

RECAP OF 2022

As another successful year ends, we want to share with you some of our accomplishments for the year and thank you for helping to make them happen. In this newsletter, we update you on the success of the stream restoration project along the Stickney Branch of Big Creek, and on the status of the two green infrastructure projects that are ready for construction. We provide a photo recap of the four full-day stream monitoring programs that we held with four local high schools, and we give an overview of our Trails & Greenways Mini-Conference that was held in September.

Also here, we re-introduce you to our Big Creek / I-71 Relocation & Restoration Initiative that is in the process of being updated since its initial publication in 2015. And we review the completion of a study this year of similar scale, the Cleveland Land Bridge / West Shoreway Concept Alternatives.

The Board and staff at Big Creek Connects are looking forward to increasing our impact and capacity for projects and programs in the year ahead, as we strengthen our relationship with West Creek Conservancy and other partners. And as always, we look forward to your ongoing support!

STICKNEY CREEK RESTORATION

The plantings along Stickney Creek and adjacent floodplain in Brooklyn's Veterans Memorial Park have been growing in nicely since the project's completion in 2021. The natural and wildlife enhanced landscape design is the work of Biohabitats, an environmental consulting firm based in Cleveland. Thanks to West Creek Conservancy for assisting Big Creek Connects and the City of Brooklyn with management of the project grants. Still to be developed is the trail system that includes a second bridge across Stickney Creek, creating a pedestrian loop.

See interpretive signage on the next page to learn about methods and features that apply to this project and stream restoration projects in general. In our next newsletter, we plan to report on more of these efforts underway within the Big Creek watershed. To learn more about the Stickney Creek project's specific development process and funding details, see our December 2021 newsletter.

SCHOOL STREAM MONITORING PROGRAM

See the story on page 3 about our tactile learning program that brings home rich lessons about water quality and how our actions affect our environment.



Rhodes High School students at chemical stations



Maple Heights students learning about turbidity and its effects on water quality

Using nature to restore nature.

Long ago, Stickney Creek wound gently through this area, shaded by the native grasses, shrubs, and trees that formed its surrounding floodplain. A stream's floodplain provides wildlife habitat and absorbs flood waters during heavy rains. Together, the creek and its floodplain functioned as an ecosystem.

As Brooklyn became more developed and paved, the amount and speed of stormwater flowing into the park increased and the banks of Stickney Creek started to erode. The City of Brooklyn installed "gabion baskets," wire cages filled with rock, to fortify its banks. Although the baskets provided some short-term protection, they separated the creek from its natural floodplain, and they eventually failed. Some even collapsed into the stream, along with portions of a walking trail.

Rather than replacing the gabion baskets, the city turned to a more resilient solution: ecological restoration. Using natural materials generated by the removal of the gabion baskets and the grading of the floodplain here in Veterans Park, the city applied three nature-based techniques to stabilize the creek and reconnect it to its floodplain: Toe Wood, Soil Lifts, and Buried Soil Rip-Rap.

A restored Stickney Creek ecosystem means increased habitat, safety, biodiversity, and natural beauty for us to enjoy in Veterans Park!

BEFORE AND AFTER RESTORATION OF STICKNEY CREEK



Before and After - Eroded Trail Section

Before and After - Concrete Weir

Before and After - Immediately Upstream of Bridge

WHAT DO YOU REPLACE GABION BASKETS WITH?

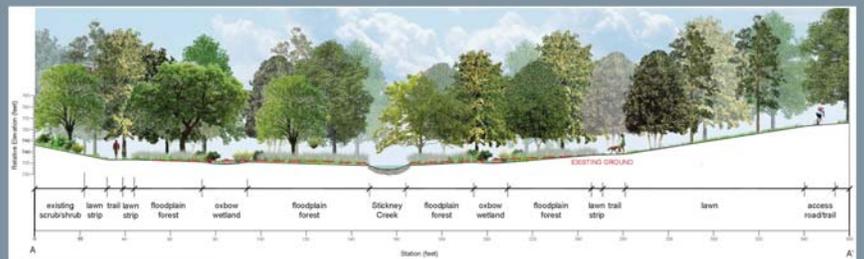
Restoring Stickney Creek required some very special design and construction techniques:



Toe Wood

Soil Lifts

Buried Soil Rip-Rap



Concept Cross-section



Stickney Creek restoration interpretive signage.
Story on first page.

