

SOIL QUALITY RESTORATION & RAIN GARDEN WORKSHOP, DEMO & INSTALLATION



PSCW held a Soil Quality Restoration and Rain Garden Workshop and Demonstration in which four rain gardens and two soil quality restorations were installed between two Habitat for Humanity Homes. A total of twenty six people were in attendance at the workshop/demo including landscape contractors, environmental professionals, local government staff, Habitat for Humanity staff and Scott County residents.

Infiltration of storm water runoff through the installed soil quality restorations and rain gardens, recharge ground water, mimic the natural water cycle, slow storm water runoff, decrease flood levels and occurrences, minimize stream bank erosion and lessen stress on municipal storm water infrastructure, streams and rivers. Importantly, these practices protect and enhance water quality by cleansing pollutants from storm water including: fertilizers and pesticides from lawns, landscapes and gardens; heavy metals from roofs; salt from winter applications to walks and driveways; bacteria from pet waste and thermal pollution from the heat of impervious surfaces. The native plants used in the rain gardens provide habitat for valuable wildlife such as birds, butterflies and insects.

As a result of the workshop, 3 attendees have installed soil quality restoration. These three practices infiltrate up to a 1.25" rain every time it rains. A new contractor at the meeting sold a soil quality restoration to a developer and that has been installed since the workshop as well.

The projects that were installed with grant funding from Iowa American Water and the projects installed to date as a result of the workshop/demo, infiltrate a total of 1,058,148 gallons of storm water runoff in a year. That is about the size of two Olympic size swimming pools or 26,500 bath tubs or 530,000 kitchen sinks!

Kerofsky is currently working with two other attendees to design practices that infiltrate 100% of their runoff. These projects will be installed in the spring of 2011.

A Bettendorf Alderman and board member of Partners of Scott County Watersheds reported that he and three of his neighbors conducted soil quality restoration after seeing information in the Quad City Times about the workshop/demo.



Above: Attendees look on as practices are installed and discussed at a Habitat for Humanity Home.

Below: Youth install native grasses and forbs at the North High School Rain Gardens



Natural Area Management

PSCW manages the North High School Rain Gardens, a quarter acre area planted with native prairie plants that manages approximately 8.8 million gallons of stormwater per year from the North High School roof and parking lots. At this year's X-Stream Cleanup, 75 invasive trees and shrubs were removed and 175 native grasses and forbs were planted.

PSCW also assists in the restoration of Fairmount Wetlands. Invasive woody vegetation was removed from the upland prairie area this year and a Friends of Fairmount Wetland group was formed to guide future restoration efforts.



Save the Date!

2011 Calendar of Events

Monthly Educational Lunch Forums

January 25, February 15, March 15, April 19, May 17, June 21, July 19, August 16, September 20, October 18, November 15, Noon-1pm

Board of Directors Meetings

January 4, March 1, May 3, July 5, September 6, November 1, Noon-1pm

Bald Eagle Days, January 7th-9th (Friday, January 7th, 4-8pm; Saturday, January 8th, 10am-8pm and Sunday, January 9th, 10am-5pm)

Flower and Garden Show, March 25th-27th (Friday, March 25th, 10am-8pm; Saturday, March 26th, 10am-8pm and Sunday, March 27th, 10am-4pm)

Earth Week Fair, Saturday, April 16th, 10am-4pm

Davenport Jr. High Earth Week Event, April 19th, 20th and 21st, 9am-2pm

Jr. Conservationist Day Camp, July 18th-22nd

Enviro-Kids (June-August)

Watershed Festival, Saturday, July 16th

X-Stream Cleanup, Saturday, August 13th

In this report...

