

Fall, 2014

## With grant funding in place, study begins for possible trash rack removal

Graffiti-strewn concrete. Rusty metal. Substantial erosion. Log jams of debris. This isn't the picture of a healthy stream environment, but it is what an aging debris rack has created in the Doan Brook Gorge.

In 1975, a concrete debris rack spanning the width of Doan Brook was installed at the western end of the Gorge, 90 feet upstream from the Martin Luther King, Jr. (MLK) Drive bridge culvert. The rack was installed after several large floods inundated downstream neighborhoods with 3-11 feet of standing water. At that time, approximately 5000 tons of trash and debris were pulled from the culverted section of Doan Brook that runs for one mile under University Circle.

Fast forward 39 years, the debris rack has failed and is a source of impairment, not prevention. Engineers have determined that the design of the structure no longer supports the health of Doan Brook because it prevents the natural movement of bed-load. Consequently, a large accumulation of sand, gravel and cobble has created a bar immediately behind the failed rack. The backlog is so significant that it drives the stream to flank the structure, which in turn has severely eroded and destabilized the southern streambank. The constant erosion around the rack means the bank is an on-going source of turbidity and sediment to the Brook and Lake Erie.

In September, DBWP received \$179,927 from the Sustain Our Great Lakes Foundation, which is a public-private partnership among ArcelorMittal, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Forest Service, the National Fish and Wildlife Foundation, and the National Oceanic and Atmospheric Administration. Its mission is to sustain, restore and protect fish, wildlife and habitat in the Great Lakes basin by leveraging funding, building conservation capacity, and focusing partners and resources toward key ecological issues. The Doan Gorge Habitat Restoration Project will create a comprehensive solution to restore ~300 linear feet of Doan Brook in the pristine Gorge.

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*Above: Failed debris rack. If studies deem the rack eligible for removal, a maintenance plan for the MLK bridge culvert will be created.*

*Right: Though thousands of people pass the trash rack each day on nearby commuter routes, few know of its presence.*



### North Park-Demington green infrastructure repaired after summer storm damage



A lot can happen in a week! In the span of seven days this last July, our green-infrastructure project at North Park and Demington in the Upper Doan Brook Gorge was installed and quickly dismantled in a “50-year storm.”

The initial project design, which was featured in last fall’s edition of Brook Notes, sought to restore 70 feet of eroded stream channel and create a wetland swale to receive 26,200 gallons of stormwater from North Park Blvd. After plan reviews with the City of Cleveland Heights and the project funder, the Northeast Ohio Regional Sewer District (NEORS), our consulting team, River Works, lined the stream with new cobbles and planted the wetland swale with water-loving plants. By July 14, the entire project was complete and ready to filter and slow stormwater received from North Park.



And stormwater it did receive! On July 27, a powerful storm dumped 2.8 inches of rain on the Heights in less than an hour, overwhelming storm sewers and causing all four Shaker Lakes to overtop their dams. Because Lower Lake spills onto to North Park and flows west across Coventry Rd—water was two feet deep in the intersection—the surge of flood water entered Doan Brook via our brand-new green infrastructure. We were gratified to see that the project location was spot on, but disheartened to learn that it’s in the path of Lower Lake floodwaters.

As the middle photo above shows, the aftermath wasn’t pretty, but the project is now repaired and fortified to handle Lower Lake floods. DBWP paid for heavier grade rock and River Works donated man-power to armour the conduit to the



Doan Brook. Look for the wetland swale, visible from North Park, as its vegetation is noticeably different than the surrounding grass.

Despite setbacks, DBWP looks forward to installing green infrastructure at any opportunity. According to a study by the Natural Resources Defense Council, major storms—those that dump more than three inches of rain in 24 hours—have increased in frequency in Ohio by 40% in the last 50 years. The increased regularity of strong storms is affecting design standards throughout the country and presents a challenge for infrastructure of all types. Infrastructure built to withstand new weather intensities is one of the great design challenges facing current and future planners.

### 13<sup>th</sup> annual Family Fishing Day a splashing success

Thanks to the support of many contributing organizations and 42 volunteers, over 500 people were “gone fishing” around Cleveland’s Rockefeller lagoon for DBWP’s largest community event of the year. People of all ages took advantage of free fishing rods and bait to try their hand at catching bluegill, catfish, and largemouth bass, which are stocked in the lagoon with the support of a grant from Holden Parks Trust.

Special thanks go out to the North Coast Black Bass Anglers Association, Cleveland Metroparks Youth Outdoors, the Ohio Department of Natural Resources, the City of Cleveland, and all our volunteers for their invaluable help. We couldn’t do it without you!

Mark your calendars: Next year’s Family Fishing Day is July 11, 2015.



**Rack's days may be numbered**  
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Since receiving the grant, DBWP assembled a Technical Advisory Committee that includes engineers from Cleveland, Cleveland Heights, Shaker Heights and the Northeast Ohio Regional Sewer District (NEORS). The committee will work with consulting team, River Works Inc., to model hydraulics and study all options from complete removal to dam modifications. Regardless of which option is chosen, the project will be to restore the streambed profile, proper sediment transport, and the Brook's original channel alignment. In addition, invasive species will be removed from the project reach.

One important contribution to the successful grant award was the donation of match dollars from NEORS. Next year NEORS will commence with a large-scale green infrastructure project to decrease Combined Sewer Overflow frequency to the Doan Brook. The Fairhill Green Infrastructure Project will filter and slow 75 acres of stormwater from the Larchmere neighborhood. The project's detention basin will eventually outfall into Doan Brook via the eroding southern bank. The nearly \$360,000 needed to repair the severely eroded bank for the outfall was eligible to be match funding, required by Sustain Our Great Lakes.