Can You Spot These Park Visitors and Residents?

This part of Stickney Creek was once lined with "gabion baskets," metal cages filled with rocks. Intended to protect the creek from erosion, the baskets offered little habitat and ultimately did not hold up. Many of the baskets collapsed into the creek, bringing with them excess debris and sediment. The baskets are now gone, and the creek has been restored naturally, with materials like wood, soil, and live plants. Stickney Creek and its surrounding floodplain now provide habitat for native fish, birds, amphibians, and other wildlife. Can you spot any of these critters?

RIFFLES AND POOLS

Riffles (rocks and pebbles across the stream) provide habitat for fish like dace and darters, which like fast-moving water, and the tiny spineless animals (macroinvertebrates) they eat. Pools provide protection and shelter for species like sunfish and the common shiner, which prefer still water.

RIPARIAN AND FLOODPLAIN FOREST

Riparian forests are like wildlife "highways" that help animals travel from one patch of woods to another along the stream corridors. Floodplain forests are wooded areas beyond the edge of a stream or river that help absorb water that overflows stream banks during heavy storms. In and out of the water, wildlife such as birds and amphibians, depend on the trees and shrubs that grow along and beyond the banks of Stickney Creek for food and shelter.

OXBOW WETLANDS AND VERNAL POOLS

Oxbow wetlands are u-shaped meanders of a river or stream. They look very peaceful, but they are hard at work absorbing flood waters, filtering out excess nutrients from the water, and providing habitat for birds, fish, and other wildlife. Vernal pools are temporary wetlands. Depressions in the land that fill with water seasonally, vernal pools provide key breeding habitat for many forms of wildlife, including frogs, toads, and salamanders.

MEADOWS

Together, the native grasses, sedges, and flowering plants assembled here comprise a meadow ecosystem. Meadows provide important wildlife habitat. The meadow's wildflowers are a great source of nectar for pollinators, like birds and butterflies. The meadow also provides feeding and nesting areas for birds and shelter for small mammals.

RIFFLES AND POOLS WILDLIFE



White Sucker

Blacknose Dace

Creek Chub

Mallard Duck

RIPARIAN AND FLOODPLAIN FOREST WILDLIFE



Salamanders

Wood Frog

Yellow Warbler

Mink

OXBOW WETLANDS AND VERNAL POOLS WILDLIFE



Viceroy

Northern Leopard Frog

Least Skipper

Red-winged Blackbird

MEADOW WILDLIFE



Black Swallowtail

Eastern Tiger Swallowtail

Honey Bee

Ruby-throated Hummingbird



SCHOOL STREAM MONITORING PROGRAM

This year saw four stream monitoring events with four different high schools for a total of over 250 students participating in the program. All events took place in Cleveland Metroparks' Memphis Picnic Area where the East and West Branches of Big Creek converge and data can be compared. In May we hosted Maple Heights High School students on two different dates. In September we hosted Cleveland's Rhodes School of Environmental Studies. In October we hosted two schools together on one day – Brooklyn High School and, new to the program, Cleveland's John Marshall High School.

The program introduces students to watershed stewardship and the application of science, technology, and engineering with professionals in the field. It combines monitoring of the biological, chemical, and physical characteristics of the two branches of the creek with site tours examining the natural and man-made environments within the park.



John Marshall students testing nitrate levels



Maple Heights students experimenting with watershed model



Brooklyn students studying macro-invertebrates



Macro-invertebrates sorted and ready for scoring

The popular program is funded by an annual General Motors Community Impact Grant awarded to Big Creek Connects. The GM Parma Plant's environmental "E-Team" assists the students with studying chemical parameters of water samples, while Northeast Ohio Regional Sewer District staff guides their identification of Macro-invertebrates, Cuyahoga Soil & Water Conservation District with their assessing stream habitat, and Cleveland Metroparks and Cleveland Museum of Natural History staff with the site tours. Funding has been awarded for a similar, robust set of outings in 2023.



