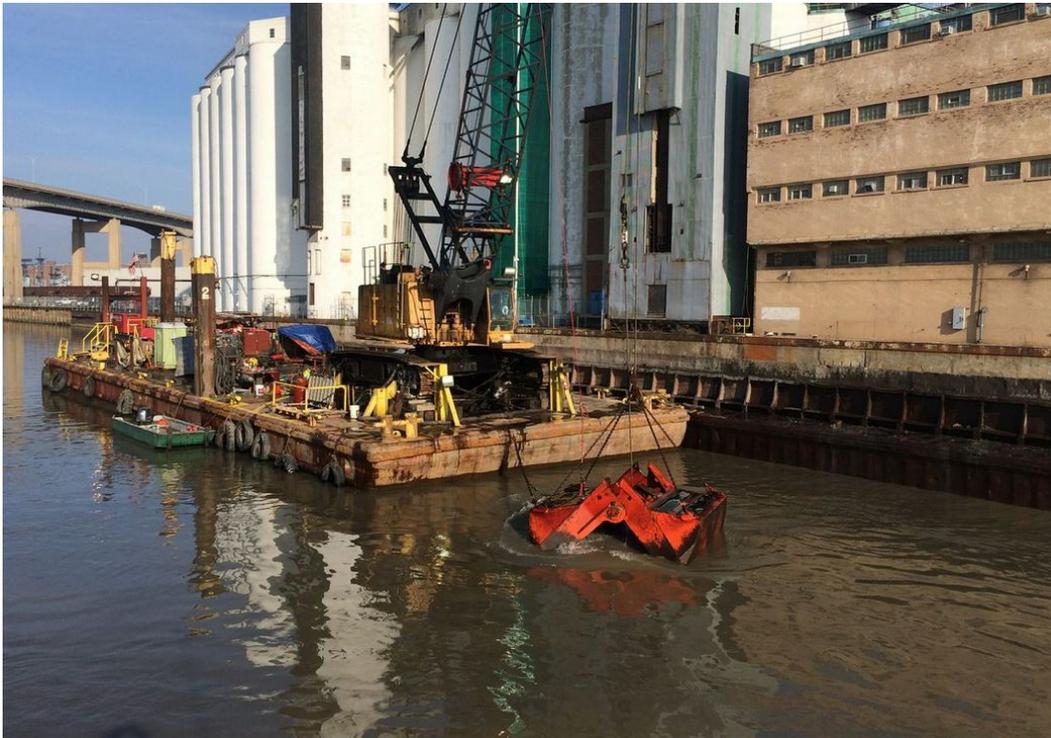


USA: Revitalization of Buffalo River Moves Ahead

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With the skill of a surgeon, crews are meticulously dredging the Buffalo River, ridding it of decades of contamination, setting the stage for the restoration of habitat for fish and wildlife, improved water quality and enhanced public access.

24 hours a day, six days a week, between late June and December, operators dredge the river with a massive clamshell bucket that is repeatedly lowered into the water from a crane decked on a barge. When the four year project is completed in 2015, the equivalent of 33,000 truckloads of sediment will have been removed from the riverbed. The shipping channel was formed nearly 100 years ago, in part, to alleviate upstream residential flooding.

Work halts from January 1 to June 15 each year, the fish spawning season on the river.

Known as the Buffalo River Restoration Partnership, this public-private collaboration includes U.S. Environmental Protection Agency (USEPA), U.S. Army Corps of Engineers (USACE), New York State Department of Environmental Conservation (DEC), Buffalo Niagara Riverkeeper and Honeywell.

USEPA is project manager for projects involving Great Lakes "Areas of Concern," (AOC) of which the Buffalo River is one. AOC's are required by the Great Lakes Water Quality Agreement to advance environmental cleanup through remediation strategies including dredging of contaminated sediment. The agency partnered with Honeywell and Buffalo Niagara Riverkeeper, and has been involved in the project design along with other partners, and is managing the construction.

The project addresses the historical industrial contamination, common in many of the Great Lakes, rivers and harbors according to **Scott Cieniawski, project manager for USEPA**. *"We saw a huge improvement when the Clean Water Act came into effect. We've been able to greatly reduce the amount of contamination going into these systems,"* he said.

