a report that was separate from the internal management plan, and that should be the outcome of Recommendation 2-1 above.

With respect to the suggestion that planning and coordination limits the rate at which we clean up contaminated sediment sites, it is our perspective that the main factors affecting the pace of sediment remediation in Great Lakes AOCs are the level of funding appropriated under the Act, and the availability of the non-federal share. Despite the financial challenges, to date the Program has effectively utilized, or has plans to effectively utilize, all of the funds appropriated by Congress.

**OIG Response:** While the OIG recognizes that AOC clean-up projects are dependent upon appropriated federal funding and non-federal cost-share funds, we believe that if GLNPO would implement the management improvements as recommended, the Program Office would be better able to address the current AOC conditions when federal and non-federal funds do become available.

We appreciate the time and effort the Office of the Inspector General has invested to date and would like to work collaboratively to ensure that the recommendations provided in the final report will provide a strong basis for assistance in our collective goal of remediating contaminated sediments in the Great Lakes. Any questions regarding this response can be directed to Gary Gulezian, the Great Lakes National Program Office Director at 312-886-5870, or me at 312-886-3000.

cc: Peter S. Silva, Assistant Administrator, Office of Water  
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**Appendix C*****Distribution***

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