

# Brook Notes

A publication of the

DOAN BROOK WATERSHED PARTNERSHIP

## *Watershed Action Plan Summary* by Jeffery Schiffman

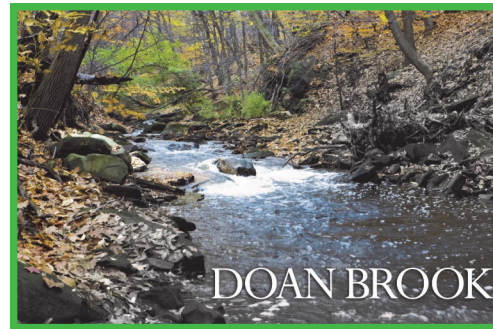
With several comprehensive watershed studies completed, the Doan Brook Watershed Partnership has assembled data, maps, statistics and goals into a Draft Watershed Action Plan (WAP) to submit to the Ohio Department of Natural Resources for endorsement. Once approved, the WAP will guide the restoration of the chemical, physical and biological aspects of the Watershed, in accordance with the Clean Water Act of 1972.

According to 2000 Census data, the Watershed is home to approximately 49,000 people. The population density averages 4,454 persons per square mile, making the Doan Brook Watershed one of the most densely populated in the Lake Erie Basin. Another contributing factor to the Watershed's urban nature are the many businesses and institutions that call it home. It is estimated that over 42,000 people are employed by more than 2,000 businesses here. The urban setting of the Watershed presents a variety of unique challenges and opportunities for watershed stewardship.

Urbanization and development in the Watershed are ultimately the reasons for the Doan's water quality impairments. Unlike other watersheds, it does not receive pollution from industry, mining, or agriculture. Thus the responsibility for a healthy Doan Brook lies squarely with the actions of individuals, schools, municipalities and businesses. In other words, you and me.

Portions of the Brook are channelized and others are culverted underground. Bound by walls or pipes, the Brook cannot function as nature intended. The stream cannot access its floodplain; its riffle, run, and pool habitats are compromised; flow is intensely altered; and riparian vegetation cannot hold streambanks or provide shade. The Brook suffers from high nutrient enrichment from non-point source pollution. The fertilizers that feed our lawns also feed the excessive aquatic algal blooms, called eutrophication, that cause stench, visible muck and low levels of dissolved oxygen.

Watersheds have a hard time remaining healthy if the percentage of impervious cover (roofs, parking lots, and even residential lawns) exceeds 20% of its total area. When 25% or more of a watershed is impervious, the following impacts can occur:



- Bacteria levels from Combined Sewer Overflows (CSOs) and pet-waste are too high for recreation.
- Nutrient loading causes eutrophication.
- Strong storms cause erosion and sedimentation in the Shaker Lakes and Lake Erie.

The Watershed's percentage of impervious cover is approximately 35%, which exacerbates CSOs about 35 times a year.

The draft WAP outlines restoration and protection goals for the following areas: biotic management, channel and floodplain management, stormwater management, wastewater management, public outreach and community involvement.

Implementation of the Draft WAP has already begun through the work of the DBWP and its many community partners, but the WAP will be considered a "living document" and will adapt to social, ecological and economic changes. As progress is made, it will be important to measure improvements or setbacks to better inform future improvements. From this point forward, we will need the Doan Brook community to play a more vocal role in stewarding the Doan. Draft goals are presented on the following pages. Please comment! We value your input. Send to [mills@shakerlakes.org](mailto:mills@shakerlakes.org).

## Biotic Management

## *Draft WAP Summary Continued: Please Comment*

Pollution and high flows inhibit the Doan Brook's biotic community from reaching its full potential. Strategies for implementation include removal of fish barriers, protecting and replanting riparian corridors and restoring in-stream habitats for more bio-diverse flora and fauna populations. The overarching goal for Biotic Management is to:

- ◆ Improve the biological community and habitat conditions of the Watershed to meet the warm water habitat standards established by EPA for the Watershed.

