



DNR FILE PHOTO

Local industries assist with the cleanup of legacy pollutants.

Contaminated sediment is safely removed and hauled to special landfills.

BEN UVAAS

# Healing the Lower Menominee River

## Partners are pitching in.

Kevin Harter and Kendra Axness

Things are looking bright these days for the Lower Menominee River Area of Concern. With several key sediment cleanups underway or completed, a habitat restoration plan in the works, and several habitat restoration projects underway, state resource agencies and the citizens who have contributed local knowledge along the way are seeing the fulfillment of the promise that was made more than 30 years ago. It's been a long road, patiently traveled by those who live near and work on the river.

### Early development leads to AOC designation

The Menominee River, the ancestral home of the Menominee tribe, was settled by French Canadian, Swedish, Norwegian and German immigrants. The river and its watershed were ideal for fur trading, commercial fishing, logging, paper-making and shipping industries. As the area developed, the river was polluted by sewage, industrial discharges and chemical runoff in the era before modern environmental regulations prevented the discharge of municipal and industrial waste directly to waterways. Adding to the problems facing the river were over-fishing and dam building.

When the lower six miles of the Menominee River were designated an Area of Concern in 1987, six impairments were identified as applying to the AOC due mainly to contamination of the river bottom by arsenic, coal tar and paint sludge. Known problems with bacterial contamination were beginning to be addressed at the time of AOC designation by the cities of Menominee, Mich., and Marinette, Wis. through programs to separate the storm and sanitary sewers. The natural resources agencies in Michigan and Wisconsin joined forces to address the AOC's remaining problems.

### Citizens get involved

One of the requirements for AOCs was to write Remedial Action Plans, or RAPs,

to describe the problems leading to beneficial use impairments and to identify actions for addressing them. Community input was important for writing plans that reflected local stakeholder values, and many citizens generously gave their time in order to participate in meetings to help write the plans.

Steve Zander was hired by Marinette County in the early 1990s to lead RAP implementation, and worked closely with the first Citizens' Advisory Committee to develop the RAP update published in 1996.

"We had a very diverse group of folks at the table, representing different community, business, and environmental interests. I can tell you that the members of the committee didn't always agree, but what they did agree on was that they wanted a cleaner river and healthy economies for Marinette and Menominee," Zander says.

After some early successes — closure of a landfill on the Michigan side and cleanup of the paint sludge offshore from Menominee, Mich. in the 1990s, among others — federal resources for AOCs waned and the members of the Citizens' Advisory Committee stopped meeting. The members went on with their daily lives but always hoped that more work would be done to clean up the river.

### States share responsibility

Despite the reduction in federal resources for AOCs during the late 1990s and early 2000s, Wisconsin and Michigan continued to work on the river's rehabilitation. Wisconsin continued discussions with the responsible parties for two significant contaminated sites which contained remnant arsenic and coal tar pollution from early to mid-20th century industrial practices. Wisconsin and Michigan each continued monitoring fish population and health, and looked for opportunities to protect and restore habitat within the AOC.

These agencies had made significant but incremental progress during these years. And then came 2012 — an important year for the AOC. Cleanup of arsenic in the river began, following years of dedicated effort by many to contain or



CHERYL BOUGIE

Restoration of the Menominee River AOC will improve fishing and other recreational opportunities and give a boost to related businesses.

clean up sources of arsenic on land. Later in 2012, coal tar was removed from the river just upstream of the arsenic site. Cleanup at the arsenic site is expected to be completed later this year.

Cleanup for both sites entails dredging the contaminated sediments out of the river and safely disposing of them in properly designed landfills. Additionally, the City of Marinette worked with the Wisconsin Department of Natural Resources to generate engineering and design plans for Menekaunee Harbor, an area that had historically been a commercial fishing center and now has potential to be an important recreational harbor with opportunities for habitat restoration. With these projects in progress, the AOC is well on the way to recovering.

"I think the future of the Menominee River looks bright, thanks to a lot of support from our local, federal, Michigan and Wisconsin partners," says Benjamin Uvaas, DNR's Lower Menominee River Area of Concern Coordinator.

As the cleanup progresses, recreational boating opportunities will increase, and improved navigational depths will help shipping and ship building industries. Habitat for fish — including sturgeon — and wildlife also will be improved, Uvaas says, which will result in a healthier river system benefitting the health and economic wellbeing of the area.

### Renewed citizen engagement

With the advent of the Great Lakes Restoration Initiative and the promise of



# Area of Concern



North American Hydro, government agencies, and non-profit organizations are working together to create a safe passage for lake sturgeon around the lowest two dams on the river.

cleaner river sediments, Wisconsin and Michigan state agencies have teamed up again with a diverse group of local stakeholders to renew the Citizens' Advisory Committee. Many of the individuals who were there at the beginning came back to work side-by-side with agency staff and new citizen members to develop a plan to preserve and improve habitat in the river. Key pieces of the plan include:

- Providing safe passage around dams for lake sturgeon to increase their population;
- Protecting and improving island and shoreline habitat for water birds like herons; and
- Restoring wetland and aquatic habitat to improve fish spawning success and wildlife populations.

It is estimated that there were once two million adult lake sturgeon in all of Lake Michigan. Over-fishing, pollution and barriers to historic spawning grounds reduced populations to about 3,000.

North American Hydro owns the lowest two Menominee River dams. It is partnering with federal, state and non-profit organizations to create a means for the sturgeon to move around the dams and reach more habitat. The partnership hopes to grow the Lake Michigan sturgeon population to 20,000.

Herons and egrets are large waterbirds that prefer to nest in groups where predators cannot reach them. Islands can be the perfect habitat for them to form nesting colonies. However, nonnative plants like *Phragmites* and buckthorn

Cleanup and spawning habitat restoration is improving lake sturgeon populations.

are invading these islands and out-competing native trees used for nesting. Volunteers are working with the Bureau of Land Management and University of Wisconsin-Marquette to remove nonnative plants and save the colony.

Once contaminated sediments have been removed, environmental agencies and the Citizens' Advisory Committee plan to restore wetland habitat within the AOC. Wetland and quiet backwater areas are important spawning habitat for a number of fish. These areas are especially important for young fish that need to hide from predators and find enough food to grow.

"The Menominee River is an essential part of our lives in this area, yet most people are unaware of its condition," says Dr. Keith West of the University of Wisconsin-Marquette and a CAC member. "Being a part of the Citizens' Advisory Committee for the AOC has been an invaluable education for me. It is our duty as CAC members to get what we have learned out into the community in a way that is accessible and effective."

"We have seen a lot of progress in the last couple years and there will be much more progress in the next couple years," Uvaas says. "We are on schedule for completion of all AOC-related management actions by 2016." With this milestone not too far off on the horizon, AOC partners are energized and excited about meeting these goals and moving beyond.

"Getting the AOC to the point where it



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Local families participate in a shoreline cleanup day on the Menominee River.



DNR FILE PHOTO

The Menominee River Citizens' Advisory Committee tours a contaminated sediment cleanup site.

is in recovery is something to celebrate," says Uvaas, "but the resource will continue to need care in the future to truly be the best that it can be for the communities."

With so many community members ready to help and care for the river, the future is bright indeed. •

Kevin Harter is a public affairs manager for the Department of Natural Resources. Kendra Axness is the Policy and Outreach Coordinator for DNR's Office of the Great Lakes.