

stream enhancement project



AUGUST 2011

## Improving and protecting the brook

The Northeast Ohio Regional Sewer District is working 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.

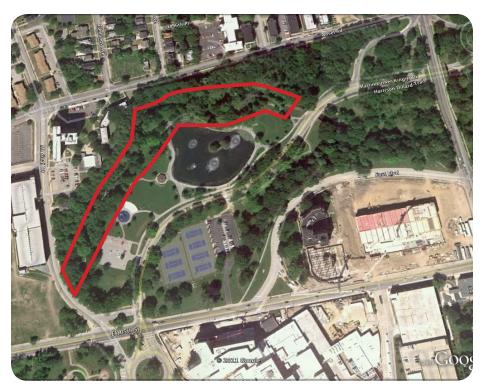
The design team used input from this meeting with technical information about the brook to begin the stream enhancement design. Since this project involves the use of federal funds, through the Federal Aviation Administration (FAA), and potentially impacts historic properties (e.g., Rockefeller Park), 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.

# About Doan Brook

The Doan Brook begins in the Heights area of Greater Cleveland and carries flows from portions of Shaker Heights, Cleveland Heights, and Cleveland. The Doan Brook watershed drains directly to Lake Erie at Dike 14. The Doan Brook watershed was developed over the past 200 years and is home to most of the area's cultural museums and the historic Rockefeller Park with its cultural gardens exhibition.

As the area developed, forests and wetlands were replaced by roads, buildings and parking lots, creating impervious services that prevent rainwater from percolating into the ground. The initial effect of urbanization on stream channels is increased runoff volume and velocity, resulting in channel erosion and higher sediment loads. The channel erosion and increased sediment combine to degrade the aquatic habitat of the stream.

Today, the lower Doan Brook is impacted by flooding, stormwater, and combined sewer overflows.



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

## **PROJECT GOALS**

- Improve the aquatic habitat in restored areas
- Provide better control of stream flows
- Provide for floodplain access
- Improve and enhance riparian vegetative cover
- Provide limited removal of invasive plant species
- Provide for some limited access to the brook for users of the park while increasing safety.
- The design will accomplish these goals through Structural Elements, Managed Enhancements and Naturalized Enhancements.

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 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 next couple of weeks. 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

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 **LEARN MORE**: neorsd.org/cleanlake

Homeowners also can improve water quality of Doan Brook, too:

- Create a rain garden to inflitrate pavement or roof runoff
- 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 Districts web page at neorsd.org/rainworkingforyou.php and through the Doan Brook Partnership at doanbrookpartnership.org.









## Maura Johnson - Photo Hike in the Doan Brook Gorge is Saturday, October 8

**From:** Victoria Mills <mills@shakerlakes.org> **To:** Victoria Mills <mills@shakerlakes.org>

**Date:** 10/1/2011 3:33 PM

**Subject:** Photo Hike in the Doan Brook Gorge is Saturday, October 8

## Learn Outdoor Photography on a Photo Hike in the Doan Brook Gorge

Saturday, October 8, 2011 9am - 12pm (rain date October 9)



Bring your camera equipment and explore & photograph several sections of Doan Brook with local photographer David Perelman-Hall.

We will hike to up to three beautiful sections of the gorge, demystify the technical settings in your camera, cover compositional techniques for good photography, and explore what makes certain sections of the Doan Brook so wonderful to photograph. Terrain is steep in places, so please wear sturdy footwear.

On Tuesday, October 11, the group will meet at the Shaker Lakes Nature Center from 7-9pm to view, critique, and learn more from David.

Location: Meet at "Lovers Lane" by the western edge of Lower Shaker Lake and park your car on either side of the pedestrian bridge. We will hike from there.

Fee: \$10. To register, call Mary Ryan at <u>216.321.5935 x234</u> by October 7.

