



Missouri Department of Natural Resources

Water Quality Coordinating Committee Water Protection Program

Minutes

Feb. 19, 2008

WATER QUALITY COORDINATING COMMITTEE

U.S. Geological Survey Columbia Environmental Research Center
4200 New Haven Road
Columbia, Missouri

Feb. 19, 2008
10 a.m.

MEETING AGENDA

Landowner Leadership in Community Conservation, Kenda Flores, Fisheries Management Biologist, Missouri Department of Conservation

Helpful Hints for Establishing and Working with Local Watershed Groups, Dan Downing, University of Missouri Water Quality Extension

Evaluating timber harvesting effects on water quality in low-order streams in the Missouri Ozarks, Amod Koirala, Doctoral Student in Civil Engineering

Other

Agency Activities

Meetings & Conferences

MISSOURI WATER QUALITY COORDINATING COMMITTEE

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USGS Columbia Environmental Research Center
4200 New Haven Road
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MINUTES

Attendees:

Sarah Fast	DNR, Water Protection Program	Tucker Fredrickson	DNR, Water Protection Program
Darlene Schaben	DNR, Water Protection Program	Dan Downing	University of MO Extension
Priscilla Stotts	DNR, Water Protection Program	John Tharp	University of MO Extension Clarence Cannon Wholesale Water Commission
Susan Higgins	DNR, Water Protection Program	Liz Grove	MO Dept. of Conservation
Terri Brink	EPA Region 7	Cindy DiStefano	DNR, Water Protection Program
Greg Anderson	DNR, Water Protection Program	Anne Peery	DNR, Water Protection Program
Trish Rielly	DNR, Water Protection Program	Donna Menown	University of MO Civil Eng.
Randy Crawford	MEC Water Resources	John Bowers	University of MO Civil Eng.
Brian Brookshire	MO Forest Product Association	Amod Koirala	MO Dept. of Conservation
Kurt Boeckman	DNR, Soil & Water Conservation Pgm	Kenda Flores	
Ed Galbraith	DNR, Water Protection Program		

Introductions were made.

Landowner Leadership in Community Conservation, Kenda Flores, Fisheries Management Biologist, Missouri Department of Conservation
PowerPoint Presentation

Even though she is a Fisheries Management Biologist, Kenda assists private landowners with education, ponds, lakes, or streambank erosion problems. She also assists them with cost-share practices. She has worked in the Sullivan area for 12 years. In order to get organized and have a focused approach, they tried working on a smaller watershed scale and developing a marketing scheme. This was so they could get the best customer service for the landowners and watersheds. MDC would get everything set up then give the power and leadership back to the landowners. DNR, Fish and Wildlife Service, USGS and planning commissions would still be partners and provide technical assistance. They picked a watershed and studied it. They then targeted the customers to find what products the landowners wanted and what services were needed. The plan was to come back from this effort with a conservation profit.

Kenda said they started working on the Watershed Marketing Process in 2000. This was more like matrix management instead of the pipeline management they were used to using. She talked about the different parts of the process. In 2002, they received a Challenge Grant, National Fish & Wildlife Grant, and a Stream Stewardship Trust Fund grant. They started with \$88,000 to work with three watersheds. In two months the money was committed. In 2003, a landowner committee was set up and 41 BMPs in place. By 2005, they had worked with 20 landowners and had 73 BMPs. Consistent funding is still an issue to date.

In order to work with Soil & Water to use SALT money and NRCS to use Farm Bill money, a committee of landowners was formed for the Little Bourbeuse River and Brush Creek watersheds. Kenda discussed the roles of the committee. This committee can sometimes get better cooperation of other landowners. The

committee developed a list of issues and concerns in the watershed. These include: livestock in the river and the need for alternative water; streambank erosion and stream management; trees/riparian corridors for main branch and tributaries; upland field management and soil erosion; better marketing through education. MDC assisted with getting the electricity needed for water and reinforced stream crossings. The farmers like the reinforced stream crossings. The stream crossing sites are selected by MDC, not the farmer. Farm tours were held. A portable shade, which may eventually be a cost share too, is something new Kenda's been working on since the cattle are being fenced out of the woodlands and riparian corridors. She said the farmers like the geoweb pads that are used in front of their cattle waterers. The cells are filled with gravel.