### **Specific objectives are to:**

- ◆ Remove check dams through Rockefeller Park.
- ◆ Evaluate all dams for negative and positive impacts to stormwater and ecology.
- ◆ Reduce and prevent invasive plant and problem fish species.



"Great Blue Heron" By L. Gooch

## Channel & Floodplain Management

Modifications to the Doan Brook stream corridor have impaired the function of its floodplain, including the ability to provide habitat, filter stormwater, and attenuate floods. Doan Brook has many opportunities, due to a large percentage of public ownership along the stream, to restore channel and floodplain functions throughout the riparian and floodplain corridor. The overarching goals for Channel and Floodplain Management activities are to:

- ◆ Increase channel and floodplain capacity to manage flow regime that can sustain healthy fish and macro invertebrate communities.
- ◆ Restore channel and floodplain capacity to manage a flow regime that can slow and filter runoff.

### **Specific objectives are to:**

- ◆ Facilitate additional restoration at the Shaker Country Club, including stream-banks and in-stream habitats.
- ◆ Identify riparian parcels for restoration and for permanent protection and public access.

## Stormwater Management

The Doan Brook's high level of urbanization has resulted in a damaging level of imperviousness and reduced infiltration. This dynamic increases pollution to the stream and decreases the percentage of healthy habitats. The Watershed is a prime candidate for retrofits and restoration in developed areas. The overarching goals for Stormwater Management are to:

- ◆ Reduce nutrient loadings to the Doan Brook from non-point source runoff.
- ◆ Increase the infiltration capacity throughout the Watershed to decrease high flow volume and velocity.

### **Specific objectives are to:**

- ◆ Assist municipalities and businesses with more sustainable policies, ordinances, and operations.
- ◆ Retrofit parking lots in the Watershed with biofilters and bioswales.
- ◆ Institute nutrient management plans on campuses and golf courses.
- ◆ Develop management plans for the Shaker Lakes.
- ◆ Identify, prioritize and implement tree and shrub planting the Parkland areas.
- ◆ Retrofit catch basins.
- ◆ Implement the Shaker Lakes Parklands Management Plan.
- ◆ Identify and remove illicit connections and discharges to storm and wastewater sewer systems.
- ◆ Reduce impervious cover with fewer parking lots, alternative pavement and green infrastructure projects.

The Watershed's aging infrastructure inhibits restoration of biological communities. Investment in infrastructure upgrades will enhance the conditions in the Brook for the re-introduction of species and the restoration of habitats. The overarching goals for Wastewater Management are to:

- ◆ Reduce fecal coli form and bacteria pollutant loads in Doan Brook.
- ◆ Reduce nutrient loads, primarily nitrogen and phosphorous, in Doan Brook.
- ◆ Maintain a flow regime that sustains healthy fish and amphibian communities.

Specific objectives are to:

- ◆ Support the Northeast Ohio Regional Sewer District to implement its CSO Facilities Plan.
- ◆ Add system capacity through tunnel expansion.

## Public Outreach & Community Involvement

Together with its partners, the Partnership has provided leadership in public outreach and community involvement over the past seven years. The Partnership will continue to partner to expand awareness within the community and advance innovative and participatory citizen stewardship. The overarching goals for Community Involvement are to:

- ◆ Increase citizen, school, and business stewardship of private property to reduce nutrient and bacterial pollution and manage stormwater sustainably.
- ◆ Sustainably maintain and increase public access to the Doan Brook Corridor and Parklands.

Specific objectives are to:

- ◆ Mark storm drains & conduct stream clean-ups.
- ◆ Promote sustainable landscape program for schools, businesses, citizens and organizations.

**"My infatuation with Doan Brook carried me into my high school years, when I began volunteering for the Nature Center. I started reading books about the creek and realized that I was not the only one impressed by this urban gem. Now out of college, I have been so many other places. Some places have been scenic and beautiful, while others are arid and desolate. Yet, I cannot seem to get out of my mind the feelings and sensations I got from Doan Brook." —Volunteer and Brook-lover, Alex Palmer**

*Speaking of Volunteers...  
Please **HELP** us  
with a pollution prevention survey!*

Have you ever wondered how your neighbors prioritize the maintenance of their yards? On aggregate, do you think the folks on your block care more about a yard's aesthetics, cost, health or the time it takes to maintain? The many approaches to caring for our lawns, gardens and trees differ from person to person and community to community.

