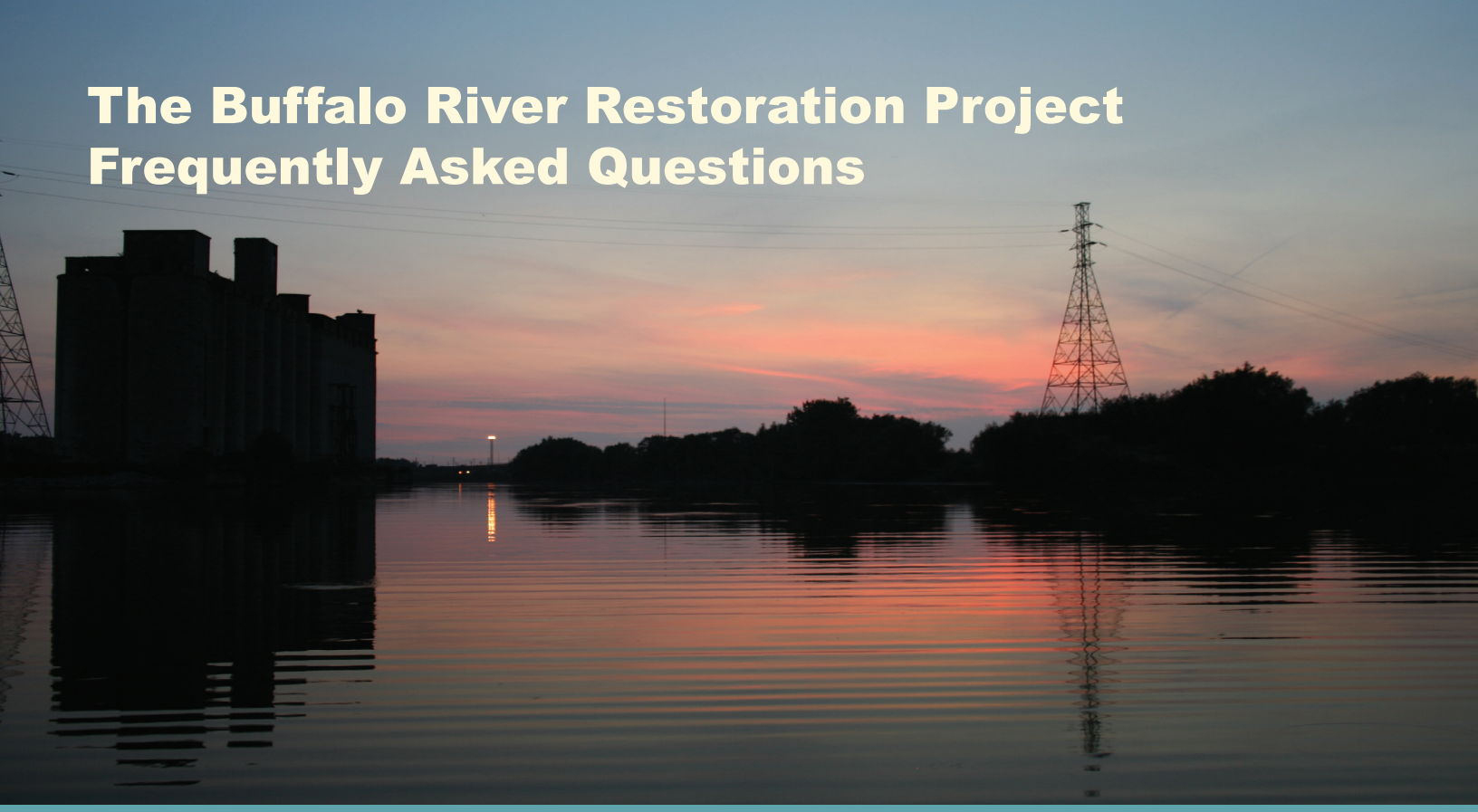
The Buffalo River Restoration Project Frequently Asked Questions



The Buffalo River Restoration Partnership is a public-private collaborative effort to clean up sediment in the Buffalo River. Although discharges of toxic chemicals to the Great Lakes have greatly decreased in the past 30 years, contamination remains in Buffalo River. The river bottom is contaminated with PCBs, PAHs (polynuclear aromatic hydrocarbons), and metals. The Buffalo River Restoration Partnership includes the U.S. Environmental Protection Agency (USEPA) Great Lakes National Program Office, the USEPA Region 2, the U.S. Army Corps of Engineers, the New York State Department of Environmental Conservation, Erie County, the City of Buffalo, Honeywell, and Buffalo Niagara RIVERKEEPER. This cleanup is part of a larger strategy to keep contaminants out of not only Buffalo River, but also the Lake Erie food chain.

