
Cleanup of Great Lakes Sediment: A Catalyst for Waterfront Revitalization

Kinnickinnic River Legacy Act Sediment Cleanup

Milwaukee, Wisconsin

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Sediment cleanup and economic revitalization

Contaminated sediment impacts:

- Impacts to human health and the environment.
- Restrictions to navigation.
- Fish consumption advisories.
- Impaired aesthetics.
- Stigma of contamination.
- Depressed property values.

Potential economic benefits of sediment cleanup:

- Improved navigation channels.
- Enhanced use of rivers, harbors, and water resources.
- More opportunities for waterfront redevelopment.
- Improved aesthetics.
- Increased property values.

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GLLA sediment cleanups

The Great Lakes Legacy Act is a tool to clean up contaminated sediment sites in Great Lakes Areas of Concern. The Kinnickinnic River GLLA project, completed in 2009, spurred local efforts to upgrade and redevelop adjacent businesses and marinas. *See story, page 2.*

Although discharges of toxic chemicals to the Great Lakes have been reduced in the last 30 years, there are still high levels of contaminants in the sediment of rivers, harbors and bays throughout the region. A legacy of North America's industrialization, these contaminated zones – known as “Areas of Concern,” or AOCs – are like industrial brownfields. Contamination at these sites can pose a threat to public health, forcing beach closures and fish consumption advisories. It can also impair water supplies and impede regular dredging of shipping channels. And it carries a stigma that can extend to the waterfront as a whole, discouraging investment and development. Some problems may be so severe that an entire city turns its back on its waterfront, inviting further decay in an area that was once a natural asset to its citizens and a driving force in its economic development.

Through the Great Lakes Legacy Act, or GLLA, communities are joining with the federal government to address this problem, removing contaminated sediment from their rivers and harbors. A prominent example is the recently completed cleanup of the Kinnickinnic River in southeast Milwaukee. As this case illustrates, the benefits of sediment cleanup can extend beyond a cleaner environment, including the economic revitalization of entire urban waterfronts.

Economic benefits of sediment cleanup

As cleaner rivers and harbors once again draw people who enjoy the natural beauty and resources of the Great Lakes, the surrounding waterfront becomes a more attractive place to live and work. Signs warning against the consumption of contaminated fish may soon be replaced with fishing piers or hiking and biking trails. Waterways once clogged with contaminated sediment may once again be open to navigation, and marinas may expand. Derelict properties may be restored or replaced by new residential or commercial development, creating even greater momentum for economic revitalization. In short, the cleanup of contaminated sediment can serve as a catalyst to economic development, restoring the waterfront as a prominent asset and source of pride to Great Lakes communities.



The GLLA-funded cleanup of Milwaukee's Kinnickinnic River has spurred new development along the water, including the opening of a brew pub that features boat slips, an outdoor bar, and an extensive riverfront patio.

The Kinnickinnic River: A Great Lakes Legacy Act success story

In October 2009, U.S. Environmental Protection Agency's Great Lakes National Program Office and Wisconsin Department of Natural Resources completed a joint sediment cleanup project in a reach of Milwaukee's Kinnickinnic River. Federal funds for the project were provided under the authority of the Great Lakes Legacy Act, which finances the cleanup of polluted sediment in U.S. AOCs. For the Kinnickinnic project, EPA used GLLA funds to cover 65 percent, or \$14.3 million, of the effort's \$22 million cost. The proceeds from a bond issue under Wisconsin's Growing Milwaukee Initiative financed the remaining \$7.7 million. This is consistent with GLLA requirements, which stipulate that at least 35 percent of a project's funding must come from non-federal sources.

The Kinnickinnic project removed about 167,000 cubic yards of sediment contaminated with PCBs and other toxic substances. Cleanup of the river was the result of years of planning and collaboration among EPA, WDNR, U.S. Army Corps of Engineers, the City and Port of Milwaukee, and local stakeholders. Chief among these local groups was Business Improvement District 35, which represents the businesses adjacent to the site. As illustrated below, many of these businesses have already benefited from the river's restoration.

