

Lower Menominee River

Removed from the list of Great Lakes Areas of Concern

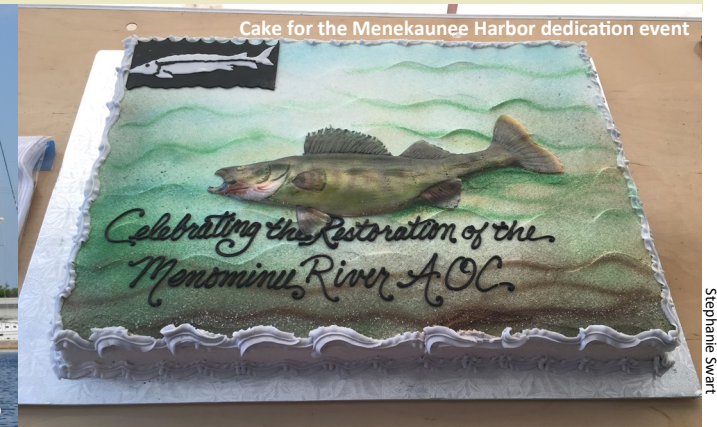
Fall 2020



The Lower Menominee River was designated an Area of Concern in the 1980s due to habitat loss and contaminated sediments in the river that impaired public benefits such as healthy fish and wildlife populations, consumption of fish, and maintenance of shipping channels. Wisconsin Department of Natural Resources and citizen groups addressed six environmental problems to heal the river and harbor.



Pollution cleanup and restoration goals for the six impairments were met, allowing the Area of Concern designation to be removed, or in other words the Lower Menominee River was "delisted" in August 2020. [Learn more inside.](#)



Lower Menominee River—part of the largest fresh surface water resource in the world—the Great Lakes ecosystem

Wisconsin Department of Natural Resources Office of Great Waters

To learn more about Lower Menominee River Area of Concern projects and progress, visit <http://dnr.wi.gov>, search "Menominee AOC." For more details, refer to the AOC Remedial Action Plan Updates or videos highlighting key projects. Major funding for the [AOC Program](#) is provided by the [Great Lakes Restoration Initiative](#) through the U.S. Environmental Protection Agency.



Lower Menominee River AOC — Path to Delisting

Fall 2020

After decades of hard work, the Lower Menominee River was removed from the international list of most polluted sites on the Great Lakes, referred to as Areas of Concern or AOCs, in August 2020.

Michigan's Upper Peninsula and northeastern Wisconsin meet at the Menominee River, which flows into Lake Michigan's Green Bay. The states worked closely with local citizens, businesses, industries and other agencies to address environmental problems stemming from historical pollution and habitat loss.

Six environmental problems, referred to as beneficial use impairments in the AOC program, were identified for the Lower Menominee River when it was designated an AOC in 1987:

- ✓ Restrictions on recreational contact with the water,
- ✓ Restrictions on dredging,
- ✓ Restrictions on eating fish and wildlife,
- ✓ Degraded bottom-dwelling organisms,
- ✓ Degraded fish and wildlife populations,
- ✓ Loss of fish and wildlife habitat.

To achieve delisting, project partners implemented over \$170 million worth of pollution cleanup and habitat restoration projects—accomplished through a combination of federal Great Lakes Restoration Initiative funding, matching state, local, and private funding, and through government regulatory actions.

The Wisconsin DNR and Michigan Dept. of Environment, Great Lakes and Energy provided the U.S. Environmental Protection Agency with a delisting report detailing the pollution cleanup and restoration actions that were completed to address the six environmental problems.

As part of the delisting process, Wisconsin and Michigan also held a public comment period and public meetings in Spring 2020. EPA then took the final step with the U.S. and Canadian governments to officially remove the AOC designation in August 2020.

This is Wisconsin's first of five AOCs to be delisted, and it's a significant milestone in the binational agreement between the U.S. and Canada to restore the Great Lakes.



Fish and wildlife habitat restored at Menekaunee Harbor after area was dredged to remove polluted sediments. Photo: Cheryl Bougie, DNR.

43 Great Lakes Areas of Concern Identified:

- 26 located entirely in the United States
- 12 located wholly within Canada
- 5 are binational waterways shared by both nations
- 5 United States and 3 Canadian AOCs removed from the list so far.



