

Army Corps Completes Navigational Dredging Project

By Susan Pastor, U.S. Environmental Protection Agency

Green Bay's Georgia-Pacific and East River turning basins have lower levels of PCB-contaminated sediment thanks to the U.S. Army Corps of Engineers.

In cooperation with U.S. Environmental Protection Agency, the Corps completed its annual navigational dredging using environmental equipment and techniques through the end of July that complemented the work being done by Appleton Papers, Inc. and NCR Corp.

EPA Remedial Project Manager Jim Hahnenberg, who helped negotiate an "interagency agreement" between the two agencies, said the special equipment worked out well. "They used an environmental-type bucket that closes horizontally rather than just scooping like a traditional clam shell bucket," he explained. "It gives you a horizontal surface under the river rather than scooping out a big hole."



PHOTO COURTESY OF THE BOLDT COMPANY

Dredged sediment is being placed in a storage barge before it is taken off site for disposal.

Hahnenberg said when workers were done, there was a flat, rather than bumpy, surface at the river bottom. "This is important because if you have contamination, you won't leave something behind or take out more than is necessary," he continued. "The horizontal line at the bottom is more efficient for environmental reasons and for maintaining the navigation channel. Also, this type of dredge is better environmentally due to seals and gaskets that result in less spillage while in operation."

Although the Corps uses various types of dredges in navigational channels, Hahnenberg said an environmental dredge allows more sediment to be moved faster. "I think the Corps actually prefers this method," he added.

A key part of the agreement also called for the Corps to do turbidity monitoring twice daily to measure



PHOTO COURTESY OF THE BOLDT COMPANY

Upriver from the Corps dredging project, danger signs warn boaters about a pipeline that lies mostly beneath the water surface (propellers or the bottoms of boats could be damaged if boats ran over it).

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Dredging Moves South of DePere Dam

By Susan Pastor, U.S. Environmental Protection Agency

Stopping only on weekends, three dredges continue to pull sediment from the Lower Fox River just past the DePere Dam.

According to EPA Remedial Project Manager Jim Hahnenberg, between 100 and 120 truckloads of sediment per day are being removed. This adds up to more than 300,000 cubic yards so far. “Assuming we maintain the same rate of production, more than 600,000 cubic yards will have been removed this year added to the 500,000 cubic yards removed last year. This means that nearly a third of the total amount to be dredged will have been completed by the end of 2010,” he said.

For the rest of the year, workers are dredging about a half-mile north of the DePere Dam, south of the Highway 172 bridge in Ashwaubenon. They will keep moving north before work stops in November for the winter. “We’re on schedule and operations are proceeding as we thought they would,” Hahnenberg said.



PHOTO COURTESY OF FOX RIVER CLEANUP GROUP

Trucks are loaded on scales and washed before leaving the processing facility.



PHOTO COURTESY OF THE BOLDT COMPANY

After leaving the dewatering and sediment handling facility, truck carries a load of PCB sediment about 30 miles to a landfill for final disposal.

Disposal locations remain the same. Sediment with PCB levels over 50 parts per million, considered “highly contaminated,” is being sent to a licensed facility near Detroit. Most of the sediment dredged this year has levels under 50 ppm, so it is being taken to Veolia Hickory Meadows Landfill in Chilton. Trucks continue to pass through Wrightstown and Hilbert without incident. Routes are expected to revert back to the original plan through DePere now that construction there has been completed.

All dredged sediment is still being pumped into the dewatering facility through a pipeline. Water is squeezed out by special equipment called a plate and frame press. The remaining dried sediment is loaded onto a truck for proper disposal.

Caps and sand covers are not being used this season, but are expected to resume next year pending the outcome of discussions regarding which areas are most appropriate for those methods.

EPA Settles With Local Entities, Companies

By Susan Pastor, U.S. Environmental Protection Agency

To provide a fair and equitable settlement for liabilities, and in an effort to protect several local parties from large lawsuits, U.S. Environmental Protection Agency filed two settlements in federal court.

The most recent settlement, or judicial consent decree, was signed with the city of DePere on April 20. Under this settlement, the city agreed to pay EPA \$210,000. A second consent decree of just over \$2 million was finalized on Dec. 16, 2009. That payment was split among 11 parties: George Whiting Paper Co., Green Bay Metropolitan Sewerage District, Green Bay Packaging, Inc., Heart of the Valley Metropolitan Sewerage District, International Paper Co., Lafarge North America Inc., Leicht Transfer & Storage Co., Neenah Foundry Co., The Proctor Gamble Paper Products Co., Union Pacific Railroad Co. and Wisconsin Public Service Corp.

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water clarity as prescribed by Wisconsin laws. As expected, turbidity caused by navigational dredging was below required state standards. This monitoring, however, was critical to ensure that water clarity standards were maintained and that there were no significant releases related to the operation.

Hahnenberg explained, "Water with high turbidity has a milky look while low turbidity would look clean."

Under the agreement, the Corps paid for the actual dredging while EPA paid for the monitoring and other related costs incurred by the Corps. Discussions among EPA, the Corps and Wisconsin Department of Natural Resources will continue to determine what the Corps needs to do next year.

