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GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



STEVEN E. CHESTER  
DIRECTOR

September 20, 2006

Mr. Gary Gulezian, Director  
Great Lakes National Program Office  
United States Environmental Protection Agency  
Region 5  
77 West Jackson Boulevard (G-17J)  
Chicago, Illinois 60604-3507

Dear Mr. Gulezian:

The purpose of this letter is to request the U.S. Environmental Protection Agency – Great Lakes National Program Office's (U.S. EPA-GLNPO) concurrence with the removal of the Degradation of Benthos Beneficial Use Impairment (BUI) in the Manistique River Area of Concern (AOC). The Michigan Department of Environmental Quality (MDEQ) has evaluated the restoration of this BUI based on the process in the state's *Guidance for Delisting Michigan's Great Lakes Areas of Concern*, which is consistent with the U.S. Policy Committee's *Delisting Principles and Guidelines* document. The MDEQ has determined that the Manistique River AOC has met the statewide restoration criteria for the Degradation of Benthos BUI and that the BUI should be removed from the list of impairments in the Manistique River AOC.

Enclosed please find supporting documentation for the removal of the Degradation of Benthos BUI in the Manistique River AOC, including the recommendation briefing paper from the MDEQ's technical staff and a letter of support from the Manistique River Public Advisory Council.

We look forward to our continuing partnership in the AOC program, and working closely with the U.S. EPA-GLNPO in the delisting of AOCs. If you need further information or assistance, please contact Ms. Julie Sims, Aquatic Nuisance Control and Remedial Action Unit, Surface Water Assessment Section, Water Bureau, at 517-373-2732, or you may contact me.

Sincerely,

Richard A. Powers, Chief  
Water Bureau  
517-335-4176

Enclosures

cc: Mr. Mark Elster, U.S. EPA  
Mr. Tony Kizlauskas, U.S. EPA  
Ms. Vicki Thomas, U.S. EPA  
Mr. James K. Cleland, MDEQ  
Ms. Diana Klemans, MDEQ  
Mr. Richard Hobrla, MDEQ  
Ms. Julie Sims, MDEQ

# Briefing Paper

## Removal of the Degradation of Benthos Beneficial Use Impairment for the Manistique River Area of Concern

### Issue or Request

Based upon the review of Remedial Action Plan (RAP) documentation and consultation with agency staff, we would like to request removal of the Degradation of Benthos Beneficial Use Impairment (BUI) in the Manistique River Area of Concern (AOC), per the process outlined in the *Guidance for Delisting Michigan's Great Lakes Areas of Concern* (Guidance) (MDEQ, 2006, page 8, attached).

### Background/Facts

The Manistique River flows southwest through Schoolcraft County in Michigan's central Upper Peninsula, discharging into Lake Michigan at the city of Manistique. The AOC is the last 1.7 miles of the river, from the dam in Manistique to the mouth of the harbor at Lake Michigan (Michigan Department of Natural Resources [MDNR], 1987). On February 15, 2006, the Manistique River Public Advisory Council (PAC) adopted the delisting targets included in the Guidance to evaluate the status of their BUIs. The AOC has five BUIs determined under Annex 2 of the Great Lakes Water Quality Agreement, including Restrictions on Dredging, Loss of Fish and Wildlife Habitat, Restrictions on Fish Consumption, Beach Closings, and Degradation of Benthos. This briefing paper only addresses the Degradation of Benthos BUI.

In the original 1987 RAP, the Degradation of Benthos BUI in the Manistique River AOC was identified primarily due to deposit of wood fibers and organic waste from the saw mill and paper mill operations, and chemical waste and sanitary waste from the city of Manistique (MDNR, 1987). The Michigan Department of Environment Quality (MDEQ) and the PAC have assessed the status of the impairment per the criteria outlined in the Guidance and recommend removal of this BUI.

### Analysis

According to the Guidance, the restoration criteria for the Degradation of Benthos BUI in the Manistique River AOC requires that:

*All remedial actions for known contaminated sediment sites with degraded benthos are completed (except for minor repairs required during operation and maintenance) and monitored according to the approved plan for the site. Remedial actions and monitoring are conducted under authority of state and federal programs, such as Superfund, Resource Conservation and Recovery Act, Great Lakes Legacy Act, or Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.*

The attached excerpt from the Guidance (pages 27-29) includes the rationale for the delisting criteria. Remedial actions and source control activities have been summarized to document restoration of this BUI:

### **1977**

Manistique Wastewater Treatment Plant (WWTP) was upgraded to secondary (biological) treatment. Manistique Papers, Inc. upgraded its wastewater treatment facilities to provide secondary treatment of process wastewater from its paper making operations. Manistique Papers dredged and filled the deinking wastewater settling lagoon (MDNR, 1987).

### **1986**

Manistique Papers, Inc. placed an erosion barrier along the west bank of the main river channel upstream from U.S. 2 to control erosion of polychlorinated biphenyl (PCB) impacted soils from the former deinking lagoon (MDNR, 1987).

### **1993**

The United States Environmental Protection Agency (USEPA) placed a 110-foot by 240-foot temporary cap over sediments in the vicinity of a combined sewer outfall that discharges directly to the Manistique River (MDEQ, 1996).

### **1996**

Washed gravel was placed in the North Bay area (located on the west side of the river upstream and adjacent to the U.S. Route 2 highway bridge) to improve the river bottom as habitat for fish as well as to contain contaminated residuals (Triad Engineering Inc. and Terraforma Environmental, Inc., 2002).