What is the timeframe of the cleanup?

The dredging of the river is planned to occur in two phases. Phase I dredging is fully funded and began in August 2011 and will continue through November 2011. The U.S. Army Corps of Engineers is taking the lead on the dredging of the federal navigation channel (or center of the river) in 2011, which is being funded by the Great Lakes Restoration Initiative. Phase II of the project is under remedial design, with a proposed start date in 2012. Phase II is the cleanup of contaminated sediments outside of the navigational channel, including side slopes. Phase II dredging will be lead by the U.S. Environmental Protection Agency Great Lakes National Program Office under the Great Lakes Legacy Act and take approximately two years (through 2013), which will include habitat restoration.

FUNDING

Who is paying for the cleanup?

Because of the "legacy" of North America's industrialization, large amounts of contamination persist in the sediment. To help accelerate the recovery of the sediment, the Great Lakes Restoration Initiative (GLRI) funds cleanup activities. The GLRI is administered and distributed through the U.S. Environmental Protection Agency Great Lakes National Program Office. Phase I of the project is funded through a combination of U.S. Army Corps of Engineers operations and maintenance funds and through the GLRI. Regarding Phase II, the U.S. Environmental Protection Agency takes a partnership approach under the Great Lakes Legacy Act in a cost-share agreement with non-federal sponsors (state, local, non-profit or industry) to fund cleanup activities. Honeywell and Buffalo Niagara RIVERKEEPER, the non-federal sponsors to date, have been active partners in the Remedial Investigation/Feasibility Study and Remedial Design process for

Kickoff celebration of U.S. Army Corps of Engineers dredging

the last three years, and we are actively seeking engagement from a variety of river industries and private corporations.

Is the funding for all phases of dredging secure?

Phase I of the dredging is taking place and fully funded. Funding for the Remedial Design of Phase II is secure. Pending final design an application to Great Lakes Legacy Act is expected in late 2011.

How much has been spent on the studies and will this project actually be implemented?

To date more than $6 million has been spent on the Remedial Investigation/Feasibility Study and Remedial Design. There are no guarantees that Phase II dredging will be implemented, however the Buffalo River Restoration Partnership is committed

U.S. Army Corps of Engineers barge loader, "Lucille T," which transfers dredged sediment to the Confined Disposal Facility

to the restoration of the Buffalo River. Significant personnel time and resources have been dedicated to the effort for more than seven years.