The interagency agreement can be found at www.epa.gov/region5/sites/foxriver.

The decision of what is a "fair allocation" promotes an equitable settlement for liabilities. It was based on the total cost of the entire Lower Fox River project (\$1.5 billion). This included cleanup and long-term monitoring for all four portions of the river from Little Lake Butte des Morts to Green Bay and the bay itself.

Referred to as "de minimis," these types of settlements are typically done to protect smaller parties from being sued by larger companies.



Out and About...

By Susan Pastor, U.S. Environmental Protection Agency

The Fox River Intergovernmental Partnership is made up of U.S. Environmental Protection Agency, Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Oneida Tribe of Indians of Wisconsin and Menominee Indian Tribe of Wisconsin. These partners, as well as other supporting agencies, regularly provide speakers to organizations in the Fox Valley area. The following people recently made presentations:

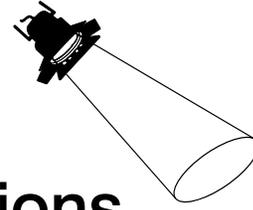
June

- ◆ *Jim Hahnenberg*, EPA: National Association of Retired and Active Federal Employees, Green Bay; general Lower Fox River cleanup.

The Fox River Current is featuring natural resource damage assessment projects in and near the Lower Fox River.

Spotlight On:

Killsnake Wildlife Area Restorations



By Betsy Galbraith, Fox River/Green Bay NRDA Trustee Council Coordinator

Nestled in the heart of northeastern Wisconsin's "ag country" is a 7,000-acre contiguous land mass known as the Killsnake Wildlife Area. Plentiful wildlife can be found in every corner of this unique Wisconsin Department of Natural Resources-managed property. A 10-point buck in velvet bounding through prairies filled with big bluestem, sandhill cranes sailing overhead, and wild turkeys strutting down gravel roads are common sights. But perhaps Killsnake's most significant role is providing a seasonal home for waterfowl and shorebirds injured by PCBs in its abundant wetlands.

Killsnake Wildlife Area is located in both southeastern Calumet and southwestern Manitowoc counties. Three waterways run through the wildlife area including the Killsnake River, South Branch of the Manitowoc River, and Cedar Creek. The confluence of these waters is the primary reason the property contains a wealth of archaeological history, with many sites on the National Register.

A variety of landscapes offer diverse habitat for wildlife including prairies, grasslands, bottomland hardwood forest, cedar swamp and tamarack bogs. "Killsnake Wildlife Area is unique because of its large size, diverse habitats and its location in a remote rural area," stated Wisconsin DNR Wildlife Technician Josh Jackl, who helps manage the site. "Agriculture is also a large component at Killsnake Wildlife Area. We're one of the largest



PHOTO COURTESY OF JOEL TRICK, U.S. FISH AND WILDLIFE SERVICE

Wisconsin DNR Wildlife Technician Josh Jackl examines the structure that regulates wetlands water levels.

sharecropping DNR-managed wildlife areas in the state," Jackl added.

In 2004, the Fox River/Green Bay Natural Resources Damage Assessment Trustee Council funded the restoration of wetlands and adjacent uplands in several areas at Killsnake. Drained farm fields were once again returned to soggy wetlands as ditches were plugged and tile lines were broken to restore natural hydrology. At least five shallow wetland ponds were dug to provide open water habitat for waterfowl and mudflats for

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shorebirds. These ponds were surrounded by newly planted prairie mixes.

“Blue-winged teal, pintails, and mallards frequent the wetlands and nest in the uplands,” said Wisconsin DNR Wildlife Biologist Dick Nikolai. “These wetlands are also excellent food sources during migration for other waterfowl such as redheads, scaup and canvasbacks,” he added.

The wetlands and prairies are now part of the established landscape at Killsnake but still require ongoing maintenance. Prescribed burning, mowing and spraying for invasive plants, and brush cutting are regular activities undertaken by Wisconsin DNR staff and contractors.

Regular monitoring activities have been helpful in capturing the positive changes at Killsnake. Annual waterfowl surveys, duck banding, amphibian surveys and marsh bird monitoring are used to track wildlife trends.

Water quality within the watershed has also improved as a result of these projects. Water infiltrates in the newly restored areas and recharges the ground water table rather than rapidly running off into nearby ditches and going directly to rivers. Upland prairie plantings adjacent to the wetlands act as erosion control buffers by filtering suspended soil materials.

There are abundant public recreational opportunities in this large wildlife area. Hunting and fishing are popular activities during the spring and fall. Local school groups also visit Killsnake to learn about the unique ecology of the area and assist with restoration work. Bird watchers frequent the site to catch a glimpse of unique species such as the short-eared owl and dickcissel. (For more information on birding at Killsnake, check out the Great Wisconsin Birding and Nature Trail publication at www.wisconsinbirds.org/trail/sites/Killsnake.htm)



PHOTO COURTESY OF TAMMIE PAOLI, WISCONSIN DNR

This type of wetland provides food and habitat for waterfowl and shorebirds injured by PCBs.