Pier Milwaukee Yacht Storage: Turnaround of a commercial boatyard

Pier Milwaukee, one of three commercial boatyards bordering the project area, advertises itself as Milwaukee's premiere yacht storage facility. Before the cleanup, however, the condition of the river had put the boatyard in jeopardy. Access to the yard was



Business at Pier Milwaukee has flourished since completion of the Kinnickinnic River environmental restoration project.

- Restored access for deep-draft vessels.
- Elimination of operating restrictions.
- Increased demand for vessel storage.
- New seasonal boat slips.

constrained by years of siltation; deep-draft vessels could no longer reach it, and even those with shallower drafts were at risk of running aground. The impediments to navigation also created operating restrictions, limiting access to the boatyard's dock to one vessel at a time. The poor conditions were driving customers away and raised the possibility that the yard would have to close.

The benefits of the cleanup for Pier Milwaukee have been dramatic. For the first time in years, the yard was full in the winter of 2009-10, and will be again this winter. Concerns about running aground have been eliminated, and larger boats with deeper drafts can now easily access Pier Milwaukee's docks. The project also has opened access to 16 newly installed slips, which boaters can rent from May through October. The slips are equipped with water and electricity, and are offered in conjunction with access to restrooms, showers and dockside parking. The addition of the slips provides a new stream of revenue for Pier Milwaukee's business.

"Without the dredging and cleanup of the Kinnickinnic River, this boatyard would be out of business."

— Chris Svoboda,
Owner, Pier Milwaukee

Paul Davis Restoration and Remodeling: Investing in brownfield redevelopment

The Kinnickinnic River makes a 90-degree turn from north to east at the site of Paul Davis Restoration and Remodeling, a franchise business that specializes in the restoration of property that has suffered fire, smoke or water damage. Unlike most businesses along the river, operations at Paul Davis do not require access to the water. Nonetheless, restoration of the river has led the owners of the property to make new investments in its development and broaden their investment in the surrounding community.



Paul Davis Restoration is renovating its East Building to add boat slips, a boardwalk, and a boaters' lounge, shown here during a November 2009 ceremony marking the completion of the KK River project.



The Kinnickinnic River cleanup spurred Paul Davis Restoration to redevelop a nearby brownfield site, with construction of a 40,000 sq. ft. commercial or light manufacturing facility slated to begin in 2011.

Paul Davis’s offices are located next to a brownfield that was once the site of an old foundry. As the restoration of the river began to take shape, the franchise’s owners saw an opportunity to redevelop the site and invested in its purchase and cleanup. They hope to build on the site in 2011, implementing plans that call for the construction of a 40,000-square-foot commercial or light manufacturing facility.

“If not for the river sediment cleanup, we never would have invested in redeveloping the old foundry site.”

— Dave Ferron,
Property and Real Estate Manager,
Paul Davis Restoration

In addition to this investment, Paul Davis is revamping its property along the Kinnickinnic to take better advantage of the river. The company is remodeling the property’s East Building to incorporate a lounge with restrooms and showers for boaters. In addition, it plans to add a boardwalk and boat slips equipped with water, electricity and cable TV access. In the short term, the company anticipates leasing these slips to boaters on a seasonal basis. In the long run, it may totally redevelop the site for residential or commercial use by boaters who want to live or work along the river year-round.

The Horny Goat brew pub: Milwaukee’s newest waterfront destination

The Horny Goat brew pub is an indoor/outdoor pub and a prominent addition to the Kinnickinnic River corridor. The pub opened just as the cleanup project was being completed in 2009. It has since become one of Milwaukee’s most popular nightspots. The pub’s success has been enhanced by the increased navigation depths and river access resulting from the Kinnickinnic River sediment cleanup project.

The Horny Goat is located on the south bank of the Kinnickinnic River. It features a two-story brick deco building and a new riverfront patio, which the pub advertises as the largest patio in Milwaukee. The patio is equipped with a 50-seat outdoor bar and 68 umbrella tables, and three fire pits. It also features a boardwalk and 10 boat slips, with plans for additional slips already in development. A stage borders the rear patio and features live music throughout the summer. From late spring to early fall, four beach volleyball courts along the river host competitive and recreational leagues. In winter, the courts are converted to ice rinks for recreational skating and broomball tournaments.

