The tide is turning for the Lower Menominee River. Toxic sediments are being removed and habitat restoration is underway in much of the AOC. The river is becoming a more valuable resource for recreation and the local economy, as fish and wildlife benefit and public enjoyment opportunities improve.

Jon Kukuk

Restoration Sites in the Lower Menominee River Area of Concern

Contaminated sediment dredged from the river at the Ansul site is treated and then contained in a bin prior to removal.

18th Ave.

Menominee

Marinette

⭐ Wildlife Habitat Restoration
★ Sediment Cleanup

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

For more details about AOC progress and projects, refer to the Area of Concern Remedial Action Plan Updates, available at **http://dnr.wi.gov/topic/greatlakes/aoc.html**

Lower Menominee River *Area of Concern*

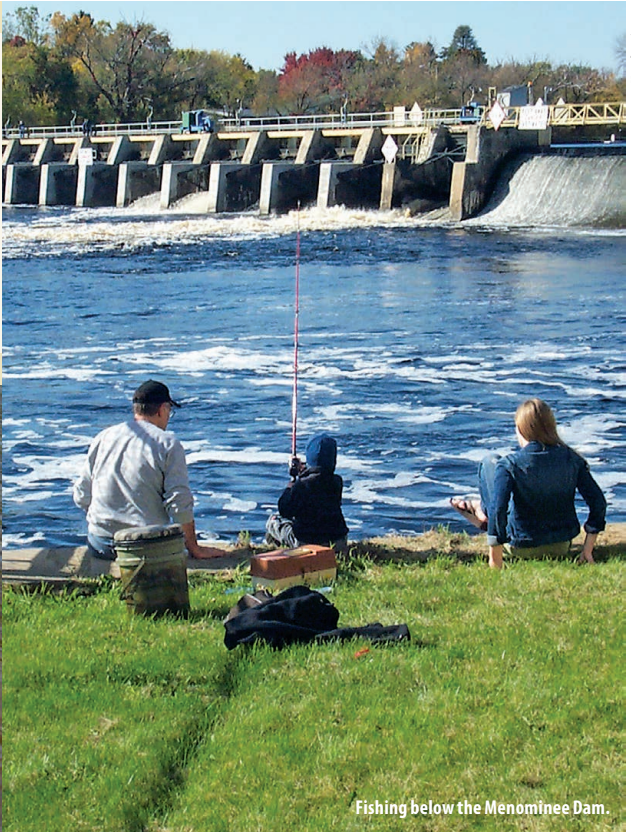## BENEFICIAL USE IMPAIRMENT RESTORATION REPORT

Summer 2013

The Lower Menominee River was designated an Area of Concern (AOC) in the 1980s because contaminated river sediment impaired public benefits such as fish consumption, healthy fisheries, shipping channels and wildlife habitat.

Kendra Axness

WDNR

Tammie Paoli, fisheries biologist with adult lake sturgeon.

Fishing below the Menominee Dam.

Margaret Stearn
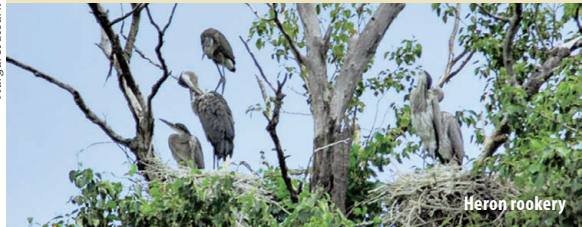
Heron rookery

The Wisconsin Department of Natural Resources (WDNR) and citizen groups identified six Beneficial Use Impairments (BUIs) to target here for improving the river.

See progress report inside ➡

WDNR

Red Arrow Park.

Lower Menominee River AOC – Restoration Status Update

Summer 2013

Tackling AOC problems, which are expressed as Beneficial Use Impairments in the Area of Concern program, requires several steps. We must understand their causes and define their extents 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. Upon 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.

Derek Strohl, BLM

Volunteers helping with buckthorn removal on Strawberry Island to improve the rookery.

This update shows the current status (Summer 2013) of the removal phases for six impairments of the Lower Menominee AOC – *complete, underway, not started,* or *not required* – and the next steps.

Ben Uvaas, WDNR

Natural Resources Technology

Joel Trick, US Fish & Wildlife Service

Clockwise from above: waterfowl nest platform in a quiet backwater area, sampling sediments from the river bottom, and state- and federally-endangered piping plovers.

Arrowhead, kingfisher and great blue heron illustrations by Cindie Brunner

BUI Removal Phases:

MA **MONITOR & ASSESS:** define the problem, establish baseline, gather data.

DR **DATA UNDER REVIEW:** literature searches, lab results not yet analyzed/summarized, understanding the data by consulting with experts, etc.

DP **DEVELOP AOC PROJECTS:** engage stakeholders to develop the set of projects that are necessary for reaching AOC goals.

IP **IMPLEMENT PROJECTS:** take action to improve conditions within the AOC if monitoring data shows goals are not being met.

VR **VERIFY RESULTS:** this phase includes the step of monitoring to check conditions after action has been taken. Once targets are reached, prepare a proposal to remove the BUI with input from stakeholders.

Status of Each Phase:

not required	not started	underway	complete
X	O	➜	★

There are health concerns with eating fish & wildlife

NEXT STEPS:

- Collect remaining fish tissue samples from the Lower Scott Flowage.
- Compare mercury, PCB, and dioxin concentrations from fish within the AOC to reference sites, assess if targets have been reached.

MA	DR	DP	IP	VR
➜	➜	O	O	O

Fish and wildlife populations are degraded

NEXT STEPS:

- Conduct a fisheries population assessment in the lower river and nearby reference sites.
- Begin construction of the lake sturgeon passage structures at the Park Mill and Menominee Dams.

MA	DR	DP	IP	VR
➜	➜	➜	➜	O

Populations of sediment-dwelling organisms are degraded

NEXT STEPS:

- Remediation of the Ansul and Menekaunee Harbor locations must occur according to plan.
- Sediment characterization testing and identification of any unknown contaminants in the Lower Scott Flowage by EPA.

MA	DR	DP	IP	VR
➜	➜	➜	➜	➜

Dredging activities for commerce or navigation are restricted

NEXT STEPS:

- Remediation of the Ansul and Menekaunee Harbor locations must occur according to plan.
- Sediment characterization testing and identification of any unknown contaminants in the Lower Scott Flowage by EPA.

MA	DR	DP	IP	VR
➜	➜	➜	➜	➜

Water contact through beach use or other recreation is limited

BUI REMOVED ★★★★★

This Beneficial Use Impairment's removal phases are successfully completed and a formal BUI removal application has been accepted.

MA	DR	DP	IP	VR
★	★	★	★	★

Fish & wildlife habitat is poor

NEXT STEPS:

- Implement the Island Rookery Habitat Improvement project.
- Develop habitat improvement designs for Menekaunee Harbor.
- Update the Fish and Wildlife Population and Habitat Restoration Plan.

MA	DR	DP	IP	VR
➜	➜	➜	➜	O

Monitor and Assess (MA) → **Data Under Review (DR)** → **Develop AOC Projects (DP)** → **Implement Projects (IP)** → **Verify Results (VR)** → **TARGETS REACHED** → **SUBMIT FORMAL BUI REMOVAL APPLICATION**

← RETURN TO PROCESS STEPS IF TARGETS NOT REACHED