



## Delisting Guidance and Restoration Targets for Ohio AOCs Summary of Version 2 Revisions January 2016

In May 2014, Ohio EPA released the *Delisting Guidance and Restoration Targets for Ohio Areas of Concern (Guidance)*. Since that time we have been working with Ohio's local AOC advisory committees to evaluate the current status of the remaining Beneficial Use Impairments (BUIs) and identified several areas that require clarification and revisions. In October 2014, Ohio EPA also finalized *A Framework for reorganizing and implementing Ohio's Remedial Action Program: In Support of Ohio's Areas of Concern (Framework)*. Local AOC Advisory Committees were asked to review a May 2015 DRAFT and provide comments and consider adopting for their AOC. Version 2 of this document (November 2015) addresses those comments. Overall, version 2 of the *Delisting Guidance and Restoration Targets* adds clarification, adjusts several targets based on new or corrected information, and aligns the guidance with the new framework.

### **Document-wide changes**

1. All references to "RAP" groups were updated to local AOC Advisory Committee and Facilitating Organizations as applicable to be consistent with the Ohio AOC Program Framework's nomenclature.
2. In July 2015, U.S. EPA approved a change in the Black River AOC boundary and all maps and references to the Black River AOC were updated.
3. *Table 1 Status of Ohio AOC BUIs* was revised so that any previously listed BUIs that have since been removed are now designed as "Removed/Year of Removal."
4. The Path to Delisting- Removing a BUI: Under item #2 clarified that a 14 or 30 day public review period may be conducted. The short period may be warranted for non-controversial BUI removals with concurrence by Ohio EPA and the Local AOC Advisory Committee.
5. When developing the Restoration Targets using Ohio's biological metrics a "non-significant departure" deviation was incorrectly used for the Modified Warmwater and Limited Resource Water targets. The targets have been corrected for the following BUIs:
  - a. BUI 3 (Degradation of Fish and Wildlife Populations) : Index of biotic Integrity ( IBI) and Modified Index of Well-Being (MIwb);
  - b. BUI 6 (Degradation of Benthos): Invertebrate Community Index (ICI)

## **Key revisions by BUI**

**BUI 1 - Restriction of Fish and Wildlife Consumption:** No change.

**BUI 2 - Tainting of Fish and Wildlife Flavor:** No change.

**BUI 3 - Degradation of Fish and Wildlife Populations:**

(1) Targets were revised based on Comment #5 above. Specifically, the Riverine Fish Population Restoration Target table was revised to adjust the Indices for Modified Warmwater Habitat (MWH) and Limited Resource Waters (LRW) waters.

(2) Clarification was added to the Rationale section explaining how the MIwb metric is not applicable to sample locations with drainage areas of 20 square miles or less.

(3) Clarification was added to the Rationale section describing Ohio EPA's Low-End Scoring Adjustment for IBI evaluations. Many of these adjustments are based on a low number of fish collected in a sample; however even with sufficient sample numbers in some cases this metric score will may still be manually adjusted.

(4) Corrected restoration targets for lacustuary and nearshore waters. The rationale section was also revised to reflect how these targets should be applied.

(5) New references added.

**BUI 4 - Fish Tumors and Other Deformities:** Target was revised to specify the minimum age for brown bullhead is 3 years. The rationale was also revised to recognize methodologies for assessment of tumors in brown bullhead are evolving and recommends use of current industry protocols.

**BUI 5 - Bird or Animal Deformities:** No change.

**BUI 6 - Degradation of Benthos:**

(1) Targets were revised based on comment #5 above.

(2) Clarification added regarding the evaluation of qualitative (narrative) data, including a conversion from narrative to equivalent ICI values.

(3) Corrected restoration targets for lacustuary waters. The rationale section was also revised to reflect how these targets should be applied.

(4) The second conditions for mayflies was also changed from "AND" to "OR" because the mayfly metric is the only available target for Maumee Bay (only waters where this target applies). Ohio EPA does not have any other benthic/ICI metrics currently established for the nearshore.

