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Session 2A

Kentucky Water Resources Research Institute, University of Kentucky

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MILLCREEK ELEMENTARY STREAM & WELANDS RESTORATION
PROJECT & OUTDOOR CLASSROOM

Dr. Carol D Hanley, Ed.D.
College of Agriculture, University of Kentucky
Tracy Farmer Institute for Sustainability & the Environment
859.257.3785
chanley@email.uky.edu

In 2008, there was a wonderful opportunity to develop a school-wide, interdisciplinary, water-focused education program at Millcreek Elementary School by restoring stream and wetland habitats around the free-flowing, meandering creek on the school grounds. This enhanced outdoor classroom would form the basis for environmental education in an urban setting. The outdoor classroom would help the environment by improving water quality and increasing aquatic and terrestrial habitats in and along the stream. Each habitat would be constructed using the latest technologies in partnership with the National Center of Excellence in Wetland and Stream Restoration, and would require a minimum of maintenance. Through the educational program, the creation of student Water Ambassadors, and the professional development of teachers and PTA volunteers, the entire community would benefit from the program.

In fall of 2008, this project began with hopes to restore approximately 625 feet of perennial stream riparian habitat using natural channel design techniques and to create of wetland habitat in the Millcreek watershed. This project assembled a team of over ten experienced conservation partners to insure the project was designed, implemented and measured effectively. The team had extensive experience in natural stream channel design concepts, wetland restoration and natural vegetation systems. Partners included the University of Louisville Stream Institute which is at the forefront in the development of natural channel design plans, parameters, and geomorphic regional curves for Kentucky, as well as Bluegrass Stream, a design/build stream restoration firm, who have restored over 30,000 feet of stream throughout Kentucky, Ohio, and Tennessee. Others included the Sheltopee Wetland Coalition who have implemented numerous education wetlands throughout Kentucky and aided in the establishment of educational classrooms.

Biologists with KDFWR and the USFWS Partners for Fish and Wildlife program assisted using their extensive knowledge of habitat restoration practices and fish and wildlife systems.

Over the past year, this project has continued to address the ecological need for restoring stream and wetland habitats, demonstrate natural channel design concepts, and facilitate the educational process related to those habitats. The original stream habitat of this project had been severely degraded over the past 200 years by agriculture and urbanization. Prior to this project, throughout this watershed, streams had been straightened and channelized and wetlands drained. This project demonstrates how streams and wetlands should function and has aided in the restoration of additional stream and wetland habitats.

Educational objectives of the program were to increase student, teacher and PTA volunteer content knowledge regarding biological and chemical indicators of water quality, physical features of streams, stream ecology, and GIS mapping. The targeted audience for this project was the Millcreek Elementary students, teachers, and PTA members at Millcreek Elementary School in Fayette County, Kentucky. One teacher representative from each grade level, K-5, along with a Family Resource Center teacher, special education teacher and the science resource teacher, continue to participate in the year-long investigations and maintain the stream and wetland at their school.

As this project continues through another year, it proves to be a beneficial step in educating the community of Mill Creek Elementary of their surrounding environment and it is helping them take a part in preserving it for future generations. Currently, this project is expanding to other schools in Fayette County so their communities may also be educated on the importance of streams and wetlands and the importance of maintaining their surroundings for the good of the environment.

SOUTHERN REGION 4-H₂O AMBASSADOR PROGRAM

Ashley Osborne
University of Kentucky Cooperative Extension Service
N122 Ag Science North
Lexington, KY 40546-0091
P: 859-257-2505
ashley.osborne@uky.edu

The Southern Region 4-H₂O Ambassador Program is part of an ongoing effort in the EPA Regions 4 and 6 to educate and empower youth to conserve and protect our water resources. The program includes four units, each of which focuses on a specific question related to watersheds and water quality. Each unit includes hands-on, investigative activities. Agents and volunteers trained on unit curriculum assist youth in these activities.

Once youth have completed all four units, they are considered 4-H₂O Ambassadors. As ambassadors, they are required to develop and implement a community-based service project. The service project must 1) educate community members on local watershed issues and 2) improve the water quality of a local watershed. After an ambassador has completed his or her service project, they will be recognized for their efforts locally, statewide, and regionally. In addition, as a 4-H₂O Ambassador, youth will be required to mentor new participants entering the program.

The Southern Region 4-H₂O Ambassador Program is a collaboration between the University of Kentucky (UK), UK Tracy Farmer Institute for Sustainability and the Environment, Kentucky Water Resources Research Institute, University of Tennessee, Clemson University, University of Georgia, Georgia 4-H Foundation, and the Southern Regional Water Program. The program is funded by the Southern Regional Water Resource Project Grant.

