



## Healing the Sheboygan River Area of Concern

### A community's shared vision leads to a big GLRI boost.

Kevin Harter and Kendra Axness

**S**heboygan area partners have been working for more than 30 years to bring the Sheboygan River back to being fishable and swimmable.

Prompted by trapper reports in the early 1980s that mink could not be found when the available habitat indicated that they should be present, DNR scientists sampled sediments in the river and the floodplain. They discovered high levels of PCBs, man-made compounds that were widely used in electrical equipment; they were banned in the United States in 1979 because of environmental concerns. Mink are especially sensitive to these chemicals, with exposure causing their reproductive rates to plummet and local populations to decline or disappear. Like canaries that indicated unsafe air quality in the early days of coal mining, mink indicated the need to improve environmental quality in the Sheboygan River.

While the Department of Natural Resources led efforts to study contaminants and seek funding for sediment cleanup, Sheboygan County led programs to address watershed sources of nutrients, and a local watershed partnership supported agency and community efforts to protect wetlands, educate residents and engage youth. Partners had achieved some success, but still had significant hurdles to overcome. Pollutants remained in the river sediments, limiting opportunities for habitat restoration and navigational dredging. Removing the pollutants would be expensive.

Vic Pappas, DNR's Lake Michigan Field Supervisor, has been around to see things change in the past three decades.



*Sheboygan is a popular tourist destination. Cleanup and restoration will enhance our enjoyment of many recreational activities.*



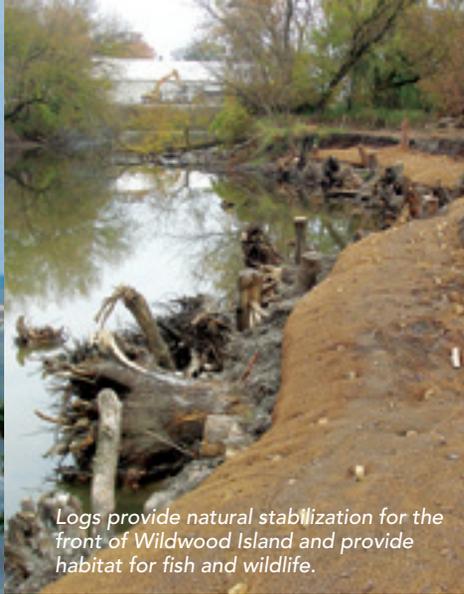
*Dredging contaminated sediment from the river continued day and night in 2012.*

"After a long time of negotiation, interim steps and study, companies that were responsible for the contamination took care of their responsibilities for sediment cleanup under the Superfund program in recent years," Pappas says. "That really set us on the path to being able to deal with the remaining legacy pollutants and begin restoring habitat."

"Superfund" is shorthand for the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, a federal law designed to clean up sites contaminated with hazardous substances.

When the Great Lakes Restoration

Initiative (GLRI) began, Department of Natural Resources and UW-Extension staff convened a technical advisory committee to develop grant proposals that would help guide habitat restoration. Applications submitted early in 2010 were only partially successful. So when EPA approached the group in fall 2010 with a proposal to become a "priority AOC," they jumped at the chance. Priority AOCs receive focused attention and resources to accelerate cleanup and restoration of the river. Sheboygan was one of only four AOCs selected in the United States that year, and the only one in



Logs provide natural stabilization for the front of Wildwood Island and provide habitat for fish and wildlife.

DEBBIE BEYER



CHAD PELUSHEK

STACY HRON

Program Office, Sheboygan County, the City of Sheboygan, UW-Extension, Wisconsin Department of Transportation, Technical Advisory Committee members and many others. An impressive and nearly unprecedented amount of cleanup and restoration was accomplished in under two years:

- More than 400,000 cubic yards of contaminated sediment were removed in approximately 20,000 dump truck loads.
- Five projects were implemented to restore native plants to approximately 34 acres along more than 18,000 feet of shoreline. A sixth project involved in-stream habitat restoration.
- More than 15 projects were carried out to assess fish and wildlife populations, habitat and contaminant levels and impacts.

"We have incredible partnerships, including with the city and county, and everyone is on the same team," says Hron. The goal is to revitalize the Sheboygan River by reducing health threats to people, fish and wildlife; improving fish and wildlife habitat; and increasing recreation and economic opportunities.

In the end, more than \$80 million has been used to address beneficial use impairments in 2011 and 2012.

"We are in the process of healing the river for the fish, wildlife and the community," says Hron. "People had waited for quite some time and they are very excited to see this happening."

### From Area of Concern to area in recovery

Sheboygan was once a primary port for ships carrying European immigrants who settled the area. The strong German influence led to the establishment of beer and cheese factories. Fur trading, sawmills, tanneries, ship building, shipping, manufacturing of shipping barrels, and commercial fishing also prospered. With abundant water and an ample immigrant workforce, Sheboygan developed a vibrant manufacturing industry.

Over time, industrial, urban and agricultural pollution contributed to the river's degradation. Pollution from many years of heavy manufacturing led to the Sheboygan River and harbor's designation as a federal "Superfund" site in 1986.

In 1987, the lower 14 miles of the Sheboygan River and the harbor were designated as one of 43 Great Lakes Areas of Concern, primarily due to contamination from PCBs and another industrial waste that persists in the environment — polynuclear aromatic hydrocarbons (PAHs). These compounds are found in oily wastes that were discharged from an early 20th century coal gasification plant. The designation was also due to the decline of fish and wildlife populations and habitat loss.

Nine impairments were identified in the river. Contaminated sediments resulted in fish and waterfowl that are not safe to eat and impaired use of harbor areas due to dredging restrictions. Pollution is also suspected of contributing to the degradation of wildlife, fish, benthos (bottom-dwelling critters) and plankton populations. High levels of nutrients have caused nuisance algal blooms in the past. Sedimentation and habitat loss were also issues in the AOC.

Now that all necessary AOC-related actions have been taken to address the impairments, the Department of Natural Resources and its partners will continue to monitor the river for recovery while attending to some remaining details of the sediment cleanup and habitat restoration projects. When verification and monitoring data show that AOC goals have been met, the AOC will be formally delisted.

In the meantime, AOC partners will begin to dream bigger — even with as much as was accomplished with AOC projects, more can be done.

"There are a lot of people keeping the ball rolling," Hron says.

"After many years of on-again-off again work, the AOC really was a needed project," says Jon Gumtow, a citizen who has been involved in the AOC and is secretary of the local watershed group.

"We were really engaged in the process of cleaning up the river, but we couldn't do much without funding," says Gumtow, who has been involved in the river cleanup for more than 30 years. "Now that the river is getting cleaned up, for me, the most exciting thing is the people who are again enjoying it."

The area that was once mink-free is becoming mink friendly once again. •

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Wisconsin.

"We felt like we were being offered this great opportunity," says Debbie Beyer, UW-Extension Natural Resources Educator who helped facilitate the meetings and conduct outreach.

Stacy Hron, the DNR's Sheboygan River Area of Concern Coordinator, adds, "We knew we were taking on a lot, but we also knew that we had a shared vision for the river and partners who were willing to go the extra mile to make it work."

Work it did, with close partnerships between the Department of Natural Resources, U.S. EPA's Great Lakes National