Maple Heights students assessing stream habitat

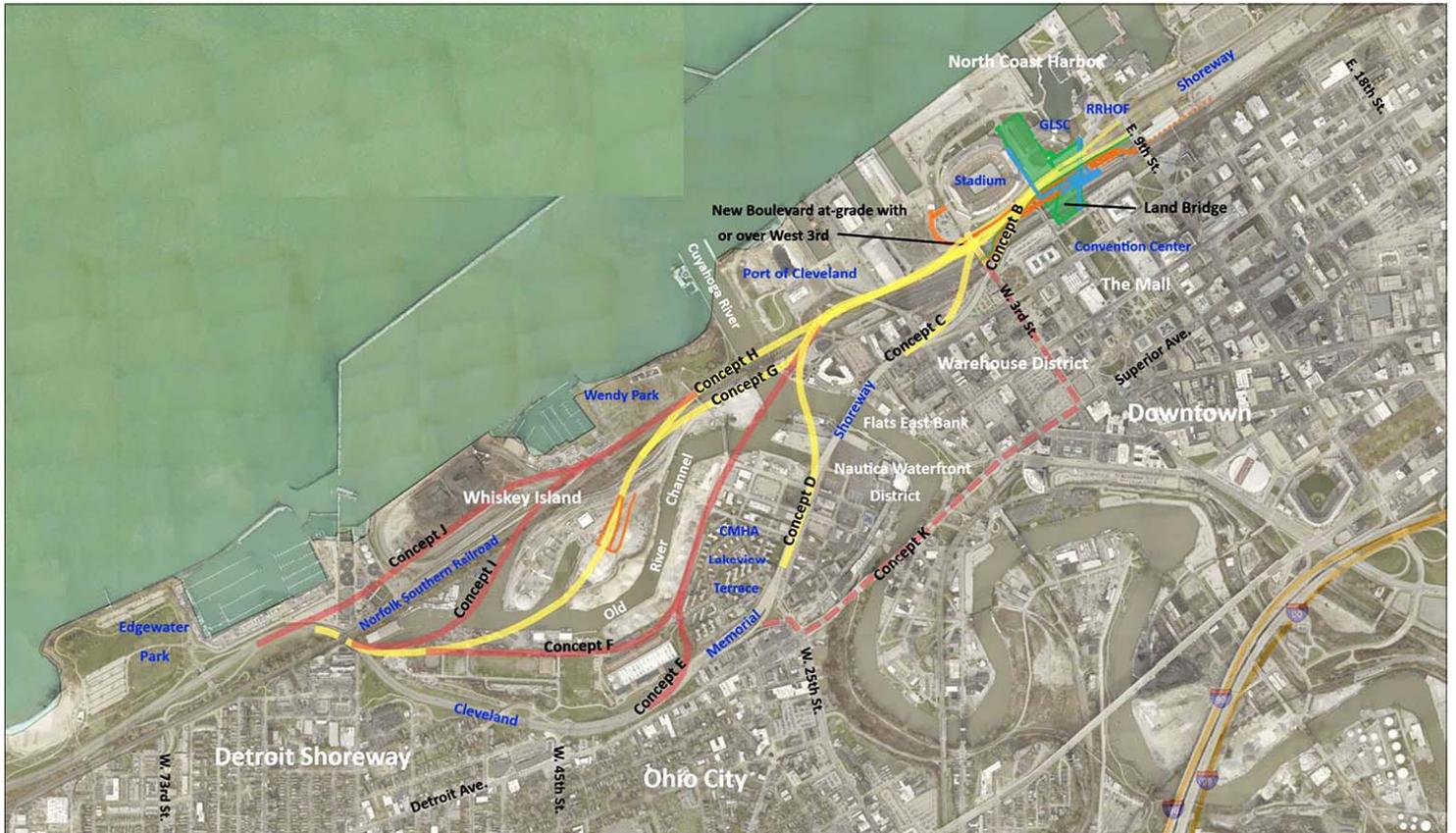


Maple Heights students on site tour

CLEVELAND LAND BRIDGE / WEST SHOREWAY CONCEPT ALTERNATIVES

Big Creek Connects in partnership with the Green Ribbon Coalition (www.greenribbonlakefront.org) developed the Cleveland Land Bridge / West Shoreway Concept Alternatives study to assist the City of Cleveland, the Greater Cleveland Partnership, and the Lakefront Task Force with its downtown lakefront planning process, by updating the initial Green Ribbon Coalition land bridge proposal and suggesting additional concept alternatives to be considered for further study.

