

2008 Innovations Awards Program APPLICATION

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ID # (assigned by CSG): 08-M09MI

Please provide the following information, adding space as necessary:

State: Michigan

Assign Program Category: Water Resources

1. *Guidance for Delisting Michigan's Great Lakes Areas of Concern*
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9. Please provide a two-sentence description of the program

The *Guidance for Delisting Michigan's Great Lakes Areas of Concern (Guidance)* identifies specific quantitative or qualitative criteria which the State of Michigan will use to determine when environmental restoration has been completed and beneficial water uses are restored in Michigan's Great Lakes Areas of Concern. It is the tool used by agencies and stakeholders in the Areas of Concern to guide the process of measuring progress, documenting environmental restoration, and celebrating success.

10. How long has this program been operational (month and year)

The *Guidance* has been available and in use since January 2006.

11. Why was the program created? What problem[s] or issue[s] was it designed to address?

The Great Lakes Water Quality Agreement between the U.S. and Canada established the Areas of Concern Program and lists 14 beneficial use impairments which are caused by a detrimental change in the chemical, physical, or biological integrity of the Great Lakes system. Of the 43 original Great

Lakes Areas of Concern, 14 are located in Michigan. They include rivers, lakes, and bays located across the state. These sites are currently being restored through the implementation of Remedial Action Plans. When Areas of Concern were originally designated, no specific restoration criteria were developed. General criteria and guidance documents on the process for Area of Concern delisting were developed. However, these efforts were not specific enough for use in determining restoration of individual beneficial use impairment by either the state of Michigan or the U.S. federal government agencies.

In order to direct restoration efforts and develop specific benchmarks for measuring restoration success, several Areas of Concern in Michigan began to develop their own individual restoration targets. As they proceeded in developing restoration targets and plans for delisting, the Michigan Department of Environmental Quality received many requests from the public for information regarding what criteria would be applied, what approaches are acceptable, and how the delisting process will work when an Area of Concern has restored all of its beneficial use impairments. In response, the Water Bureau and the Office of the Great Lakes of the Michigan Department of Environmental Quality collaborated on development of the *Guidance*. The *Guidance* provides the tools for the agencies and the stakeholders in Area of Concern communities to document environmental restoration and celebrate success, ultimately leading to delisting the Area of Concern by removing its designation as such.

12. Describe the specific activities and operations of the program in chronological order.

The Area of Concern program *Guidance* outlines the process Michigan uses to collaborate with other agencies and stakeholders to track restoration progress, demonstrate restoration of a historical impairment, and ultimately remove the designation of being a Great Lakes Area of Concern. The main body of the *Guidance* offers Michigan's position on what constitutes restoration of an impairment. When the criteria are met, an impairment will be considered restored by the State. Below are the specific activities and operations of the *Guidance*.

There are three main processes outlined in the *Guidance* which include: tracking restoration progress of beneficial use impairments, removing beneficial use impairments, and delisting Michigan's Areas of Concern.

- Tracking restoration of beneficial use impairments in Areas of Concern includes the periodic review of the restoration status of use impairments, maintaining records and files of remedial actions that have occurred, and preparing biennial Remedial Action Plan Updates to demonstrate the progress that has been made in each Area of Concern.
- Removal of beneficial use impairments involves consulting with local Public Advisory Councils and other stakeholders to determine if an impairment is ready for formal review based on the applicable criteria outlined in the *Guidance*, holding a public meeting to solicit public comment, and documenting remedial actions and source control activities that lead to restoring a beneficial use.
- Once all of the beneficial use impairments have been restored, the Area of Concern can be formally delisted. The process to delist an Area of Concern was adopted by the U.S. Policy Committee in 2001 and will be used by Michigan to remove Areas of Concern. The actions to delist an Area of Concern is a step-by-step process that includes preparing a final Remedial Action Plan documenting restoration, transmittal of other delisting documentation between

the state and federal government agencies, and holding a public meeting to solicit public support. Once the formal process is completed, the U.S. Secretary of State officially removes the water body from the list of Areas of Concern and all the local, state, and federal partners cooperate on publicizing and celebrating the delisting of the Area of Concern.

13. Why is the program a new and creative approach or method?

The program is innovative, new, and creative because prior to the *Guidance* there was no formal process for measuring progress in Michigan's Areas of Concern. A significant amount of restoration has been accomplished in many of Michigan's Areas of Concern and development of the *Guidance* provided a means to measure and document that progress. Demonstrating progress in a time of economic uncertainty and funding constraints is a major accomplishment for the state of Michigan and communities where these Areas of Concern are located.

The approach taken to develop the *Guidance* was unprecedented in the Great Lakes region. An integral part of Michigan's Areas of Concern program is the partnership among the state and federal agencies, and local stakeholders. Throughout the 1.5-year development of the *Guidance*, state and federal agency experts, the Statewide Public Advisory Council and individual Public Advisory Councils in each of the 14 Areas of Concern were regularly consulted and provided the opportunity to weigh in on the content of the *Guidance*. Few other Great Lakes programs have had this kind of extensive public involvement and ownership.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

The development of the *Guidance* was a staff-driven process, with no substantial material or production costs. All communications were electronic and no special equipment was needed to produce the *Guidance*. A total of one full-time equivalent position was required for the 1.5-year duration of the development, using existing staff and expertise.