Duck Creek Watershed Plan

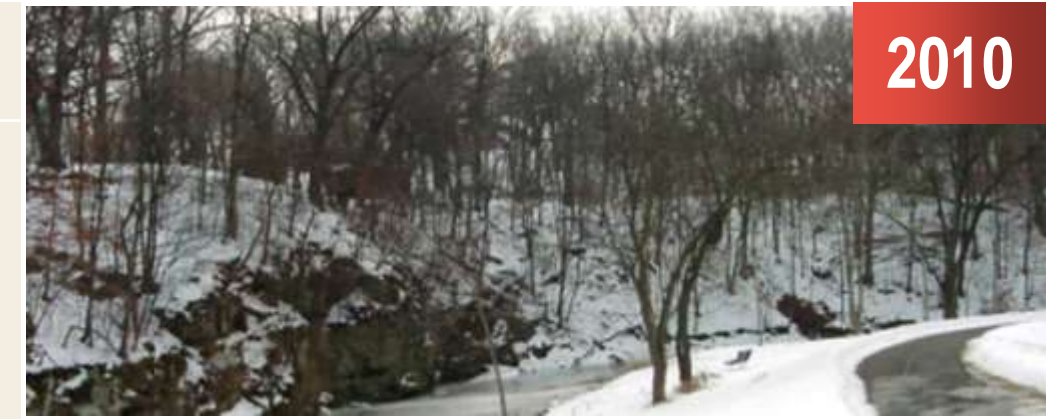
Urban Initiative

Stream Assessment and Water Monitoring

Environmental Education

Infiltration Practices Workshop/Demo

Natural Area Management



2010

Year End Newsletter

Partners of Scott County Watersheds

Developing and implementing ways all citizens can be better stewards of our watersheds.

www.partnersofscottcountywatersheds.org

Board of Directors

Jane Weber, Chair, Scott County Soil and Water Conservation District

Wally Mook, Vice Chair, Director of Bettendorf Public Works

Jim Hoepner, Secretary, Davenport Resident

Patty Copeland, Treasurer, LeClaire Resident

Mike Clarke, Director of Davenport Public Works

Harlan Meier, Local Farmer

Dr. Ellen Kabat-Lensch, Scott Community College

Paul Loete, MSA Professional Services, Inc.

Barney Barnhill, Davenport Alderman

Dean Mayne, Bettendorf Alderman

Jeff Liske, Scott County Board of Supervisors

Tim Huey, Scott County Planning and

Development

Larry Thompson, Davenport Resident

Julie Awkerman, Quad Cities Home Builders

Association

Clare Kerofsky, Coordinator

Duck Creek Watershed Management Plan

A Duck Creek Watershed Management Plan (DCWMP) has been created for Duck Creek, using protocol from the Iowa Department of Natural Resources and the Environmental Protection Agency, to address the E. coli bacteria impairment on Duck Creek. The plan entails information about the watershed including; watershed anatomy, land use, resource and physical characteristics, community involvement, pollutants and analysis, sources defined and recommendations, targets and load reductions, goals and objectives, a prioritized implementation plan, monitoring plan and technical and financial resources. Sources of bacteria in Duck Creek include wastewater treatment facilities, septic systems, sanitary sewer overflows, urban miscellaneous sources from municipal separate storm sewer operations, cattle with direct access to the stream, manure application to row crop, pet waste and wildlife. The DCWMP will be used to seek funding for recommendations to address the sources contributing bacteria to Duck Creek. Recommendations include: a cost

share for septic inspections, maintenance, repair and replacement; the implementation of a pet waste management program with signage, pet waste bag dispensers and disposal receptacles along the extensive Duck Creek Parkway; an awareness and education program with accompanying cost share for the implementation of pasture improvements, manure management plans, agricultural conservation practices and urban infiltration practices.



Scott County Soil and Water Conservation District Commissioners

Kent Paustian (Chair), Chad Dexter (Vice Chair), Kathy Henningsen (Treasurer), Jane Weber, Kenneth Freund

Assistant Commissioners: George Braden, Al Werthmann, Bob Doerscher, Larry Thompson

If you could tomorrow morning make water clean in the world, you would have done, in one fell swoop, the best thing you could have done for improving human health by improving environmental quality.

-William C. Clark (ecologist)

Urban Initiative

Through the urban initiative, Scott County residents, businesses and municipalities receive technical assistance and cost share funding for urban infiltration practices. These practices recharge ground water, mimic the natural water cycle, slow storm water runoff, decrease flood levels and occurrences, minimize stream bank erosion and lessens stress on municipal storm water infrastructure, streams and rivers. Importantly, these practices protect and enhance water quality by



Rain garden in Davenport.

cleansing pollutants from storm water including: fertilizers and pesticides from lawns, landscapes and gardens; heavy metals from roofs; salt from winter applications to walks and driveways; bacteria from pet waste and thermal pollution from the heat of impervious surfaces. The

native plants used in the rain gardens provide habitat for valuable wildlife such as birds, butterflies and insects. Together, the practices installed in 2010 infiltrate 228,642 gallons of rain water in a 1.25" rain (90% of rain fall events in the region are 1.25" or less).

Permeable paving driveway in Bettendorf.

2010 Infiltration Projects

- 27 Soil Quality Restorations
- 10 Rain Gardens
- 4 Bioretention Cells
- 4 Permeable Paving Systems
- 2 Native Landscaping

Stream Assessment and Water Monitoring

Water Monitoring

Scott County Snapshot Water Quality Monitoring Events

Twice this year (May and October), PSCW organized the 9th year of the **Scott County Snapshot Water Quality Monitoring**. PSCW facilitates over 30 volunteers at each event to monitor Scott County streams, rivers, lakes and wetlands. Volunteers monitor approximately 60 sites for transparency, water temperature, pH, Nitrite, Nitrate, Dissolved Oxygen, Phosphate and Chloride.