In addition to the many ecological benefits of the Gorge Habitat Project, the aesthetic improvement to one of the most secluded and beautiful woods in Cleveland should not under-estimated. We thank the many neighbors who wrote letters of support, expressing their passion for this important slice of urban wilderness. Join us for one of our interpretive hikes in the gorge next year!

## Welcome to our new board members!

This year we added four new members to our 16-person board. The board consists of two representatives from each of our three supporting cities, members of partner organizations, and four at-large citizen representatives.

### Jane Goodman

Jane brings her extensive knowledge of watersheds to the board. She



recently became Executive Director of Cuyahoga River Community Planning Organization after working there since 2006. She is also a

South Euclid councilwoman and has advocated for environmentally responsible development in her ward. Jane has assumed the role of secretary for the DBWP board.

### Mary Dunbar

Mary's passion for sustainability makes her an excellent addition



to the board. She serves as a Cleveland Heights councilwoman and was a co-founder of Cleveland Heights Bicycle Commission. In

her numerous leadership roles, she has been an advocate for a more sustainable, healthy, and livable community. Her environmentally conscious outlook fits well with our board.

### Christa Dillabaugh

Christa's background in science education adds a new facet to our board. Christa has experience working and



leading professional development programs for educators in highly diverse tropical ecosystems; she is the education director for Amazon Rainforest Work-

shops. Her guidance will increase our capacity to use the Brook as an educational tool.

### Kevin Conwell

Kevin represents a large part of the Doan Brook's lower watershed as Cleveland's Ward 9 councilman. His



ward includes Glenville, Little Italy, and University Circle—densely populated areas within a stone's throw of the Brook. His input will

help DBWP serve those important neighborhoods.



## Over 170 boaters hit the water for Take to the Lake

172 people young and old turned out for our third annual Take to the Lake, and many took advantage of the once-a-year opportunity to kayak, canoe, and even paddleboard on Lower Shaker Lake on August 23. Thanks to Cleveland Metroparks Youth Outdoors, the Nature Center at Shaker Lakes, and all our volunteers for making this event a success.

## 2014 watershed hero Kathy Smachlo exemplifies volunteer spirit

In addition to her career as a physician at CWRU, Kathy Smachlo is a model watershed citizen—and had been for the past decade. Kathy first volunteered to measure and monitor the Brook, and has since assisted at every single DBWP event or stewardship activity. Kathy brought the message of environmental responsibility home, converting her lawn to native and bird-friendly gardens and earning the National Wildlife Foundation's Certified Wildlife Garden designation. Kathy tracked changes to her backyard—such as composting and reduced watering—through the Laudable Lawn program. In addition to DBWP, Kathy volunteers with the Nature Center at Shaker Lakes and chairs the the Shaker Tree Advisory Board. Look for that committee's new website, e-newsletter, and plans for coping with the immensely destructive Asian longhorned beetle and emerald ash borer. Kathy's humble activism has made a heroic difference in the Doan Brook watershed.

Upon receiving her award at the DBWP Annual Meeting, Kathy read this poem that she wrote. Thank you Kathy for being a living example of the power of one.

Imagine: Deliberate, not so random-acts-of kindness.....for earth

One plastic bottle picked up from a roadside during a leisurely walk, and recycled

One set of plastic utensils brought into and out of a restaurant, and reused again, another time

One lawn cared for without toxins

One rainbarrel, capturing rain, to be released to plants and soil, not sewage drains

One invasive species removed from a yard, preventing its spread to parks, neighbors, and preserves

One native species introduced to a yard, providing valuable food and shelter for insects and birds

Imagine: The power of One, multiplied

—Kathy Smachlo



*Kathy Smachlo (left) receives her Watershed Hero award at the Annual Meeting.*

## DBWP team introduces Graham Welling

Welcome to our new Watershed Planning Assistant! Graham has been working with DBWP since late June. Graham graduated from Ohio State University in 2012 with degrees in city & regional planning and Russian. After college, he spent a summer with the Shaker Heights planning department as a Cleveland Foundation



intern, and he taught English in Vladimir, Russia, for two years before coming back to Cleveland this May. In addition to assisting DBWP, he's working on a Master's of Public Administration at Cleveland State University. Graham is from Bainbridge Township and cultivated his love of nature by spending many childhood years in the Cleveland area's excellent parks and by monitoring streams with the Geauga County Soil and Water Conservation District. DBWP is excited to have Graham back in Cleveland and working to enhance and promote the Doan Brook watershed. Graham takes on any challenge posed to him, including writing and designing this year's Brook Notes!

## New volunteer initiative set to expand outreach

As a small non-profit, we depend on volunteers to carry out our mission. This fall, Lourdes Sanchez offered to help organize and invigorate our volunteer corps. Lourdes, a resident of Shaker Heights, has degrees in biology and has served as a docent at the Art and Natural History museums. She will use her considerable experience to nurture and grow our ranks, and plans include a speakers bureau and a watershed docenting program. Watch for more information to come.

## 2015 calendar of events

Plan ahead to make a difference in your watershed!

**April 25 & 26:** Stream sweep

**May 19 & 21:** Rain barrel workshops

**June 6:** Dr. Roy Larick hike

**June 10:** Rain barrel workshop

**June 27:** Storm drain stenciling

**July 11:** Family fishing day

**August 22:** Take to the Lake, Dr. Larick hike

**September 5:** Storm drain stenciling

**October 10:** Dr. Larick hike

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