"The problem is, the sediments present a storehouse for the contamination of the past, where they continue to have impacts on fish tissue concentration, so there are restrictions on fish consumption, they continue to cause fish tumors and other deformities in other kinds of wildlife and really degrade the aquatic system and really reduce what your able to do with these rivers, which for the city of Buffalo is a huge draw, it's a huge benefit to the city to have a clean and healthy river."



Sevenson Environmental Services of Niagara Falls, N.Y., is a team partner with EQM, an engineering and design firm out of Cincinnati, which was awarded the \$40 million contract by the Great Lakes National Program office. Luedtke Engineering, a subcontractor of Sevenson, is doing the dredging and hydraulic unloading of the barges filled with sediment that is transported by barge for processing at the confined disposal facility (CDF).

“These are historical legacy sediments that have been there for a long time that don’t normally get addressed through the routine navigational dredging,” said **Martin Doster, regional environmental remediation engineer for DEC.** *“These pockets of contaminated sediments have been identified over the last decade through a series of sample investigations and engineering investigation.”*

Crews are mechanically dredging approximately 480,000 cubic yards of PCB sediment from the lower 6.5 miles of the Buffalo River and the City Ship Canal. The sediment is loaded into scows and placed in the USACE’s CDF, located three miles south of the Buffalo River on the shores of Lake Erie. Another 5,000 cubic yards of PCB sediment will be processed, dewatered, stabilized and disposed of offsite in a Toxic Substances Control Act permitted landfill (waste with >50 parts per million PCB concentration).

Along with the sediment, the material being pulled from the river bed varies according to **Ben Faery, Sevenson’s project manager.** *“Logs are coming up and there are a lot of tires, cable, concrete, you name it,”* he said.

The sediment and debris are loaded onto a barge which is then towed to the confinement facility, where a hydraulic unloader pumps it in through a pipeline into the actual CDF.

Sediment is offloaded using a 16-inch hydraulic dredge that has been modified specifically for offloading sediment scows into CDFs. Water is recirculated from within the CDF to create and slurry and the sediments are pumped thru a 16-inch pipeline to a designated area within the CDF.

Debris that ends up in the sediment scows is removed periodically at the temporary pier constructed by Sevenson at the CDF. Debris is offloaded using a long reach excavator with grabble attachment, loaded into off-road dump trucks and placed within the CDF footprint.

The project also calls for insitu capping over an eight to 10 acre area of contaminated sediment along a 1.4 mile stretch of the City Ship Canal, located adjacent to the Buffalo River. Habitat restoration will also be completed.

USACE is supplying subject matter experts to work as part of the Buffalo River Restoration Partnership and to oversee the work that is being done. **Bruce Sanders, Public Affairs Officer for the U.S. Army Corps of Engineers, Buffalo District,** said: *“The partnership’s efforts will contribute significantly to the ecological restoration of the Buffalo River and the Great Lakes. We’re optimistic that working together to leverage available resources the partnership will leave a legacy we can all be proud of.”*

According to Buffalo Niagara Riverkeeper, the restoration project has leveraged nearly \$75 million in restoration of the Buffalo River and shoreline, which is laying the foundation for Western New York's "blue economy."

Jill Jedlicka, Riverkeeper Executive Director, is passionate about this project. Two generations of her family have doggedly worked to clean up the river. *"It's exciting. For a long time, we never thought it would happen. To be able to get a point where we actually see the dredge plants and the scows and the 40 plus jobs that have been created for this project it makes you feel great that your work means something for not only your organization but for your entire community."*

This is just the beginning. Jedlicka said the motivation behind a river restoration is to help simulate the local economy, something she calls a *"blue economy, that's water dependent and is a recreational resource."*

Economic revitalization around the river is beginning to take hold, with investors looking to capitalize on the cleaner, restored waterway. *"It's seen as prime real estate and prime for private investment,"* Jedlicka said.

"I think it's another page in the book of turning Western New York around economically, but also bringing people back to the waterfront," the DEC's Doster said. *"For a long time, I think Buffalo and the people here have never taken the time to come to the water to be part of that waterfront, and now we, as a society, are embracing that. We're excited about restoring environmental features of the river, which in turn, benefit everybody who lives here in Western New York."*

The future for the Buffalo River is bright. USEPA's Cieniawski noted that regulations that have come into effect have led to cleaner systems in general, and waterways no longer run the risk of recontamination.

Jedlicka said: *"We've always said that water defined our history it will define our future. But now, clean and healthy water will define our future."*

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