Sponsored by the Doan Brook Watershed Partnership www.doanbrookpartnership.org



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Victoria Mills Director, Doan Brook Watershed Partnership 2600 South Park Blvd. Cleveland, OH 44120

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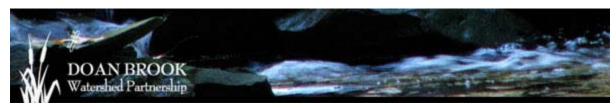
## Maura Johnson - 12th Annual Family Fishing Day

From: "Doan Brook Watershed Partnership" <dbwp@shakerlakes.org>

To: "Maura Johnson" <MJohnson@manniksmithgroup.com>

**Date:** 8/14/2012 2:51 PM

**Subject:** 12th Annual Family Fishing Day



View in your browser August, 2012

Get hooked!

#### DBWP 12th Annual Family Fishing Day is Saturday, August 25

Fishing with friends and family is fun! Enjoy one of the last Summer Saturdays at Cleveland's historic Rockefeller Park Lagoon in the heart of our lower Doan Brook watershed. This year's theme of *Clean Water = Healthy Fish* celebrates the importance of clean water to our lives and local economy.



Rockefeller Park Lagoon, University Circle

Martin Luther King, Jr. Drive and East 105th St.

9:00-3:00pm

Learn how to bait a hook and cast with a rod and reel -- bring your own fishing rod or use one of ours! Identify native Ohio fish, look at stream life under a microscope, make Japanese fish prints, enter a raffle for a free rain barrel, win fishing prizes throughout the day, get your face painted and more!

- FREE bait and tackle
- FREE fishing in stocked lagoon with catfish, bluegill and bass
- FREE t-shirt for children (while supplies last)
- FREE hot dog lunch
- FREE for all ages!



University Circle, Inc.

ADVANCE REGISTRATION IS HIGHLY RECOMMENDED, especially if you would like to borrow fishing equipment. Call DBWP at 216.321.5935 x244.

The 12th Annual Family Fishing Day is sponsored by the City of Cleveland, Cleveland Metroparks Youth Outdoors, TLC Springwater, Constantino's Market, Holden Parks Trust, Nature Center at Shaker Lakes, Northeast Ohio Regional Sewer District, North Coast Black Bass Angler's Association, Ohio Department of Natural Resources, Passion 4 Fishing, PluggOne Outdoors, and

Doan Brook Watershed Partnership

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**Unsubscribe** 

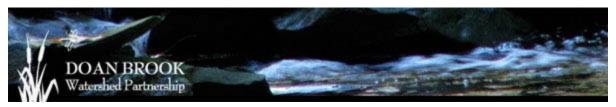
### Maura Johnson - November News and an Invitation....

From: "Doan Brook Watershed Partnership" <dbwp@shakerlakes.org>

To: "Maura Johnson" <MJohnson@manniksmithgroup.com>

**Date:** 11/5/2012 10:08 AM

**Subject:** November News and an Invitation....



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### WHAT'S DOIN' AT THE DOAN?



Please join us for the **Doan Brook Watershed Partnership's Annual Meeting and Celebration** of our brook, its volunteer stewards, and new projects.

Tuesday, November 13 from 7-9pm at The Nature Center at Shaker Lakes

MIX & MINGLE over desserts and wine ... HONOR our 2012 watershed heroes, Julie Patton and Arcey Harton... GET THE LATEST on partnership initiatives

Keynote speaker Kyle Dreyfuss-Wells will speak about the "greening" of our water infrastructure, as Manager of Watershed Programs at the Northeast Ohio Regional Sewer District and as owner of a model sustainable home in Shaker Heights.



Rain is one of the great gifts of our region (even if we may not feel that way this week). Our perception of stormwater is shifting from an underground nuisance to a vital component of urban renewal. Learn how green infrastructure could

transform entire blocks of vacant land within the watershed and redirect millions of gallons of stormwater away from pipes and into gardens, welands, and other landscpaes that benefit our waterways. Ms. Dreyfuss-Well will also share innovative approaches to saving and managing rainwater in our backyards.



#### **COMPLIMENTARY ADMISSION**

Please RSVP to 216-321-5935 x244 or email to dbwp@shakerlakes.org.

Overflow parking on South Park & North Park Blvds. Public transportation by RTA Rapid Green Line.

Photo of Kyle and Kevin Dreyfuss-Wells by Thomas Ondrey/The Plain Dealer

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