**BUI 7 - Restrictions on Navigational Dredging:** In previous versions of this Guidance, Ohio has relied on suitability of dredged sediments for open lake disposal as the BUI restoration target. The suitability for open lake disposal was selected as a measure of sediment quality since Ohio did not have sediment criteria and open lake disposal was considered the least restricted form of disposal at the time. Since this target was originally drafted and implemented back in 2005, Ohio has developed alternative options for sediment reuse and disposal and is formally moving away for open lake disposal of sediments in Lake Erie by 2020. Restoration targets for the Restriction on Dredging BUI have been amended utilize Ohio EPA's new sediment reuse and disposal criteria and to reflect the shift away from open lake disposal. The rationale was also revised to state that of disposal practices significantly contribute to nutrient loading, Ohio will review the restoration target and consider revisions as appropriate.

**BUI 8 - Eutrophication or Undesirable Algae:**

(1) The Dissolved Oxygen target for lacustuary waters was revised to remove the Outside Mixing Zone Minimum (OMZM) condition as it is not appropriate for the AOC program. The OMZM is calculated from a single point in time (acute) rather than the long term (chronic) problems.

(2) The previous version contained a target for the riverine waters based on Ohio’s draft Trophic Index Criterion. The original intent for including the draft metric was to serve as a placeholder until the criteria were fully developed and codified in Ohio WQS. Due to the complexities with this index and ongoing development and adoption delays, it was removed from the current restoration target. Ohio EPA will review the restoration target for this BUI as new methods for evaluation become available and consider revisions as appropriate.

(3) Clarification was added stating that the DO seasonal average condition only applies to the lacustrine waters of the Maumee River, Black River, Cuyahoga River, and Ashtabula River mainstems and of Maumee Bay. The smaller lacustuaries within the AOCs will still be evaluated by the narrative “no persistent nuisance growths of algae” of condition.

**BUI 9 - Restriction of Drinking Water Consumption or Taste & Odor Problems:** No change.

**BUI 10 - Beach Closings (Recreational Use):**

(1) Clarification added to the rationale explaining how the algal toxin advisories at beaches should be evaluated if the sampling season ends with an advisory in place. Specified that the “advisories” referenced in the Public Bathing Beaches target was for “contact advisories.”

(2) Ohio EPA recently updated the water quality standard rule (effective 1/4/16) that previously identified Class A waters and specified how recreation use advisories due to e. coli levels are issued. The BUI restoration targets remain focused on the same previously designated Class A waters and the reference is now to ODNr’s designated paddling streams (original source of Class A designated waters). The BUI restoration target remains the same (based on advisories) but *Appendix D –Recreational Waters WQS and Designated Waters* was revised to reflect the updated standards.

**BUI 11 - Degradation of Aesthetics:** Minor changes to the wording in the targets and the third conditions related to MS4 systems was changed from “AND” to “AND/OR”.

**BUI 12 - Added Costs to Agriculture or Industry:** No change.

**BUI 13 - Degradation of Phytoplankton and Zooplankton Populations:** No change.

**BUI 14 - Loss of Fish and Wildlife Habitat:** Target was revised to add metric numbers (QHEI) for headwaters, lacustuary and nearshore waters.

**Appendices**

**Appendix A - Ohio WQS:** Addressed several typos.

**Appendix B - Ecoregional Biological Criteria:**

*Table B-1 Stream Evaluation Criteria and Benchmarks by Ecoregion* and *Table B-3 Evaluation Guidelines for Lake Erie Lacustuary and Nearshore* were revised to reflect corrections previously described.

**Appendix C - HUCs in Ohio AOCs:** The Hydrologic Units for the Black River AOC were revised to reflect the new boundary. Euclid Creek waters were moved from Ashtabula River AOC to the Cuyahoga River AOC.

**Appendix D - Recreational WQS and Designated Waters:**

The tables for Recreation Use Water: Categories and Bacteria Standards were revised to reflect the updated rule (effective 1/4/16). Public Bathing Beaches and Class A Stream Segments in Ohio AOCs were revised to reflect designated Paddling Streams and the new boundary for the Black River AOC.

**Appendix E - Acronyms and Abbreviations:** No changes.