

Fall, 2011

Improving and Protecting the Brook

From the Northeast Ohio Sewer District

The Doan Brook Watershed Partnership is working with the Northeast Ohio Regional Sewer District to enhance and restore portions of the lower Doan Brook.

The *Doan Brook Stream Enhancement Project* focuses on the section of the brook between East 105th Street at Martin Luther King Jr. Boulevard and Wade Park Avenue. Required by the Ohio Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), this enhancement project will mitigate impacts to Abram Creek from the Cleveland Hopkins International Airport expansion project. The District has a long term interest in the ecological restoration of Doan Brook and is this project's manager for design and implementation.

In late 2010, the District hired the services of CT Consultants to complete the design of the *Doan Brook Stream Enhancement Project*. Throughout the design process, stakeholder input will be requested through Stakeholder Meetings —such as the one conducted on January 18, 2011— to share information about the updated project and to explore stakeholder ideas in advance of any technical design work commencing.

The design team used input from this meeting with technical information about the brook to begin the stream

enhancement design. Because this project involves the use of federal funds, through the Federal Aviation Administration (FAA), and potentially impacts historic properties (e.g., Rockefeller Park), Section 106 of the National Historic Preservation Act (NHPA) applies. The District also retained the services of Mannik & Smith for the Section 106 Consultation Process and Stakeholder Involvement for the project.

A second Stakeholder Meeting was held on May 24, 2011 to review the conceptual stream restoration design. At this meeting the design

team and the District detailed plans to focus the current enhancement project on the section of stream from E. 105th to the crossing under MLK near the lagoon.

Throughout the design process the design team has been evaluating the size and shape of the stream channel to ensure a stable stream channel is created at the end of the project. A stable stream channel will reduce the amount of erosion along the stream banks, provide a low flow channel so water does not stagnate during dry months, and allow areas where the stream can safely access a floodplain. To create a stable stream

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The red line indicates the project limits as of August 24, 2011.



Improving and Protecting the Brook *continued*

channel, the design will address existing stream bank erosion, failing and deteriorating walls, and creation of stream features called pools and riffles that provide stability and habitat for aquatic bugs and fish—thus improving the ecology and life of this stream.

Plans are being developed and the designers will be submitting preliminary plans within the upcoming weeks to NEORS and DBWP. The project team will be reviewing the plans with the regulatory agencies and stakeholders again prior to final plans being approved by the District. Construction will begin in the late spring of 2012 and is anticipated to be completed by end of the year.

LEARN MORE: neorsd.org/doanbrook or call Victoria Mills at 216.321.5935 x234.

The Northeast Ohio Regional Sewer District also is working to address combined sewer overflows in the area through its 25-year *Project Clean Lake* initiative. Homeowners can help improve the water quality of Doan Brook, too:

- Collect rainwater with rain barrels
- Keep pollutants and trash out of storm drains
- Limit the use of herbicides, pesticides and fertilizers

More information on home tips to improve the Doan Brook can be found on the District's web page at neorsd.org/rainworkingforyou.php and through the Doan Brook Watershed Partnership at doanbrookpartnership.org.



Native Plant Society Grant expands Riparian Zone Diversity along Doan South Branch

The Doan Brook Watershed Partnership completed a 400' stream restoration project on the South Branch of the Doan in 2006. The project re-established the in-stream habitats that had been destroyed by channelization, entrenchment and culverting — creating meanders, re-connecting the stream with its floodplain and establishing a narrow riparian corridor with native plants.

The fact that this project site is on a campus shared by three Shaker Heights public schools made it a priority for the Partnership. Not only did we achieve ecological improvement through the stream reconstruction, but a very important educational benefit was also realized.

Fast forward to 2011: Thanks to a grant from the Native Plant Society and matching funds from the Shaker Schools Facilities Department, the Stream Corridor Project will expand the width of the corridor from 25' to 50' on either side of the Doan Brook as it traverses the Shaker Campus, with native trees, shrubs and plants. The expanded riparian corridor will increase its ecosystem services,

including filtering pollutants, diminishing erosion, increasing biodiversity and cooling in-stream water temperatures.

Since the first phase of the stream restoration at this site, teachers from Shaker Heights High School, Woodbury and Onaway Elementary have utilized the stream and its corridor as a land-lab for science classes. By expanding the width and diversity of the site, the quality of the land lab will also be increased.

With the Cleveland Museum of Natural History, DBWP hosted a bioblitz at the stream site in September. Over 120 high school students from five classes took an inventory of plants and animals in the stream and along its banks. This bioblitz created a baseline data set to compare with inventories in future years, which we hope will show more biodiverse results after the riparian corridor is expanded.