The program is currently being piloted in Kentucky, Tennessee, and Georgia. Once results from the pilot programs are received, the curriculum will be revised and training sessions on the program will be offered.

OLDHAM COUNTY FISCAL COURT LEADS WATERSHED PLANNING EFFORT

Beth Stuber, P.E., Oldham County Fiscal Court
Paul Maron, P.E. and Andrea Rogers, E.I.T., Strand Associates, Inc.
Corrine Mulberry, Independent Watershed Advisor
Oldham County Fiscal Court
100 W. Jefferson St, Suite 3
LaGrange, Kentucky 40031
502-222-1476
bstuber@oldhamcounty.net

Oldham County continues to be one of the fastest growing areas in the State of Kentucky with residential, commercial, and light industrial developments planned for the near future. Curry's Fork of Floyds Fork runs through the heart of Oldham County and is listed as a 1st priority 303(d) stream by the Kentucky Division of Water (KDOW). In 2006, KDOW awarded Oldham County Fiscal Court a \$1.6 million grant through the 319(h) Non-point Source Implementation program to develop and implement a comprehensive Watershed Plan (WP).

This presentation addresses some of the most difficult challenges in the watershed planning process head-on and can serve as an example for other communities and groups to follow in developing innovative watershed planning documents:

1. Engaging and Building Support with Elected Officials

Oldham County Fiscal Court serving as the project lead creates instant program support and elected official buy-in of the process and project from the beginning. Many 319(h) grant funds are awarded to watershed groups or public agencies and thus most work to gain the critical support of elected officials. In this project, elected officials and their staff are leaders, active participants, and local supporters of the goals of the project.

2. Public Outreach and Participation

Oldham County is blessed with one of the best educated populaces in Kentucky and its residents are active and engaged in their community. However, even in the most pro-active communities, engaging the general public, getting their input, and building support is a difficult endeavor. Multiple demands on time, overwhelming competition for attention, and other factors tend to drown out this vital voice. Oldham County Fiscal Court has been able to overcome these obstacles through a multi-layered outreach program that uses direct mail, targeted flyers, and strong word-of-mouth approaches to encourage participation. These efforts have proven successful through an active technical committee and most significantly in the public round-table that drew nearly 100 watershed residents. To maintain this high level of participation, Oldham County has created a system

of personal follow-ups on an individual basis to document that every voice is heard and recognized.

3. Early Implementation Projects to Generate Interest and Support

One of the most often heard criticisms of the watershed planning process is the emphasis on planning before action. While watershed professionals understand and value the need for proper planning, many stakeholders would prefer more ‘on-the-ground’ improvements. This project uses a stream restoration project on Oldham County School Board property for not just their required non-Federal match but to also demonstrate a commitment to action. The stream restoration project headed up by the University of Louisville’s Stream Institute is about to begin construction work and has been effectively leveraged to generate interest and encourage identification of additional projects.

This presentation will explain the history of this project, the obstacles that have been met and explain the processes that Oldham County Fiscal Court used to move forward successfully. These steps can be repeated anywhere and can serve as a blue-print for other communities wanting to engage in watershed planning.

UPDATE ON LEXINGTON'S CONSENT DECREE

Richard Walker, Tetra Tech
800 Corporate Drive, Suite 200
Lexington, KY 40503, 859-223-8000
richard.walker@tetrattech.com

Co-investigators:
Jennifer Carey, Tetra Tech
Charles Martin, LFUCG
Cheryl Taylor, LFUCG

This presentation will give an update on Lexington's Consent Decree (CD). The CD is an agreement between the Lexington-Fayette Urban County Government, the U.S. EPA, and the KY Energy and Environment Cabinet regarding violations of the Clean Water Act. The CD was lodged in federal court on March 14, 2008 and is currently under review by the U.S. District Judge. LFUCG has proceeded to implement the CD requirements in accordance with the schedule in the CD. In addition, LFUCG received a new KPDES Municipal Separate Storm Sewer System (MS4) permit effective September 1, 2009, that addresses many of the same stormwater requirements in the CD.

The presentation will give a brief summary of the sanitary sewer and stormwater requirements of the CD and MS4 Permit, progress to date, and future direction of the program. Topics covered will include the following:

- Water quality management fee implemented in January 2010
- New ordinances that address private property maintenance, industrial and high risk commercial facilities, and enforcement
- MS4 Permit and the Stormwater Quality Management Program (SWQMP)
- Progress report on implementing the SWQMP, including: watershed management, legal authority, public education and involvement, illicit discharges, construction site runoff, residential and commercial development, municipal operations, industrial facilities, monitoring, and reporting
- Progress report on implementing the sanitary sewer requirements of the CD