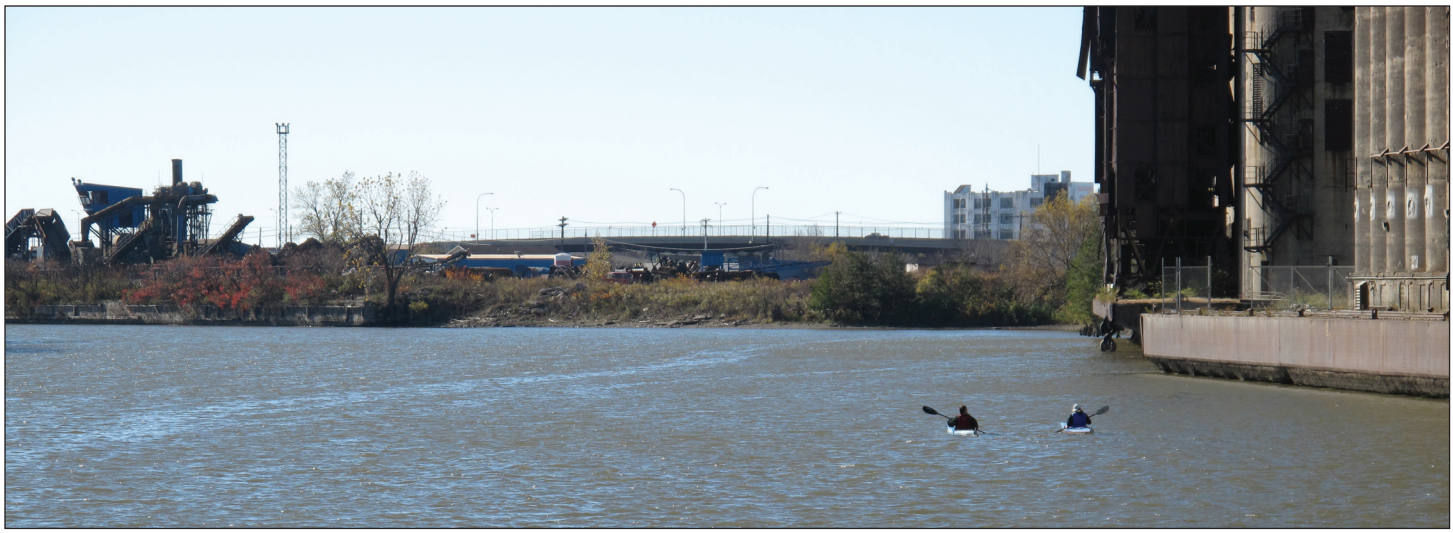
DREDGING OPERATION

How does this project compare with past dredging projects by the U.S. Army Corps of Engineers?

Past U.S. Army Corps of Engineers dredging projects in Buffalo Harbor were generally at a smaller-scale (approximately 100,000 cubic yards biannually that would typically require only a few weeks to complete). Phase I dredging is removing a substantially larger volume of sediment (approximately 600,000 cubic yards) and requires a longer time to complete than past dredging projects (a 24 hour a day, 7 days per week dredging operation from late August 2011 through November 2011). In addition, this project is a collaboration among partners of the Buffalo River Restoration Partnership and includes a second phase (approximately 600,000 cubic yards), which will be administered by the U.S. Environmental Protection Agency. The total project cleanup will remove approximately 1,200,000 cubic yards. The standard dump truck volume is about 10 cubic yards, which means the total volume of sediment removed in this project would fill approximately 120,000 dump trucks.

Is dredging planned for the City Ship Canal on the side slopes and how will this affect the marina operations?

The Buffalo River Restoration Partnership is in close contact with various shoreline property owners including the operators of the marinas. We are working with the owners on the dredging schedule to minimize impact on the slip owners' usage of the river. Due to the magnitude of sediment to be removed, we cannot guarantee whether there will be restrictions or impacts on the access to slips at certain times of the year.



The Buffalo River near Katherine Street

Will dredging be impacted by large amounts of junk (ex. cars) in the river? What about the Buffalo Police Department diving at the head of Smith Street?

Urban rivers often contain large amounts of debris and experienced dredging contractors are accustomed to dealing with this. The dredges and supporting equipment used is sufficient for clearing large debris and properly disposing of it. The Buffalo River Restoration Partnership will continue to communicate and coordinate with police as we move through remedial design and construction.

DREDGING IMPACT ON COMMUNITY

Will dredging impact recreation on the river?

River users are encouraged to maintain ongoing communication with the Buffalo River Restoration Partnership (BRRP) so both sides can be informed as to activities planned or scheduled on or along the river for 2011, 2012, and 2013. We will try our best to accommodate activities on the river if it is in our means. The BRRP is working to set up real-time public information so river users know when and where the dredge operations will be taking place during the life of the project. River users with questions or concerns regarding scheduled dredging activities are encouraged to contact the BRRP at 716-852-7483 ext. 21 (Jill Jedlicka's line from Buffalo Niagara RIVERKEEPER) and consult applicable notices to mariners. For questions specific to Phase I, river users may contact the U.S. Army Corps of Engineers at 716-879-4410.

Bailey Avenue Peninsula

Will dredging impact fish populations? Will the Buffalo River be restocked?

Although we expect fish populations to be negatively impacted initially, a major component of this river restoration effort is to restore habitat after the dredging operations. This will result in a long term net benefit to fish health and populations. Stocking efforts for walleye have been attempted in the past, but due to poor habitat conditions, there was significant mortality and the stocking effort failed. Future stocking may be considered, once habitat has been re-established and is supportive of the variety of fish species.

Will drinking water be affected by dredging?