These include several Shoreway realignment concepts that extend westward, across the east and west banks of the Flats into the Ohio City and Detroit Shoreway neighborhoods. This increase in scope is recommended due to the need for the eventual replacement of the 83-year-old Main Avenue Bridge.



The concepts presented include the conversion of an abandoned Main Avenue Bridge and its approaches into a pedestrian friendly, elevated greenway. Another is to improve the quality of life of Lakeview Terrace and other Ohio City residents impacted by Whiskey Island truck traffic, by diverting the bulk of the traffic away from the residences and onto a realigned Shoreway across Whiskey Island.

We are looking forward to questions and comments about this study from all public, private, and community stakeholders and also encourage everyone to be engaged with the City of Cleveland’s planning process for the downtown lakefront in 2023. To view the full study with related media links, visit BigCreekConnects.org.



Scan the code and sign up for email notifications of upcoming events.

Ours is a low-volume email list. We will never give out your information. You can opt-out at any time.



Rendering of Main Avenue Bridge converted into elevated park in Ohio City looking west



Rendering of Main Avenue Bridge converted into elevated park in Warehouse District looking east

ART HOUSE AND BARRIO GREEN CAMPUS PROJECTS

After additional input on the design of the Art House Green Campus by members of the community, the Art House Board of Directors and other stakeholders, the project had been modified by shifting the parking area to the other side of the property, providing more greenspace directly in front of the building. The project will break ground in the spring of 2023 with a completion date anticipated in the summer.

The Barrio Commissary Green Campus, another Green Infrastructure project reported on in our December 2021 newsletter, should also break ground in the spring of 2023. The West 63rd Street project has been postponed due to a delay in an adjacent parcel acquisition from the City of Cleveland.

Both the Art House and Barrio projects have been funded by the Northeast Ohio Regional Sewer District's Green Infrastructure Grant (GIG) Program. West Creek Conservancy has assisted Big Creek Connects with administration of the grants. These projects and the Caribe Bakery Plaza we completed in 2021 makes three projects so far that we initiated with funding through the GIG Program. We look forward to assisting property owners with additional green infrastructure projects to help reduce combined sewer overflows and the volume of water directed to wastewater treatment plants while improving the natural habitat and aesthetics of their property.

BIG CREEK CALENDAR

- **Party for the Planet – Cleveland Metroparks Zoo** **Saturday, April 22, 10:00 a.m. –3:00 p.m.**
Presented by CrossCountry Mortgage.
- **Annual Big Creek Watershed Clean-up** **Saturday, April 29, 9–11:30 a.m.**
3 locations: Snow Road Picnic Area, Brooklyn Fire Station, Cleveland Brookfield Park. Refreshments.
- **Parma Heights 2nd Annual Earth Day Event** **Saturday, April 29, 1–4:00 p.m.**
Greenbrier Commons.
- **RiverSweep Clean-up – Canalway Partners** **Saturday, May 6, 9–11:00 a.m.**
Lower Big Creek/Jennings site. Refreshments.
- **Cleveland Metroparks Monday Meet-up** **Monday, May 8, 3–4:30 p.m.**
Stearns Native Nursery, 7000 Randolph Drive, Parma. Tour led by West Creek Conservancy.

More to come!

GREATER CLEVELAND TRAILS & GREENWAYS MINI-CONFERENCE

Recognizing the value in sharing ideas, discovering new tools and setting the stage to transform concepts into successfully completed projects, conference planning partners held a free, virtual “mini-conference” two days in September that included mobile workshops.

The Wednesday, September 21st program included opening remarks by Cuyahoga County Planning Director Mary Cierebiej, followed by two virtual sessions. The first session “Ohio Department of Transportation’s Plan for Walking & Biking in Ohio” was led by ODOT representatives, followed by a session on “Using Social Media to Increase Trail Support and Use” led by public and non-profit representatives.

The Thursday program began with opening remarks from Grace Gallucci, Executive Director & CEO of the Northeast Ohio Areawide Coordinating Agency, followed by two

additional sessions. The first session “The Infrastructure Investment and Jobs Act Funding” was led by NOACA’s Government Affairs and Capital Project Managers. The second session “County-Wide Sign Plan” was led by a representative each from Destination Cleveland and Cleveland Metroparks.

Also on both days, mobile workshops were held in the afternoons. A workshop was held examining “Euclid Creek Reservation Trails”, and a walking tour was held along the “Nord Family Greenway in University Circle”.