### **1999**

The temporary cap was removed (Triad Engineering Inc. and Terraforma Environmental, Inc., 2002). According to Corey Barr, Water/Wastewater Superintendent for the city of Manistique, the Manistique WWTP biological control process was updated from rotating biological contactors to activated sludge that also significantly increased the hydraulic capacity of the plant (C. Barr, personal communication, May 24, 2006).

### **2000**

Dredging of impacted sediments was completed, and confirmation sediment sampling for PCBs was initiated. The completed dredging depth in the navigational channel was to bedrock, with depths ranging from approximately 20 to 22 feet (Weston Solutions, Inc., 2005a).

### **1995-2000**

The Manistique Harbor and River AOC 2002 RAP Update estimates that 141,000 cubic yards of PCB and heavy metal impacted sediment were successfully removed from the harbor and river system from 1994 to 2000. Additionally, during dredging activities of PCB impacted sediments, approximately 31,100 cubic yards of wood chips, sawdust, and other solid materials were removed (Triad Engineering Inc. and Terraforma Environmental, Inc., 2002).

### **2001**

The confirmation sampling was completed to ensure that the ten parts per million (ppm) average PCB concentration goal for the harbor and river was met (Weston Solutions, Inc., 2005a), per the USEPA Removal Action Recommendation (USEPA, 1994). Superfund personnel collected a comprehensive round of sediment samples at 400 locations on a random grid spacing. The sampling data had an average PCB concentration of 7.7 ppm in the top six inches of sediment (Weston Solutions, Inc., 2005a).

## 2004

According to the postdredging site investigation conducted in September 2004, natural resedimentation processes have resulted in average PCB concentrations in the surface sediments throughout the harbor and river of 0.71 ppm (Weston Solutions, Inc., 2005a).

Julie Sims, MDEQ liaison for the Manistique River AOC, has reviewed the Superfund reports documenting that all remedial actions are complete and monitored. Monitoring indicates that remediation goals have been met. Ms. Sims has also consulted with other MDEQ, Water Bureau (WB), Surface Water Assessment Section, technical staff regarding the redesignation of this BUI. Based on the most recent reports released by USEPA, Superfund, staff recommend removal of the degradation of benthos BUI.

The redesignation of the Degradation of Benthos BUI was also discussed with the Manistique River PAC at their regular meeting on March 26, 2006, and with the Manistique City Council on March 27, 2006. In addition, a public meeting was held on July 12, 2006, to discuss the redesignation of this BUI with the Manistique River AOC community. The community, the PAC, and Manistique City Council expressed their support for recommending removal of this BUI to the USEPA, Great Lakes National Program Office (see attachments: July 20, 2006, e-mail from Merilee Blowers to Julie Sims; June 26 and July 10, 2006 DEQ Calendar public notice; Manistique River AOC Public Meeting minutes; and a handout from the public meeting titled Removal Recommendation, Degradation of Benthos BUI, Manistique River AOC).

### Recommendation

Based upon review of the data (Weston Solutions, Inc., 2005a) and input from other MDEQ staff, the USEPA project staff, the PAC, the public, and the Manistique City Council, we recommend removal of the Degradation of Benthos BUI. We also recommend submittal of a letter from the chief of the WB to the USEPA requesting removal of the Degradation of Benthos BUI in the Manistique River AOC, consistent with the Guidance.

Prepared by: Julie Sims, Environmental Quality Analyst  
Aquatic Nuisance Control and Remedial Action Unit  
Surface Water Assessment Section  
Water Bureau  
Michigan Department of Environmental Quality  
September 18, 2006

### Attachments:

Removal of Beneficial Use Impairments; page 8 of the Guidance for Delisting Michigan's Great Lakes AOCs  
Degradation of Benthos; pages 27-29 of the Guidance for Delisting Michigan's Great Lakes AOCs  
July 20, 2006, e-mail from Merilee Blowers to Julie Sims  
June 26 and July 10, 2006 DEQ Calendar public notice  
Manistique River AOC Public Meeting Minutes  
Handout: Removal Recommendation, Degradation of Benthos BUI, Manistique River AOC

## References

- Barr, C. Personal communication, May 24, 2006.
- MDEQ. 1996. Manistique River Area of Concern. Manistique, Michigan: Remedial Action Plan Update for the Michigan Department of Environmental Quality, Surface Water Quality Division, Lansing, MI.
- MDEQ. 2006. *Guidance for Delisting Michigan's Great Lakes Areas of Concern*. Report No. MI/DEQ/WB-06/001.
- MDNR. 1987. Remedial Action Plan for the Manistique River Area of Concern. Michigan Department of Natural Resources, Surface Water Quality Division, Lansing, MI.
- Triad Engineering Inc. and Terraforma Environmental, Inc. 2002. *Remedial Action Plan Update, Manistique River and Harbor Area of Concern, Manistique, Michigan*. Prepared for Great Lakes Commission and Michigan Department of Environmental Quality. September 2002.
- USEPA. 1994. *Removal Action Recommendation, Manistique River/Harbor Area of Concern, Manistique, Michigan*. August, 1994.
- Weston Solutions, Inc. 2005a. *Data Evaluation Report*. Revision 1. 19 May 2005, U.S. EPA Contract No. 68-W700026, Work Assignment No. 236-TATA-05FV, Document Control No. RFW236-2A-ASJY.