The Partnership has created a survey, to be distributed on a block-by-block basis, that seeks to understand how we make lawncare decisions. Many people use chemical pesticides on their lawns, but confess they'd rather let the dandelion and clover grow. Even with the knowledge that chemicals can put children, pets, soil and waterways at risk, some residents apply lawn chemicals to avoid disappointing their neighbors.

The survey is an anonymous way for people to voice their preferences on the aesthetics and practices in their neighborhood. It's also an opportunity to learn how to have a beautiful yard without risking the health of humans and Lake Erie. Nutrient runoff is the number one contributor to the unhealthy algal blooms in our Shaker Lakes every summer. If the survey reveals that most people are happy with conventional lawncare services, that information will be very valuable, as well. The DBWP will be able to better gauge the quantity of nitrogen, phosphorous and chemicals running off lawns and how to capture and filter runoff before it enters the stormdrains that empty into the Doan Brook and Lake Erie.

The survey is taken anonymously online, but the results will be graphed and shared with your neighborhood. We hope that people want to know how their neighbors feel about this issue. **If you'd like to help gather email addresses on your block or host a sustainable landscaping presentation, call Victoria at 321.5935, x234. Your help is needed!**

# Fond Farewells



## Endless Thanks to Nancy Dietrich

By Kelsey Cornelius

Nancy Dietrich devoted boundless time and energy to the Partnership, since the time of its inception, 10 years ago. With Nancy's retirement earlier this year, we are reluctantly permitting her more time to care for, and travel with, her family. Representing the City of Cleveland Heights, as a councilwoman for 12 years, we will truly miss one of the organization's hardest working leaders. Nancy was kind enough to spend a few moments reflecting on her time with the Partnership.

## In Memory of Lester Stumpe

In March 2010, the Partnership lost founding member, Lester Stumpe, to a hard-fought battle with cancer. Lester worked for the Northeast Ohio Regional Sewer District for 29 years. Though we know the Doan Brook held a special spot in Lester's heart, the Partnership was not the first environmental movement that he hoisted into existence. Lester was active in Big Creek, Mill Creek, the Cuyahoga River and many others. In fact, Lester donated the very first dollar to initiate the Great Lakes Protection Fund, which thereafter became a permanent \$100 million endowment.

The following reflection, by colleague, Steve Benton, is a favorite among many of letters that we received along with memorial donations to the DBWP.

“Lester’s ever-present drive and enthusiasm for constant improvement in the way we protect and manage our urban watersheds has taught us all numerous lessons about

What was your favorite experience working on the Doan Brook and forming the new Watershed Partnership?

- ◆ There are two things that are my favorites, one is the fact that we started with a volunteer organization with no real power and ended up with a partnership of governments, institutions, and people who have real clout and can influence policy and make a difference; the second is the wonderful, capable and optimistic people with whom I got to work – the DBWP Board is such a pleasure to be a part of.

What was the greatest challenge that the organization or the Brook faced during your tenure?

- ◆ The challenge, as always, is \$\$\$\$; there are countless worthwhile projects that we could do to benefit the Brook and the environment if we had the money, it's always the first thing cut out of a budget.

One last word of encouragement for peo-

how to approach our work. Watershed protection, low impact development and protecting our water resources should not be afterthoughts – rather these should be primary cornerstone objectives and goals for each and every project affecting our urban built environment. We all carry forward his spirit in our commitment to protecting and improving our natural environment.” The Partnership is honored that, at Lester’s memorial service, he and his family requested donations be made to the DBWP. If you would like to contribute to the fund in his name, please make checks payable to the Doan Brook Watershed Partnership, 2600 South Park Blvd., Cleveland, OH 44120—Thanks.

*And Much Appreciation to  
Rosemary Woodruff*



Rosemary Woodruff, a long time environmental activist from Shaker Hts., joined the Board two years ago as a citizen representative. In the Outreach Committee, she eloquently balances between