Big Creek Connects with West Creek Conservancy originated and have co-chaired the Greater Cleveland Trails & Greenways Conference since 2010. To learn more about the 2022 Mini-Conference and our next full-day, in-person conference in planning for 2023, visit Gctrails.org.

To conserve, enhance, and bring recognition to the natural and historic resources in and around the Big Creek Watershed and develop a recreational trail network that connects these resources to each other and the community.

HELP PROTECT AND IMPROVE THE WATERSHED WITH YOUR DONATION

Only with the generosity of our community members can we continue to protect, improve, and connect with our environment.

Please consider a donation to help us make a lasting difference in our watershed communities in the coming year.

Secure credit card payment: online at bigcreekconnects.org or scan code.

If you prefer, mail your contribution with your name, address, phone & email.

Big Creek Connects, P.O. Box 609272, Cleveland, OH 44109

Corporate Sponsorships available.

Big Creek Connects (formerly Friends of Big Creek) is a greenway advocacy and watershed stewardship 501(c)3 non-profit organization.

THANK YOU FOR MAKING A DIFFERENCE!



UPDATE OF BIG CREEK/I-71 RELOCATION & RESTORATION INITIATIVE

Big Creek Connects is in the process of updating the *Big Creek / I-71 Relocation & Restoration Initiative*, first published in 2015. The study proposes removing the Denison Access ramps of the abandoned “Parma Freeway” and opening-up land in the Big Creek valley that will allow the creek to be naturalized by re-routing it into much of its historic streambed while creating a new greenway-trail corridor. Broader transportation, economic, community and land use opportunities adjacent to the valley were also examined.

In 2015 the City of Brooklyn, with Cleveland City Council and Big Creek Connects as partners, applied for a Transportation for Livable Communities Initiative planning grant through the Northeast Areawide Coordinating Agency to further evaluate the study’s concept plans with input from the public and develop a preferred plan that would include a planning level cost estimate, a phasing/implementation strategy, and identify funding sources. The Cleveland Administration had shown favor towards other study methods instead, although none had occurred.

With a new Cleveland Administration in place, and due to the increase in flooding in Brookside Reservation and the Cleveland Metroparks Zoo in recent years, BCC decided that now might be the time to revisit and update the plan before re-presenting it to both cities. Recognizing the potential of mitigating the flooding issues, the Northeast Ohio Regional Sewer District is currently performing hydraulic modeling using the proposed stream channel in the Big Creek/I-71 study. An updated Big Creek/I-71 study containing the results of the NEORS D stream modeling and other additions is anticipated to be completed by the Summer of 2023. To view the full 2015 study with appendices and related media links, visit BigCreekConnects.org.





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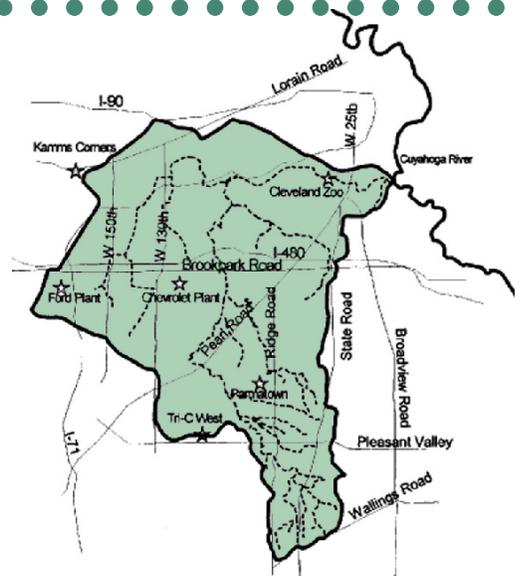


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Big Creek is the 3rd largest tributary of the Cuyahoga River. Its watershed contains over 130 miles of streams and culverts. Together they drain nearly 39 square miles from 8 municipalities - Cleveland, Brooklyn, Linndale, Parma, Parma Heights, Brook Park, Middleburg Heights, and North Royalton. Over 90% of the watershed's area has been developed and 39% of the land surface has been made impervious, making Big Creek the most heavily urbanized watershed of any major tributary in the Cuyahoga River Watershed. This degree of urbanization provides tremendous challenge...and opportunity.