A U.S. Army Corps of Engineers 2010 Environmental Assessment for Phase I indicates that no adverse impact from the project on water and sewer facilities is anticipated, and the dredging should not have any adverse impact on drinking water. The evaluation of the Phase I sediment was included in the Finding of No Significant Impact and Environmental Assessment for the Buffalo Harbor, GLRI (U.S. Army Corps of Engineers 2010, located at http://www.lrb.usace.army.mil/general/Factsheets/buffalo-harbor.html). The evaluation of the Phase II sediment will be included in the U.S. Army Corps of Engineers Environmental Assessment. The City of Buffalo is constantly monitoring intakes to ensure high quality drinking water. Multiple controls are in place to ensure protection of drinking water throughout Phases I and II. Although dredging causes a short-term disruption of sediment in the river, this project will use four primary methods to limit this occurrence. First, the dredging will occur at a slow, controlled

pace. Second, a closed clamshell bucket will be used to dig the sediment; compared to other buckets, it has a smoother, tighter close. Third, barges will be prohibited from overflowing excess water into the river. Finally, dredging will not occur during exceedingly high river flow events. More information regarding the Erie County Water Authority drinking water collection, treatment, and testing may be found at http://www.ecwa.org/web/waterquality.jsp?o=Water%20Quality.

Will surface water be affected by dredging?

Although there will be temporary resuspension of sediment at the dredging site, analyses by the U.S. Army Corps of Engineers (USACE) indicate degradation is not expected in the quality of the surface water. The USACE conducted modeling to evaluate the impacts of Phase I dredging and did not identify long-term impacts to surface water quality. They are currently conducting similar modeling for Phase II. The results of their modeling will be used to identify if additional engineering controls will be needed during dredging to minimize short-term water quality impacts. Sediment sampling was performed to provide an estimate of the contaminant concentrations in the surface sediment both before and after dredging. The existing surface concentrations were used to identify the areas to be dredged. The environmental dredging in these areas will continue until the criteria in sediment quality guidelines have been achieved. The 2010 USACE Environmental Assessment recommends that in areas of the Ship Canal with the potential to release higher concentrations of soluble copper, that under the best of conditions the dredge production rate should be restricted to about 3,000 cubic yards per day. Care will be taken to minimize the disturbance of the sediment bed by minimizing the number of lifts used to achieve the desired channel depth. In addition, barge overflow and bucket draining will be avoided. These measures will help to minimize the release of copper to the water column during dredging. The USACE Engineer Research and Development Center has conducted similar evaluations for the U.S. Environmental Protection Agency Great Lakes National Program Office to ascertain what, if any, specific measures need to be implemented to ensure that Phase II dredging is also performed to reduce the potential for contaminant releases to the water column. This evaluation is pending and scheduled to be completed in 2011.

A dredge bucket is raised from the City Ship Canal in the first phase of dredging, September 2011.

HABITAT QUALITY

After dredging is done, what is planned to improve water quality?

We are currently completing designs for the habitat restoration phase of the river clean up. All six proposed projects will be designed in an attempt to increase dissolved oxygen in segments of the river, improving water quality in the river. In addition, private shoreline property owners are implementing better storm water management that could provide additional ecological benefit.

Buffalo River is at the receiving end of a large watershed. Once the contaminated sediment is removed, what will keep the river from again filling with contaminated sediment from the watershed?

Comprehensive chemical analyses within the river and the upper tributaries have shown that sediment being carried downstream is much cleaner than the historical sediment currently below the surface of the Buffalo River.

After the dredging, will the sediment be clean enough for other beneficial uses?

Yes. One of the guiding principles to the effort is to restore the river enough to allow the contaminant levels to be reduced to a point that would allow beneficial uses of sediments. The Buffalo River Restoration Partnership would like to see future “beneficial re-use” of clean, dredged sediment for regional habitat and river restoration. Possible beneficial re-use opportunities include the use of dredged sediment for upland purposes, in-water restoration, or fill, rather than disposing of the sediment and taking up space in a Consigned Disposal Facility or landfill.

Will invasive species be considered for habitat restoration?

Any habitat restoration planning and design will consider the potential impacts of invasive species. All habitat restoration implementation will incorporate invasive species management as part of the project.

Why shouldn't we let the river go back to the natural stream it once was and learn to adjust to the flooding?

Congress mandates the U.S. Army Corps of Engineers to maintain the federal navigation channel and only Congress can change it. The Federal Emergency Management Agency (FEMA) would also be involved in any decisions that would allow the river to re-connect to its natural floodplain. Due to the hundreds of homes and thousands of residents that would be impacted by such a decision, the restoration of the river is guided by depths authorized by Congress.

DISPOSAL SAFETY

Is placement of dredged sediment from Phase I and II in the Confined Disposal Facility (CDF) safe?