To visit Killsnake Wildlife Area, take Highway 57 to Chilton then head east on Highway 151 for approximately 5 miles. Take a left on Lemke Road and head north through the interior of the property. Well-marked parking areas can be found throughout the area.

In-kind services from Wisconsin DNR for construction oversight, project design and permitting also supported this project.

The natural resource trustees are comprised of the Wisconsin DNR, FWS, Oneida Tribe of Indians of Wisconsin, Menominee Indian Tribe of Wisconsin, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration.

For more information about Fox River/Green Bay NRDA projects, contact Betsy M. Galbraith, trustee council coordinator, at betsy_galbraith@fws.gov or 920-866-1753.

Cleanup Progress At-A-Glance

The Fox River Cleanup Project moved into its second year with the start of sediment dredging and processing on April 5, 2010.

Progress Achieved in 2010

- Estimated volume of sediment dredged
 - 360,610 cubic yards
- Estimated amount of processed sediment produced
 - 185,263 tons
- Estimated volume of sediment hauled to landfill
 - 190,155 tons
- Truckloads of sediment sent to a landfill
 - 8,137
- Water treated and discharged to the river
 - 501,580,000 gallons

The 2010 cleanup activities follow on the heels of a successful start to the project in 2009.

Progress Achieved in 2009

- Estimated volume of sediment dredged
 - 541,218 cubic yards (exceeded the 2009 target by more than 15 percent)
- Amount of processed sediment hauled to landfill
 - 335,207 tons
- Truckloads of sediment sent to a landfill
 - 14,131
- Area of river bottom sand covered**
 - approximately 61 acres
- Area of river bottom capped**
 - approximately 7 acres
- Water treated and discharged to the river
 - 715,028,000 gallons

** Capping and sand covering was not originally scheduled to begin until 2010. Limited capping and covering was done in 2009 and the larger capping and covering project is expected to start in 2011. No capping or covering will take place in 2010.

Project Milestones

Spring 2008 - Spring 2009

The Green Bay processing facility was constructed.

Summer - Fall 2008

A detailed sampling and analysis program was created to refine the limits of selected areas to be dredged in 2009. This program was extended to areas of the river scheduled for dredging in subsequent years.

December 2008

The final plan for 2009 cleanup work was submitted.

January 2009

Contractors submitted the proposed final design for cleanup work to be performed from 2010 to completion.

April 28, 2009

Dredging operations began.

Summer 2009

Capping and sand covering operations began.

Mid-November 2009

First year of operations conclude. Sediment dredging and processing exceeded 2009 targets.

April 5, 2010

Dredging resumed on the Lower Fox River.

Information Available at Local Libraries

The Intergovernmental Partners invite the public to review technical reports, fact sheets, newsletters and other documents related to the Lower Fox River cleanup at information repositories set up in the reference sections of the local libraries listed below.

- **Appleton Public Library**, 225 N. Oneida St., Appleton, Wis.; 920-832-6170
- **Brown County Library**, 515 Pine St., Green Bay, Wis.; 920-448-4381, Ext. 394
- **Door County Library**, 107 S. Fourth Ave., Sturgeon Bay, Wis.; 920-743-6578
- **Oneida Community Library**, 201 Elm St., Oneida, Wis.; 920-869-2210
- **Oshkosh Public Library**, 106 Washington Ave., Oshkosh, Wis.; 920-236-5205

In addition, fact sheets and newsletters only are maintained at the public libraries in De Pere, Kaukauna, Little Chute, Neenah and Wrightstown.



Check out these Web sites:

<http://www.epa.gov/region5/sites/foxriver>

<http://dnr.wi.gov/org/water/wm/foxriver/index.html>

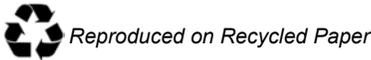
<http://contaminants.fws.gov/issues/restoration.cfm>

<http://www.fws.gov/midwest/nrda/index.html>

An administrative record, which contains detailed information upon which the selection of the final site cleanup plan was based, is also available for review at two DNR offices: 801 E. Walnut St., Green Bay, Wis. and 101 S. Webster St., 3rd Floor, Madison, Wis. An administrative record is also available at the EPA Record Center, 77 W. Jackson Blvd., 7th Floor, Chicago, Ill.



Region 5
 Superfund Division (SI-7J)
 77 W. Jackson Blvd.
 Chicago, IL 60604-3590



Prepared by the Fox River Intergovernmental Partnership: Wisconsin Department of Natural Resources, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Menominee Indian Tribe of Wisconsin, Oneida Tribe of Indians of Wisconsin, and National Oceanic and Atmospheric Administration. Supporting agencies include Wisconsin Department of Health Services, U.S. Agency for Toxic Substances and Disease Registry, and U.S. Army Corps of Engineers.

Disclaimer: The opinions expressed in these articles are solely those of the authors and are not necessarily shared by all members of the Fox River Intergovernmental Partnership.

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