

PAC Approved, MDEQ Delisting Criteria for Detroit River BUIs

Restrictions of Fish and Wildlife Consumption- This BUI will be considered restored when:

1. The fish consumption advisories in the AOC are the same or less restrictive than the associated Great Lake or appropriate control site.

OR, if the advisory in the AOC is more stringent than the associated Great Lake or control site:

2. A comparison study of fish tissue contaminant levels demonstrates that there is no statistically significant difference in fish tissue concentrations of contaminants causing fish consumption advisories in the AOC compared to a control site.

OR, if the advisory in the AOC is more stringent than the associated Great Lake or control site:

3. Analysis of trend data for fish with consumption advisories shows similar trends to other appropriate Great Lakes trend sites.

Fish Tumors and Other Deformities – This BUI will be considered restored when:

1. No reports of fish tumors or deformities due to chemical contaminants have been verified through observation and analysis by the MDNR or MDEQ for a period of 5 years

OR, in cases where any tumors have been reported:

2. A comparison study of resident benthic fish (e.g. brown bullhead) of comparable age and maturity (3 years), or of fish species which have historically been associated with this BUI, in the AOC and a non-impacted control site indicates that there is no statistically significant difference (with a 95% confidence interval) in the incidence of liver tumors or deformities.

Bird and Animal Deformities and Reproductive Problems:

on the applicability to a particular AOC. The first approach evaluates restoration based on field assessment of birds and/or other wildlife in those AOCs where MDEQ or other MDEQ-approved bird and other wildlife data are available.

The second approach will be applied in those AOCs where bird and other wildlife data are not available, and uses levels of contaminants in fish tissue known to cause reproductive or developmental problems as an indicator of the likelihood that deformities or reproductive problems may exist in the AOC.

Approach 1 – Observational Data and Direct Measurements of Birds and Other Wildlife

- Evaluate observational data of bird and other animal deformities for a minimum of 2 years over a 6-year period. If deformity or reproductive problem rates are not statistically different than inland background levels (at a 95% confidence interval), then the BUI is restored. If the rates are statistically different, or the amount of data are insufficient for analysis, then:
- Evaluate tissue contaminant levels in egg, young, and/or adult wildlife. If contaminant levels are lower than the Lowest Observable Effect Level (LOEL) for that species or are not statistically different than inland control populations (at a 95% confidence interval), then the BUI is restored.

Where direct observation of wildlife and wildlife tissue data are not available, the following approach will be used:

Approach 2: Fish Tissue Contaminant Levels as an Indicator of Deformities or Reproductive Problems

- If fish tissue concentrations of PCBs, dioxins, DDT, or mercury (as determined in the RAP) in the AOC are at or lower than the LOEL known to cause reproductive or developmental problems in fish-eating birds and mammals the use impairment is restored.

OR

- If fish tissue concentrations of PCBs, dioxins, DDT, or mercury in the AOC are not statistically different than the associated Great Lake (at 95% confidence interval), then the BUI is restored. In the connecting channel AOCs, either the upstream and downstream Great Lake may be used for comparison.

Degradation of Benthos: This BUI will be considered restored when:

1. An assessment of benthic community, using either MDEQ's SWAS Procedure #51 for wadeable streams or MDEQ's pending rapid assessment procedure for non-wadeable rivers yields a score for the benthic metrics which meets the standards for aquatic life in any 2 successive monitoring cycles (as defined in the two procedures).

OR, in cases where MDEQ procedures are not applicable and benthic degradation is caused by contaminated sediments, this BUI will considered restored when:

2. 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 of Michigan's National Resource and Environmental Protection Act (NREPA) of 1994.

Beach Closings - This BUI will be considered restored when:

no waterbodies within the AOC are included on the list of impaired waters due to contamination with pathogens in the most recent Clean Water Act *Water Quality and Pollution Control in Michigan: Section 303(d) and 305(b) Integrated Report* (Integrated Report), which is submitted to U.S. EPA every two years.

Degradation of Aesthetics: 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, foams, color, settleable solids, oil films, suspended solids, floating solids, and deposits.