Volunteers also gather samples to be sent to a lab for bacteria testing and make observations about activities and land uses surrounding the waterbody. The event engages residents in water quality through a user friendly process for data collection.

Also, the collected data provides a "snapshot" of the water quality conditions in Scott County.

Right: Turbidity test being conducted on Crow Creek in Bettendorf. Turbidity tests show the amount of sediment present in the water.



RASCAL assessment being conducted on Duck Creek

R.A.S.C.A.L.

A RASCAL (**R**apid **A**ssessment **O**f **S**tream **C**orridor **L**ength) assessment was conducted on the urban portion of Duck Creek's main stem. The tool is a combination of GPS technology and assessment procedure designed to provide continuous stream condition data at a watershed scale. Instream, stream bank and riparian area characteristics of the stream were recorded. This information collected will be used to create maps that will show the conditions of segments of Duck Creek.



Environmental Education

We do not inherit the earth from our ancestors; we borrow it from our children.

-Chief Seattle



Youth collect and identify insects at the Creek Stomp Event in Bettendorf.

PSCW is a partner in **Enviro-Kids**, a program aimed to teach youth about the environment and environmental issues while having fun outdoors. During summer 2010, PSCW served on the

Enviro-Kids planning committee, assisted with Fishing and Water Safety and Canoeing and Kayaking events and hosted Creek Stomp.

Creek Stomp was held in Crow Creek in Bettendorf, Iowa. Kids learned how to perform water quality tests on the stream. Nets were used to gather insects in the stream. The insect species were identified and used to indicate the quality of the stretch of stream.

PSCW hosts a week long **Jr. Conservationist Day Camp** (last week in July). The camp uses outdoor activities to teach youth about the value of and concerns with the environment. Twenty-two, 8-14 year old kids attended in 2010. Stream monitoring, site visits to a rain garden and green roof and a field trip to an organic farm provided teaching opportunities on the impact of urban and agricultural practices on water quality and actions that can be taken to protect and improve our streams, rivers, lakes and wetlands.

Expos

In 2010, PSCW was an exhibitor at Bald Eagle Days (January), the Flower and Garden Show (March), the Earth Week Fair (April), City of Bettendorf Public Works Day (May) and the Watershed Festival (July). At the booths PSCW provided education about water quality, infiltration practices, native plants and aquatic life and chemical and biological water monitoring. PSCW added residents to the e-mail list and set up site visits for the installation of urban infiltration practices.

Top: Bettendorf residents identify aquatic insects at the City of Bettendorf's Public Works Day.

Bottom: Over 60 Scott County residents requested site visits at the Flower and Garden Show



Monthly Educational Lunch Forums

PSCW conducts monthly educational lunch forums from Noon-1pm on the third Tuesday of every month at the Bettendorf Fire Station, Surrey Heights Location, 5002 Crow Creek Road, Bettendorf.

2010 Lunch Forums have included:

January: *Lost Grove Lake*, Mike McGhee, Lakes and Rivers Project Coordinator, Iowa Department of Natural Resources

February: *Duck Creek Watershed Improvement Plan and Total Maximum Daily Load*, Jeff Berckes and Charles Ikenberry, Iowa Department of Natural Resources

March: *Duck Creek Watershed Meeting: Sources and Recommendations*, Clare Kerofsky, Watershed Coordinator, Scott County Soil and Water Conservation District & Partners of Scott County Watersheds

April: *Constructed Wetlands*, Paul Loete, MSA Professional Services

May: *Fish to Fertilizer*, Ron Abbott, Schafer Fisheries

June: *Troubled Waters*, a new Iowa Learning Farm Video, Winner of the Iowa Motion Picture Association award

July: *Local biologist will share experiences from oil spill at the Gulf*, Mike Coffey, contaminants biologist, US Fish and Wildlife Service

August: *RASCAL (RAPID ASSESSMENT OF STREAM CORRIDOR LENGTH)*, Clare Kerofsky, Watershed Coordinator, Scott County Soil and Water Conservation District & Partners of Scott County Watersheds

September: *Iowa's Water and Land Legacy*, Rosalyn Lehman, Campaign Field Director, Iowa's Water and Land Legacy

October: *Fire Ecology*, Marilyn Andress, Quad City Prescribed Fire Alliance

November: *Urban Conservation Workshop*, Wayne Petersen, Urban Conservationist, Iowa Department of Agriculture and Land Stewardship

Total 2010 attendance at forums: 255