Reaching our targets will lead us to our goal of delisting the AOC, which means the ecological benefits of the Milwaukee Estuary have been restored to an acceptable level. We will achieve this when public uses are no longer impaired by legacy contamination, and native plants and wildlife are sustainably protected. As toxic sediment is removed and habitat restoration continues, the river is becoming a more and more valuable resource for recreation and the local economy.

The Milwaukee Estuary was designated an Area of Concern (AOC) in the 1980s because contaminated river sediment impaired public benefits such as fish consumption, healthy fisheries, boat access and wildlife habitat.

To learn more about Milwaukee Estuary AOC projects and progress visit http://dnr.wi.gov, search “Milwaukee AOC.” For more details, refer to the Area of Concern Remedial Action Plan Updates.
Milwaukee Estuary AOC – Restoration Status Update

Fall 2018

Tackling AOC problems, known as Beneficial Use Impairments in the Area of Concern program, requires several steps. We must understand the causes and define the extent of the impairments through monitoring, assessment, and data analysis. We then determine the necessary actions to address the problems, and implement them.

Actions to address AOC problems can be large and complex, requiring the coordinated efforts of many partners over multiple years. After completing the necessary actions, we must verify through monitoring that we have achieved our goals for cleanup and restoration. Once the goals have been met and the problems have been addressed, the AOC designation can be removed.

This update shows the current status of the removal process for 11 impairments in the Milwaukee Estuary AOC – complete, underway, or not started – and next steps. Dates in parentheses indicate the anticipated project completion.

There are health concerns with eating fish and wildlife

**NEXT STEPS:**
- Complete cleanup of riverbed sediments containing polychlorinated biphenyls (PCBs) and other toxins which contaminate fish and wildlife.
- As contaminated sediments are cleaned up, consumption concerns for fish and wildlife will be reassessed until goals are met.

Fish & wildlife populations are degraded

**NEXT STEPS:**
- Complete nutrient reduction plans needed to improve water quality (Total Maximum Daily Load or TMDL Plan).
- Review bacteria-related study outputs and work to determine management actions in consultation with stakeholders (2019).
- Support Milwaukee County and other partners to address high bacteria levels and beach closings at South Shore beach.

There are increased rates of fish tumors and deformities

**NEXT STEPS:**
- Continue cleanup of sites that contain polycyclic aromatic hydrocarbons (PAHs), metals and other substances that cause fish tumors.
- Reassess rates of fish tumors and deformities following sediment clean-up actions.

Communities of sediment-dwelling organisms are degraded

**NEXT STEPS:**
- Evaluate results of USGS plankton study to determine health of the benthic community.
- Identify additional studies to fully understand benthic conditions in the AOC (2020).
- Continue cleanup of polluted riverbed sediments.

BUI Removal Phases:
- **Monitor & Assess (MA):** define the problem, gather data and review literature, consult with experts.
- **Develop AOC Projects (DP):** engage stakeholders to develop the set of projects that are necessary for reaching AOC goals.
- **Implement Projects (IP):** take action to improve conditions within the AOC if monitoring data shows goals are not being met.
- **Verify Results (VR):** after actions have been taken, monitor to determine if target has been met.
- **Formal BUI Removal (RM):** targets have been met. BUI removal documentation is being prepared or reviewed, or has been submitted.

Status of Each Phase:
- Not Started
- Underway
- Complete

**Dredging activities for commerce or navigation are restricted**

**NEXT STEPS:**
- Complete cleanup of harmful PCBs, PAHs, and heavy metals in contaminated hotspots.
- Assess other potential sites with polluted sediment and begin planning cleanup projects in the Milwaukee, Menomonee and Kinnickinnic Rivers, Inner and Outer Harbors, and nearshore waters of Lake Michigan.

**Excessive nutrients cause undesirable algae**

**NEXT STEPS:**
- Review bacteria-related study outputs and work to determine management actions in consultation with stakeholders (2019).
- Support Milwaukee County and other partners to address high bacteria levels and beach closings at South Shore beach.

**Monitor and Assess (MA) | Develop AOC Projects (DP) | Implement Projects (IP) | Verify Results (VR) | Formal BUI Removal (RM) | BUI REMOVED**