Yes, the U.S. Army Corps of Engineers has determined that placement in the CDF is and will be protective of human health and the environment. All dredged sediment will be placed in the existing U.S. Army Corps of Engineers (USACE) CDF #4 located in Buffalo's Outer Harbor adjacent to the Buffalo Harbor South Entrance Channel. The USACE Engineer Research and Development Center performed two separate evaluations of the various tests of the sediment to be dredged under Phases I and II. The conclusions of these evaluations indicate that internal concentrations of contaminated pore water or carrier water will not cause lake contamination. Also, additional and ongoing upgrades have been made to ensure integrity of CDF walls.

How does the dredged sediment in Phase I differ from other material in the Confined Disposal Facility (CDF)?

The sediment to be dredged under Phase I and Phase II has been thoroughly tested and evaluated. The sediment to be dredged under Phase I is from within the navigation channel and is comparable to or slightly more contaminated than sediment routinely dredged from the Buffalo Harbor federal navigation channels. Planned upgrades to the perimeter of this CDF were completed in 2010 prior to implementation of the dredging and attendant disposal operations. Specifically, recent upgrades to the CDF walls will augment the filtering of sediment laden fluids derived from dredging and subsequent dewatering from sediment settling. The CDF can safely and adequately accommodate this dredged sediment.

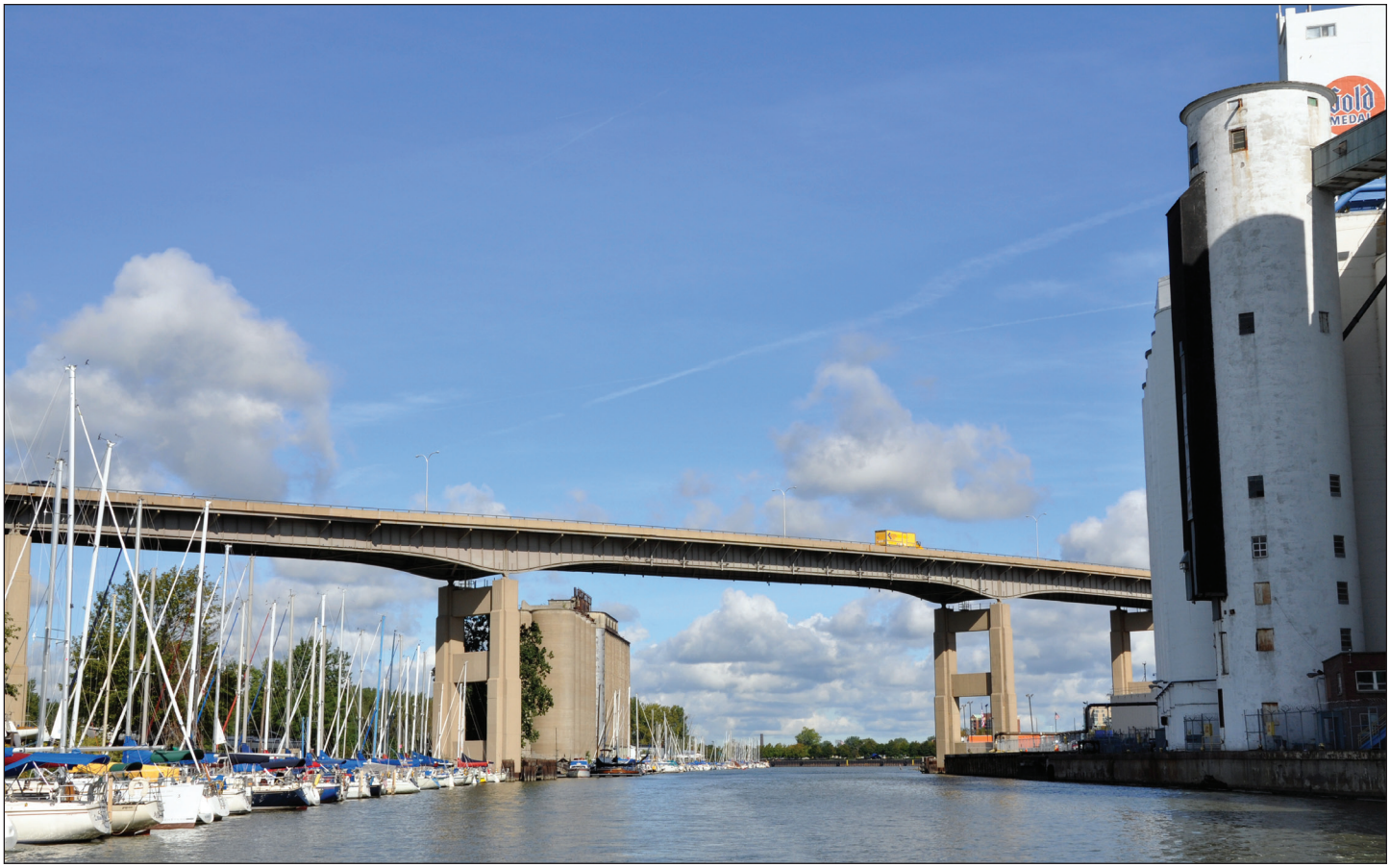
Will there be ongoing water quality monitoring at the Confined Disposal Facility (CDF)?