Despite cold and rainy conditions, Shaker student volunteers assisted with the expansion and planting on Wednesday, October 18.

Record attendance at September Family Fishing Day

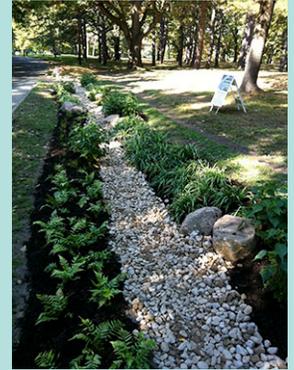
About 500 people of all ages enjoyed angling for bluegill, catfish and bass as part of the 10th annual DBWP Family Fishing Day, held at Rockefeller Lagoon in University Circle on Saturday, September 3. Thanks to funding from Holden Parks Trust, the Lagoon was stocked with keeper-size fish four times this summer, enabling local residents to take pleasure in the sport of fishing as well as bring home a healthy meal.

The day also featured live entertainment by Radio Disney, kids' casting activities and instruction, face painting, free lunch, water quality testing activities, rain barrel education and give-aways, plus an afternoon derby complete with prizes for the largest fish, smallest fish, and most fish caught.

Credit for the very successful day goes to our co-sponsors, The North Coast Black Bass Anglers' Association, PluggOne Outdoors, Northeast Ohio Regional Sewer District, the City of Cleveland and Ward 8, The Nature Center at Shaker Lakes, Hooked on Fishing: Not on Drugs, and University Circle.



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Lower Shaker Lake Bioswale: a Green Approach to Stormwater Runoff

If you've walked, driven or bicycled along South Park after a rainfall, you may have noticed standing water along the muddy edge of the road. The DBWP, with partners NEORSD, Burning River Foundation and the City of Shaker Heights, have recently chosen the site as a demonstration for a new remedy to stormwater challenges. The solution, a bioswale, is an example of an innovative category of stormwater management called *green infrastructure*.

The primary function of the new bioswale is to ease stormwater volume and filter sediment for 80% of rain events. Secondly, the swale is effective in removing hydrocarbon-based non-point source pollution such as oil or grease from vehicles, and adding biodiversity. The open, vegetated channel temporarily holds stormwater, allowing sediment and pollutants to settle in the swale's unique soil mixture, releasing clean water from the system. The soil bed consists of native soils and a hardwood mulch that have been laboratory tested to ensure its particle size will neither fall through the system, nor become compacted. So swing by, preferably in the rain, to monitor how this new approach takes on local stormwater!

October Photo Hike explores Doan Gorge

An enthusiastic group of nine nature lovers explored one of Cleveland's natural treasures--the Doan Brook Gorge in Cleveland Heights -- with camera in hand during a guided autumn hike with noted local photographer David Perelman-Hall on Saturday, October 8.

Starting by the western edge of Lower Shaker Lake, participants walked to three scenic sections of the gorge, learned technical and compositional tips, and explored what makes certain sections of the Brook so photogenic.

Check the DBWP Facebook page for a few of the photos from the day and future event listings. A winter photo hike is in the plans for January/February, 2012. Some of David's breath-taking images of Doan Brook and Shaker Lakes can be seen at www.exceptionallight.com.



You're invited to our
Annual Celebration of the Place
we call HOME... *the Doan Brook Watershed*

Wednesday, November 16, 2011
7:00pm

at The Nature Center at Shaker Lakes

Mix & mingle over desserts & wine

Honor our Annual Watershed Hero

Get the latest on Partnership projects
in our communities of Cleveland Heights,
Shaker Heights, and eastern Cleveland.

We'll also travel back in time with archeologist, Dr. Roy Larick, to learn how the Doan Brook was formed, how the stream evolved and changed from tropical sea to glacial ice age, and to the woodland neighborhood that surrounds us.

Dr. Larick offers a rare, engaging look at the natural history of the Heights landscape and how it continues to shape our lives and community to this day.

Please RSVP to Victoria Mills 216-321-5935 x234



The Doan Brook Team Welcomes Mary Ryan!

We are thrilled to have new colleague, Mary Ryan, join our team. Mary brings a well-rounded skill-set to the Partnership, having previous

experience as a grant writer, program developer, graphic artist, and educator at the Cleveland Museum of Art.

But no resume is as impressive as an actual job well done. Mary has been invaluable since she started, wearing the many hats required to run a small non-profit. At our home at the Nature Center at Shaker Lakes, Mary was quickly embraced as a member of the family. Then again, with a love of nature photography and rowing on the Cuyahoga, how could she not join our mission seamlessly? Come to our Annual Meeting on November 16 to meet our newest addition.

Tori Mills, Executive Director

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