



# THE UPPER WHITE RIVER REVIEW

*The Newsletter of the South Missouri Water Quality Project, a USDA-NRCS Water Quality Office  
Providing Conservation Solutions to Non-Point Source Water Pollution*

## Clear...Concise...and to the Non-Point

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## Stewardship Compass by Steve Hefner



*South Missouri Water  
Quality Project Team Leader*

I recently had the opportunity to attend a three day training session on caves and karst topography. The training session included both classroom lessons and local field trips. The field trips provided the opportunity to reinforce classroom lessons and to experience caves through sensory means. Other than commercial tours of show caves, this was my first opportunity to witness the underground world in a

natural setting.

The training brought an amplified awareness of the diversity of caves—a fragile ecosystem. The experience reinforced my knowledge gathered by reading books or by listening to the personal accounts of others.

The voids in the calcium and dolomite formations that

lie beneath the Upper White River Basin permit rapid interaction of surface and ground water. Certainly, surface land management impacts the sub terrain. The good news is that karst systems will respond positively to conservation.

Many agencies offer programs that protect karst features. This edition of the Upper White River Review will feature three non-point source projects sponsored by local county Soil and Water Conservation districts that offer both voluntary financial and technical assistance to landowners. These statewide grants, referred to as SALT (Special Area Land Treatment) grants, are administered by local organizations with oversight from the Missouri Department of Natural Resources. The grants are watershed based and focus on agricultural conservation practices that benefit both surface and groundwater systems.

The South Missouri Water Quality Project provides watershed planning assistance to Soil and Water Conservation Districts. If your district is interested in a watershed project, please feel free to contact us.

## Ozark Greenways' Earth Day Project

On Saturday, April 22, 2006 Ozark Greenways, a citizen's group dedicated to the preservation of green space, initiated the first step in establishing a riparian forest buffer along Ward Branch, a tributary to the James River near Springfield. Saturday's efforts provided 56 man-hours for removing brush and non-native species from an area that will be planted to native trees. The site preparation is the first step of a conservation plan prepared by Robert DeMoss, SMWQ forester. "Site preparation is the key to tree seedling survival," says DeMoss. "The work done now before planting will pay big dividends later. It's great to see Ozark Greenways and the community getting involved." The project is under the direction of Greene County Resource Department and is located in portions of Shadow Wood subdivision and adjacent to the River Bluff Cave in southern Springfield. This area is located along a portion of the Ozark Greenways' Ward Branch trail that connects to a network of other hiking trails through the city and county. Following completion of the plan, over 2,500 native trees will be planted that will aid in stabilizing creek banks, reduction of soil erosion, and provide wildlife habitat and enjoyment to trail users.

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# URBAN CONSERVATION Comes to West Plains



*Photo 1  
Stream bank restoration  
utilizing tubular fabric  
filled with compost and  
native grass seed*



*Photo 2  
Parking lot rain garden  
designed to accept runoff  
from a one inch rain*



*Photo 3  
Hydroseeding bare ground  
to control sediment  
migration*

## International Erosion Control Conference

The NRCS-South Missouri Water Quality Project, along with Howell County Soil & Water Conservation District and the city of West Plains, co-sponsored a storm water workshop held in West Plains in late April. The principal sponsor of this workshop was the Great Rivers Chapter of the International Erosion Control Association

(IECA) whose membership covers Kansas, Iowa, Nebraska and Missouri. The purpose of this workshop was to enlighten governmental officials, community leaders and developers on storm water management programs and practices.

The workshop focused on three aspects of storm water management: 1) sediment and erosion control, 2)

implementing a storm water management program and 3) demonstrating sediment and erosion control techniques. Since growing urban communities are required to manage their storm water, this workshop provided an opportunity for communities to understand the components of implementing such measures.

## Conservation Practices Implemented

The demonstration portion of this workshop entailed showing attendees practices that are both applicable in the urban and agricultural setting. The demonstration practices were actually installed previous to the workshop. Numerous companies donated their time and products for this effort. The practices were demonstrated at the Galloway Creek Nature Park in West Plains.

Such practices included a stream bank restoration project (*photo 1*) utilizing composted FilterSoxxs™ that were inter-seeded with switch grass. EROCO of Springfield, MO installed this practice with seed provided by the Missouri Department of Conservation Private Lands Program in Howell County. The advantage of this stabilization project was that

it not only supports vegetation and resists future erosion, but it was very easy to install. It took less than an hour to install this area. With the ease of installation and accessibility, this technique has great potential in the agricultural setting.

Another practice that was installed was a parking lot rain garden (*photo 2*) that was designed to capture runoff from a one-inch rain storm event. The design was done by staff at the NRCS-South Missouri Water Quality Project and was installed with help from the Howell County Soil & Water Conservation District and the city of West Plains. The concept of this rain garden was to deter excessive runoff and subsequent erosion by creating a basin for infiltration. This rain garden was fortified by a natural

rock retaining wall and filled with mulch, compost and soil in order to support a number of native plants such as Shrubby St. John's Wort, Witchazel, Beautyberry, and Buttonbush. A perforated pipe and associated riser was installed to handle excessive rainfall events and saturated conditions.

Other practices such as hydromulching and hydroseeding (*photo 3*) were demonstrated utilizing different mulch mixtures of paper, fiber and wood. Native grass seed such as Buffalo grass, Indian grass and Little Bluestem were used for establishment. Installation and mulching products were donated by the FINN Corporation, Applied TURF Products and Central Fiber Corporation.