Water quality monitoring is not planned at the Confined Disposal Facility (CDF) for Phase I. Measuring water quality outside the dike wall will typically not signify adverse impacts to Lake Erie water quality relating to the CDF, as there could be multiple sources of pollution to the lake. The CDF is specifically designed to isolate contaminated sediment from adjacent land and water, while allowing for the safe release of excess water (effluent). The release of effluent through the dike walls is predicted (before dredged sediment placement) by lab testing and modeling to be non-toxic and comply with applicable water quality standards. The results of these predictive evaluations determine that the CDF can safely and adequately accommodate the dredged sediment. Major factors of consideration include sediment contamination and contaminant partitioning, available volume and residence time in the CDF, and contaminant dilution in the CDF. No effluent will be discharged through the CDF's overflow weirs during Phase I or Phase II.

Will there be ongoing water quality monitoring during dredging operations? Who will perform the monitoring and who will pay for it?

Water quality monitoring is not planned for Phase I. Prior to dredging, impacts to the water column due to sediment resuspension, including suspended solids and contaminant concentrations, are assessed through predictive lab tests and modeling. Modeling is based on sediment contaminant concentrations, partitioning parameters and geotechnical properties. Results are compared to federal water quality criteria established for the

Confined Disposal Facility #4 and Buffalo's Outer Harbor



Looking at the Skyway Bridge from City Ship Canal

protection of aquatic life to ascertain the potential for adverse risk. The 2010 Environmental Assessment for Phase I indicates there is the potential for short-term risks to aquatic life from water column impacts during dredging. Methods to reduce short-term risk are described on page 3 in "Will drinking water be affected by dredging?" Short-term adverse effects must be compared to the long-term improvements in overall water quality resulting from the permanent removal of contaminated sediments from the aquatic system. Water quality monitoring is planned for Phase II and will be incorporated into the project cost. Final construction monitoring requirements will be worked out by the state and federal regulatory agencies during the project permitting process. Responsibilities for monitoring activities will be determined during design and contracting activities.

Will there be long-term monitoring of the river after dredging is completed?

Long-term monitoring is not planned for Phase I. For Phase II, a post-dredging (3-5 years) long-term monitoring plan is currently being developed as part of the remedial design. The Buffalo River Remedial Action Plan will also develop an extended long-term monitoring protocol (> 5 yrs), and will be available for public review once finalized. Depending on the specific objectives of each plan, monitoring may be conducted on one or more of the following measures - sediment chemistry/toxicity, water quality, habitat quality, fish tissue concentrations, and benthic community.

PUBLIC OUTREACH

What kind of outreach/education is planned to alert residents, children and at-risk populations who use the river and eat the fish?

The Buffalo River Restoration Partnership (BRRP) is currently implementing a public outreach plan that will last the life of the project. The BRRP is committed to keeping local residents as informed as possible and will use multiple tools such as guest speakers, social media, signage, website, media interviews, one-on-one meetings, courtesy calls, etc. If the community has concerns now, they are encouraged to contact the BRRP at 716-852-7483 ext. 21 (Jill Jedlicka's line from Buffalo Niagara RIVERKEEPER).

Who can I call or report to if there are problems during the dredge operations?

For questions specific to Phase I, river users may contact the U.S. Army Corps of Engineers at 716-879-4410. For general project questions, contact the Buffalo River Restoration Partnership at 716-852-7483 ext. 21 (Jill Jedlicka's line from Buffalo Niagara RIVERKEEPER).

Is public feedback actually going to affect the outcome of the final restoration?