In 1987 the governments of the United States and Canada identified specific portions of Great Lakes tributaries and harbors with especially severe pollution due to historical industrial, urban and agricultural uses—called "Areas of Concern." The Lower Menominee River was one of these AOCs. The AOC Program gives special attention to cleaning up specific "legacy pollutants" or mistakes from the past. Map: Environment and Climate Change Canada, Great Lakes National Program Office.

Historical pollution & habitat loss led to AOC designation

In 1987, the lower three miles of the Menominee River, along with Green Island and the Green Bay shoreline three miles north and south of the river mouth, were designated an AOC, primarily due to toxic chemical pollution. Polycyclic aromatic hydrocarbons (PAHs), arsenic and paint sludge associated with industrial activities were present in river and bay sediments at elevated levels within the AOC.

Loss of essential fish and wildlife habitat due to development was another reason for AOC designation. For example, an extensive wetland complex near the mouth of the river was destroyed by logging in the 1800s. Land near the river mouth was then filled for industrial uses, and sea walls of steel, concrete or timber were placed for cargo vessel docking facilities.

Several Lake Michigan fish species, including lake sturgeon, had lost access to their historic spawning and juvenile habitats in upper reaches of the Menominee River because five hydroelectric dams prevented them from swimming upstream. Fish populations were also harmed by contaminated sediments.

Restrictions on recreational contact with the water was another listed problem. Elevated bacteria levels in the river portion of the AOC were caused by combined sewer overflows.

Pollution removed, fish & wildlife habitat restored

To address the problems, polluted and excess sediments were removed from the river and harbor by dredging and disposing of them in approved locations. Cleanup efforts took place at the Lloyd Flanders paint sludge site from 1993 through 1998, the Ansul/Tyco arsenic site from 2012 through 2015 (river portion), in-water sources at the Wisconsin Public Service Corp. coal tar site from 2012 through 2015, and the Menekaunee Harbor site from 2014 through 2015 (see map on next page).

Sources of arsenic, PAHs, and paint sludge within the AOC boundaries were controlled through these cleanup projects. The projects were monitored according to their approved plans and met their cleanup goals, showing that sediments in the AOC are no longer a source of the listed impairments. Bacteria from sewage was addressed through improvements to municipal wastewater treatment systems. In addition to pollution cleanup, many fish and wildlife habitat restoration projects were completed as well:

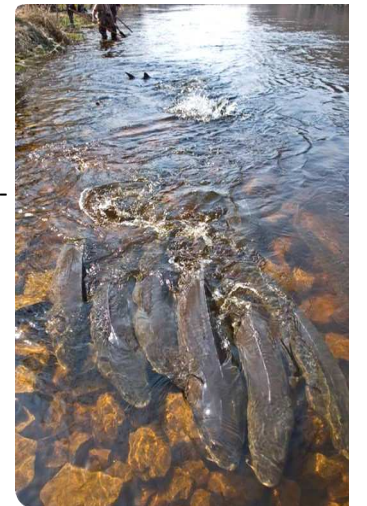
- ✓ Restored fish passage over the Park Mill and Menominee Dams, and improved overall river connectivity for fish such as sturgeon to thrive.
- ✓ Installed habitat structures for fish, birds, bats and other wildlife.
- ✓ Planted native wetland vegetation and controlled invasive species.
- ✓ Restored wild rice, which is culturally and environmentally important to the region, in the harbor.

Continued stewardship after AOC delisting

Partnerships are essential for achieving AOC restoration goals. It's a team effort by many state and federal agencies, municipal governments, non-governmental organizations, businesses, industries and committed citizens to restore beneficial uses to these areas. These same partners continue to work together after delisting to achieve further improvements and to address other issues beyond the scope of the AOC Program.



Dredging in Menekaunee Harbor. Photo: DNR.



Sturgeon spawning in the Menominee River. Providing passage around the dams returns access to their historic spawning and rearing habitats, helping to restore sturgeon populations. Photo: Bob Rashid.



Above: Sturgeon like this one are carefully examined after they pass through a fish elevator installed at the Menominee Dam to help them get upstream to spawn (photo: Rob Elliot, USFWS). Below: Dr. Keith West and UW-Marinette students help monitor and maintain restoration sites (photo: DNR).