The pub also takes advantage of its riverfront location to draw customers who enjoy spending time directly on the water. During the boating season, it partners with Riverwalk Boat Tours and Rentals to sponsor the Horny Goat Brewery Cruise to Lake Michigan and back, which would not have been possible before the river cleanup because of restricted navigation depths.

The pub’s initial success led the brewing company to purchase additional property on the river, providing off-street parking and the potential for expansion of the Horny Goat’s facilities. Plans are already in motion to add a microbrewery at the site. Overall, the sediment cleanup and the subsequent investment made by the property owner have served to revitalize what was once a neglected part of the city, helping to make the Kinnickinnic River a vital part of the local economy.



The Horny Goat brew pub patio addition, built in 2010 after the river cleanup was completed, is now a popular nightspot and prominent addition to the Kinnickinnic River waterfront.

- New patio, boardwalk, and boat slips.
- Outdoor stage with live music.
- Beach volleyball courts.
- Outdoor broomball rinks.
- Brewery tours with a riverboat cruise.

Business Improvement District 35: A model for private sector participation in a Great Lakes Legacy Act cleanup

A key to the success of the Kinnickinnic cleanup project was the active participation of the private sector through the neighborhood business improvement district, BID 35. BID 35 was formed by the owners of commercial properties adjacent to the Kinnickinnic project area to support cleanup of the river. The group was motivated by a shared interest in environmental restoration, economic development, and community renewal.

The BID is a special tax assessment district within Milwaukee. BID 35 made its

support for the Kinnickinnic cleanup clear by investing \$500,000 in new seawalls to stabilize the shoreline around the project area. Milwaukee's Department of City Development helped finance this investment, providing the BID with a \$250,000 economic development grant and a \$250,000 low-interest loan, to be repaid over the next 15 years.

BID 35's Role in the Restoration of the Kinnickinnic River:

- *Special tax assessment district.*
- *Formed by riverfront business owners to support the restoration effort.*
- *Partnered with the City of Milwaukee to invest \$500,000 in a shoreline stabilization initiative.*
- *A potential model for business participation in GLLA cleanups.*

Support from the public sector: The City and Port of Milwaukee's role in the cleanup of the Kinnickinnic River

The financial support that BID 35 received from Milwaukee's Department of City Development played a key role in launching the Kinnickinnic River restoration project. The project also received technical support from the Port of Milwaukee, which lent its expertise to the dredging effort and worked with the Corps of Engineers to ensure adequate capacity for the disposal of contaminated sediment at the Milwaukee Area Dredged Material Disposal Facility.

The city's support for the Kinnickinnic River project was motivated by both environmental and economic interests. Removing contaminated sediment from the project area would improve the local environment and eliminate a potential threat to public health. In addition, dredging would improve the navigability of the river throughout the project area, protecting boatyards and other businesses that need a navigable river to survive. The preservation of these businesses was consistent with city and community preferences for mixed development along the river, protecting its natural and scenic qualities while supporting commercial use and recreational enjoyment of Milwaukee's water resources. The benefits of the effort to local businesses and the surrounding community are now clear: a revitalized waterfront and the restoration of the Kinnickinnic River for the use and enjoyment of the city as a whole.



The Kinnickinnic: Before Cleanup

A sunken vessel illustrates the blighted condition of the Kinnickinnic River prior to the cleanup project.

Before Cleanup: A Waterfront in Decline

- *Contaminated mud flats.*
- *Restricted navigation.*
- *Dilapidated shoreline.*
- *Blighted and aesthetically unpleasing.*
- *Limited redevelopment potential.*



The Kinnickinnic: After Cleanup

After cleanup, the members of local businesses are seeing economic revitalization along the Kinnickinnic River.

After Cleanup: A Waterfront Restored

- *Contaminants removed.*
- *Navigation channel fully restored.*
- *Upgraded seawalls and shoreline features.*
- *Improved aesthetics and river access.*
- *Increased redevelopment potential.*