Yes. Public feedback may affect the scope of habitat restoration sites (expansion of proposed sites or implementation of alternative sites). With cost-share possibilities, the dredge footprint of Phase II could be expanded to meet the needs of property owners. Scheduling of operations in Phase II may be modified to avoid major river events or other unforeseen issues if it is within our means.

Can shoreline property owners talk with the Buffalo River Restoration Partnership (BRRP) about options for cost-share or shoreline improvements?

Yes. The BRRP has been and will continue to meet with individual shoreline property owners throughout 2011 and 2012 to identify and address concerns regarding shoreline stability and improvement or restoration cost-share possibilities. If you have not yet been approached by the BRRP, please contact us at 716-852-7483 ext. 21 (Jill Jedlicka's line from Buffalo Niagara RIVERKEEPER).

SOURCE CONTROL

Is this project linked to sewer overflow remediation? If so, how?

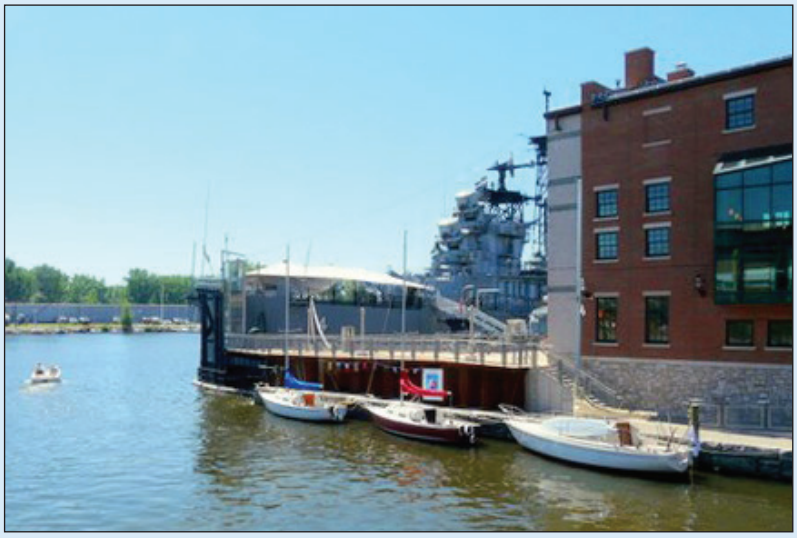
Historically, combined sewer overflows (CSOs) contributed chemical inputs into the Buffalo River. However, today, with the implementation of New York State's State Pollutant Discharge Elimination System program, environmental laws, and better wastewater treatment, the industrial chemical releases to the river through CSOs are expected to have negligible effects on sediment quality. The sediment that is being removed from the Buffalo River is mostly historical, and occurs at depths that suggest there are no longer significant chemical inputs into the river from sewers. The Buffalo Sewer Authority is in the process of finalizing a Long-Term Control Plan for CSOs in Buffalo. This process is separate from this project, and is also expected to bring about water quality improvements, specifically related to bacterial contamination.

There are several sites that are very environmentally hazardous along the banks. Have you identified them all and fixed them so they don't leak back into the river?

Over the years many hazardous waste disposal sites along the Buffalo River have been identified and either are being addressed through New York State's cleanup programs or already have been remediated. These sites include Sovereign Specialty Chemicals, Steelfields (formerly, Republic Steel and Donner-Hanna Coke, respectively), Buffalo Color, and Exxon Mobil. Remedial actions at these sites were designed to remove, treat, or contain contamination and to prevent the migration of residual contaminants to the river. In the future, as information becomes available, the New York State Department of Environmental Conservation (NYSDEC) will continue investigations to ensure upland sites do not impair the Buffalo River. For more information: http://www.dec.ny.gov/chemical/37554.html. NYSDEC's brownfield cleanups are also restoring the river's waterfront. For example, the City of Buffalo is now considering proposals for the development of Riverbend, which will transform the Steelfields site cleaned up under the state's remedial program, into a mixed

Smith Street Pocket Park provides a view of the world's largest grain elevator and Concrete Central.

use neighborhood offering light industrial, commercial, residential, and recreational opportunities. For more information: http://www.citybuffalo.com/Home/City_Departments/Office_of_Strategic_Planning/South_Buffalo_Brownfield_Opportunity_Area.



Eastern-most point of the Erie Canal, entering Buffalo's inner harbor

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