

Target for Delisting the Degradation of Aesthetics Beneficial Use Impairment in the Muskegon Lake Area of Concern

Introduction

Improvements in the water quality of Muskegon Lake have resulted in increased public usage of the resource and community interest in the enhancement of both access and habitat quality of the shoreline. At the time of AOC listing, the Michigan Department of Environmental Quality (MDEQ) did not include the Degradation of Aesthetics Beneficial Use Impairment (BUI) however mentioned the environmental impact of excessive shoreline filling. The BUI was listed by the PAC in 2002 because excessive amounts of metal scrap and concrete rubble were discarded along the shoreline and in the lake by historical industrial activity. These deposits impede the safe access and enjoyment of Muskegon Lake by the public and the ability to conduct shoreline habitat improvement efforts.

Available Guidance

The IJC criteria for listing the Degradation of Aesthetics are provided below:

“When any substance in water produces a persistent objectionable deposit, unnatural color or turbidity, or unnatural odor (e.g. oil slick, surface scum).”

The MDEQ provides the following guidance for delisting:

“This BUI will be considered restored when monitoring data for two successive monitoring cycles indicates that water bodies in the AOC do not exhibit persistent, high levels of the following “unnatural physical properties” (as defined by Rule 323.1050 of the Michigan WQS) in quantities which interfere with the State’s designated uses for surface waters:

- turbidity
- color
- oil films
- floating solids
- foams
- settleable solids
- suspended solids
- deposits

For the purposes of this criteria, these 8 unnatural properties impair aesthetic values if they are unnatural – meaning those that are manmade (e.g., garbage, sewage), or natural properties which are exacerbated by human-induced activities (e.g., excessive algae growth from high nutrient loading). Persistent, high levels are those defined as long enough in duration, or elevated to the point of being injurious, to any designated use listed under Rule 323.1100 of the Michigan WQS.”

Delisting Target

Because of the importance of Muskegon Lake as a recreational resource and the presence of excessive deposits of metal and concrete scrap in shoreline areas, the Muskegon Lake Public Advisory Council (MLPAC) voted to adopt a target for delisting the Degradation of Aesthetics BUI that is functionally equivalent to the State of Michigan criteria. The PAC has identified priority restoration sites for the BUI that enhance public access and enjoyment of Muskegon Lake and are consistent with future habitat improvement projects and municipal planning. The target is presented below:

The **Degradation of Aesthetics BUI** will be considered restored when monitoring data for two successive monitoring cycles indicates that Muskegon Lake AOC does not exhibit persistent, high levels of the following “unnatural physical properties” (as defined by Rule 323.1050 of the Michigan WQS) in quantities which interfere with the State’s designated uses for surface waters:

- turbidity
- color
- oil films
- floating solids
- foams
- settleable solids
- suspended solids
- deposits

Important public locations in Muskegon Lake where aesthetics are degraded include: Ruddiman Creek (including the Amoco property), Ryerson Creek, Grand Trunk, Heritage Landing, and the Michigan Steel Bay. Special emphasis will be placed on the removal and restoration of areas at the above locations where deposits of submerged rubble, and metallic debris impede the safe access and enjoyment of Muskegon Lake.

Programs for Monitoring and Assessing Restoration Success

The MLPAC will solicit funding for assessment and restoration activities by the submission of grants and requests for assistance from the following sources:

- Michigan Department of Environmental Quality Clean Michigan Initiative (CMI) Fund
- Environmental Protection Agency Great Lakes National Program Office (GLNPO)
- Local foundations, conservation groups, municipalities, business, and industry.

The MLPAC will obtain approval from the MDEQ for all restoration activities involving the removal of submerged rubble and debris. The MLPAC will request that MDEQ conduct the final monitoring of these locations as part of their 5 Year Basin Program. If this request is not possible, additional funds will be solicited by the MLPAC from the MDEQ CMI Program and GLNPO for supplemental monitoring and outreach programs. Quality Assurance Project Plans will be prepared for all supplemental assessment activities and agency approval will be obtained for all monitoring programs.

The MLPAC will submit a report of the monitoring data and documentation that the restoration activities at each site were completed. The report will include quality assurance data demonstrating that the data quality objectives of the QAPP and delisting targets were achieved. The MLPAC will submit a request for formal delisting of the Degradation of Aesthetics BUI to the MDEQ along with the above report.