15. What are the program's annual operational costs?

Implementation of the *Guidance* is an integral part of Michigan's Areas of Concern program staff responsibilities. Therefore, the Michigan Department of Environmental Quality has no separate cost for its implementation.

16. How is the program funded?

The source of funding for the *Guidance* development was part of a grant from the U.S. Environmental Protection Agency to the Michigan Department of Environmental Quality.

17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.

No legislation or executive orders were required to develop or implement the *Guidance*.

18. What equipment, technology and software are used to operate and administer this program?

No special equipment or software is required to implement the program.

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.

The *Guidance* did originate in Michigan, however, its creation has been a genuine collaborative effort and no one person can be identified as the originator.

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

All eight Great Lakes states have at least one Area of Concern. All Areas of Concern, and therefore all states, are scheduled to have criteria for restoration of beneficial use impairments in Areas of Concern by the end of 2008. Other states are using Michigan's *Guidance* as a reference in that process. Other states may have functionally similar, but not identical, criteria.

21. Has the program been fully implemented? If NO, what actions remain to be taken?

The *Guidance* is being implemented on a continuing basis. The program is a tool that will last the length of the Area of Concern program, likely many years into the future as restoration occurs and is documented.

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

The best way to demonstrate the program's effectiveness is by example. The Manistique River Area of Concern has demonstrated how the process and criteria outlined in the *Guidance* has been operationalized successfully.

The Manistique River is located in Michigan's Upper Peninsula on the north shores of Lake Michigan. Historically, primarily due to historical discharges to the Manistique River from a paper mill, this area became severely degraded due to high levels of contaminants in the sediments and fish populations. Since the discharges were controlled more than 20 years ago, significant remedial actions have occurred to remediate the contamination. The Manistique River has seen remarkable improvements in water quality and the aquatic life that lives there. However, until the *Guidance* was developed, there was no systematic way to demonstrate and celebrate this positive change in the environment. Since the *Guidance* was released in January 2006, the restoration criteria have been applied in the Manistique River Area of Concern to demonstrate restoration of the benthos (organisms which live on, in, or near the sediments at the bottom of the river). The Manistique River was the first Area of Concern in Michigan to remove a beneficial use impairment. Several other impairments are currently being assessed in this Area of Concern, including the loss of fish and wildlife habitat and restrictions on fish consumption.

It has been a huge success in Manistique and there are no negative impacts from the development of this innovative program.

23. How has the program grown and/or changed since its inception?

Since the *Guidance* was approved in early 2006, a few changes have been proposed in a continuing process of adaptive management. During the process of evaluating the beach closings beneficial use impairment in the Manistique River Area of Concern, we learned that our current removal criterion

is, in some cases, inconsistent with the concept that Areas of Concern, by definition, have more severe water quality problems than others. A straightforward revision to this section will provide some needed flexibility for implementation of the *Guidance* for all the Areas of Concern.

Besides specific changes to the *Guidance*, the program responsible for implementing has grown and changed as well. For the first time, the Areas of Concern program has a clear direction and obtainable goals. The *Guidance* has provided staff with a consistent approach that is used statewide. The *Guidance* has also allowed staff to critically review the status of the impairments in each Area of Concern and determine what remedial actions are needed and make better use of limited resources available to address the remaining critical issues. Additionally, the *Guidance* allows us to demonstrate progress in areas that have historically been blighted from severe environmental degradation.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

Other states may encounter some of the same obstacles Michigan addressed during development of the *Guidance* including, determining restoration endpoints consistent with the scope of the Area of Concern program. The primary challenge with developing restoration endpoints is managing expectations of what ‘restoration’ means. In Areas of Concern, restoration does not mean returning to a pre-industrial or pre-settlement condition. However, it does mean that improvements will be made to a beneficial use so that it is of the same condition as an area of similar geography that was not historically degraded. If another state chose to adopt the approach in the *Guidance*, most of the obstacles have been worked through by the state with multiple stakeholders and resource agencies responsible for restoring Areas of Concern.

A possible obstacle that other Great Lakes states might encounter if they attempt to adopt this program is that the criteria outlined in the *Guidance* are based on existing programs and regulations in the state of Michigan. Similar but not identical programs in other states would lead to necessary modifications of the *Guidance*.

For states or other agencies not within the Great Lakes basin looking to develop restoration endpoints for sites of environmental contamination, the *Guidance* could serve as an innovative framework for assessing progress. Developing clear, measurable restoration endpoints should be the first step in developing any restoration plan. When these are followed by a clear, practical process for implementation, all stakeholders involved benefit. That has been the result of Michigan’s *Guidance* program.