## Local SALT Projects MAKING PROGRESS

### Flat Creek SALT Project

The Barry County Flat Creek SALT Project includes 72,990 acres of the James River Basin. "We are currently wrapping up our second year of our project and have completed over 12% of the total project goals," said Tina Mills, project manager. "Although we have made a good start, there is still a lot of time and funds available for assistance."

Included in this grant

are cost-share practices for riparian forest buffers, nutrient management, alternative watering, use exclusion, waste management systems, waste utilization, and manure transfer. In addition to these cost-share practices, free soil testing and litter testing to landowners who have farm operations in the watershed will be available. The project is targeting the headwa-

ters of Flat Creek in Barry County. To be eligible, conservation practices must be within the defined project area. Landowners who are interested in this project may call Tina Mills, Project Manager, at 417-847-4309 ext. 3, or stop by the office at 74 South Main, Cassville. Information may also be obtained at the SWCD website at: [www.barrycountyswcd.4t.com](http://www.barrycountyswcd.4t.com).



Tina Mills

### James River Headwaters SALT Project

The James River Headwaters SALT project was initiated in July 2002. Located in Webster County, the project was designed to implement voluntary conservation practices that would protect the James River, Dry Creek, Turnbo Creek, Lake Springfield, and Table Rock Lake. Offered practices include pasture improvement,

alternative water, pest management, woodland management, spring development, use exclusion, nutrient management, waste storage and composting facilities, sinkhole improvement, animal waste utilization, and riparian forest buffers.

The project has been well received by local landowners and recently received the first

ever Missouri Department of Natural Resources Directors Award for outstanding progress. The grant continues through 2009.

For more information or assistance, please contact the Webster County Soil and Water Conservation District in Marshfield at 417-468-4176 ext. 3.

### Beaver Creek SALT Project

The Beaver Creek SALT project was awarded in 2005. The project targets the Beaver Creek watershed, an 89,495 acre watershed that flows into Bull Shoals Lake. Funds will be made available to landowners for voluntary cost share practices for pasture improvement, woodland exclusion, prescribed grazing, nutrient management planning, ri-

parian forest buffers, spring developments, alternative water systems, well decommissioning, sinkhole protection, and stream bank stabilization.

The grant also supports information programs to educate local landowners about best management practices that reduce non-point source pollution. A grazing school was first offered in Taney

County in 2005 and will continue annually. Weed and brush control workshops, riparian buffer workshops, and water quality workshops are also available.

The Beaver Creek SALT Project continues through 2009. Contact Shellia Braden or Cindy Dalton at the Taney County SWCD Office at 417-546-2089 for more information.



Shellia Braden

## Two Upper White River SWCD's Receive Recognition From Mo DNR



*Amanda Robertson,  
Earth Team volunteer,  
teaching a soil lesson in  
a local preschool facility*

Missouri Department of Natural Resources Director, Doyle Childers, has recognized two Soil and Water Conservation Districts (SWCDs) for outstanding progress in implementing non-point source pollution.

The Webster County SWCD was recently awarded for reducing the amount of sediment, nutrients, and pesticides entering the headwaters of the James River through a SALT grant awarded in 2002.

In Oregon County, the Missouri DNR is recognizing outstanding efforts by the SWCD to control erosion on grasslands. Missouri's 114 SWCDs work with landowners to conserve the state's soil and water resources. The districts are funded by the 1/10 of one percent parks-and-soils sales tax. The South Missouri Water Quality Project congratulates each conservation district on a job well done!

### Comments from Educators

*The presentation  
(by the volunteer)  
was very profes-  
sionally done and  
was an enjoyable  
experience for the  
children. It is  
definitely a  
worthwhile  
program.*

*Ms. Kathy*

*The children talked  
about what they  
learned all  
day long. They  
loved the part  
about worms!*

*Ms. Nerissa*

*Good book and  
good job of holding  
the kid's attention!  
The cloud project  
was great—  
encouraged  
creativity!*

*Ms. Wendy*

## Early Childhood Program a Success

The 2005-2006 school year is over and it signals the end of the first year of the Earth Team Early Childhood Education Program. What started as a pilot project targeting 3-5 year old children in the fall, developed into a larger program which encompassed children up to the age of third grade.

In the fall of 2005, students in two children's literature classes and a media class at Ozarks Technical Community College in Springfield became Earth Team volunteers and provided age-appropriate learning experiences for 3-5 year old children within the watershed. The learning experiences introduced basic conservation concepts. Each student wrote and illustrated a story book related to water and then developed four supporting activities and games. Lessons were developed around a number of topics and included such things as the water cycle, the forms of water, pollution, resource conservation, erosion, water treatment facilities, and earth worms.

In January 2006, students in the *Methods of Teaching Science* course at Missouri State University became Earth Team volunteers and partnered in the Early Childhood Education Program effort. These students devel-

oped and presented lesson plans which targeted kindergarten through third grade students.

Following the presentations, volunteers sent a letter home with each child which summarized the lesson. In addition, a fun conservation activity and a fact sheet about the SMWQ Project office were included.

Forty volunteers were involved in the project over the course of the school year, and 709 children received water quality education through the program.

The Earth Team Early Childhood Education Program was developed by the staff of the SMWQ Project as an outreach/education effort to reach multiple audiences within the watershed. Five specific audiences were targeted: children - three years old through the third grade, the parents of the children, early childhood facility directors and teachers, college students, and college officials.

Feedback received from directors of early childhood facilities was very positive as indicated in the sidebar to the left. The media students created a documentary video of the project which has been utilized in marketing the program and training volunteers.