The key to success is giving the control to the landowners. They appreciate having choices. Responsive customer service is important too. Word of mouth advertising goes a long way. The farmers themselves have given tours using their ATVs just because they are proud of what they've got.

Helpful Hints for Establishing and Working with Local Watershed Groups

Dan Downing, University of Missouri Water Quality Extension

PowerPoint Presentation; Handouts: Guide Sheet: Helpful Hints for developing Local Ownership of the Watershed Planning and Management Process; copy of PowerPoint Presentation

Dan generally attends the USDA annual national water quality conference. At the 2007 conference, Dan did a presentation on helpful hints on working with watershed groups – Balancing Technical Aspects with Human Aspects of Watershed Management. After the presentation, several thought the talk was good but was asking how they could start a watershed group. So, for the 2008 conference, Dan's presentation was on some strategies for starting a watershed group. John Tharpe, UMC, did a presentation on the evolution of volunteer groups, specifically watershed management groups as they mature; Bob Broz did a presentation on targeting watersheds and targeting individuals with targeted practices.

Dan said some reasons for starting a group are that communities want to be proactive and protect resources; regulatory compliance; pollution control prevention; human health and safety issues; community needs; and several other good reasons. To get started, an Initial Working Group is the first step. They can provide preliminary contacts and make some preliminary decisions. If handled properly, the group can provide instant credibility and support for a facilitator. If not, this group can kill the project. Ideally, Dan said they would like the groups started by local citizens versus by an agency. The committees need to have clearly defined roles. Everyone should be an equal player. If there is more than one committee, a liaison is needed to share important information. They should have neutral facilitator and make sure all representatives available are at the table. Dan handed out a pamphlet of Helpful Hints that may help get the buy-in from locals. Community Development is a process to educate, counsel, promote, and cooperate with communities (people) as they develop assets to seek solutions and solve problems, directly or indirectly affecting quality of life. Dan uses the phases of Forming, Storming, Norming, and Performing. Storming is an important stage in that the group finds out if they can work together or not. These phases require thought and in-depth planning; time should be allowed for getting the word out and time for processing; a neutral party should be selected for facilitation; the facilitator and volunteers must be dedicated; developmental stages may overlap; ground rules must be established that apply to everyone. Those include: all opinions are valued; participants listen respectfully; everyone is equal; everyone is heard; no one dominates the discussion; respectful disagreement is OK, and may be necessary to move ahead; and focus on the common ground in a positive way. Dan talked about the steps groups should take for developing a mission and the goals. To help reinforce and solidify the goals, they should be signed by participants. The group should develop a structure with elected offices and terms. He talked about how groups should handle finances and if they should develop by-laws. As the groups move along they will need to step back, evaluate what's been done and make any needed adjustments. The ultimate result is a comprehensive watershed management approach. A comprehensive watershed management approach is integration of organizations and individuals which have

environmental knowledge, skills and resources in necessary areas to make informed decisions. In answer to a question, Dan talked about some of the challenges he experienced with some of the groups. Dan felt the most successful groups are those that have their basic structure in place, have some accomplishments as a group, and have an agency contact person available.

Evaluating Timber Harvesting Effects on Water Quality in Low-Order Streams in the Missouri Ozarks, John Bowders, UMC, Civil Engineering (*Amod Koirala was available for questions.*)
PowerPoint Presentation

This project is about measuring water quality in the forest. They were looking at quantifying MDC's best management practices (BMPs) for timber harvesting, specifically clear cutting, regenerative oak clear cutting, and water quality data before and after clear cut. In 1987, MDC enacted a BMP for their timber harvesting practice to protect water quality. There is no quantitative data to see if the practices are working. DNR and MDC wanted to see water quality data.

They started with a hypothesis that there is no measurable or significant impact of regeneration oak clear cutting (ROCC) on water quality on low-order stream in upland Missouri forested watersheds. This is for surface water. The objectives are to collect the water quality data and design instrumentation in the field to collect the data. The study time period is between 2002 and 2009. They needed three years of pre-harvest data at every site; three years of post-harvest data in between; then look at before and after. They are currently collecting post-harvest data. There are fifteen total sites ranging from 5 acres to 50 acres in Shannon and Reynolds counties. All sites were designated for ROCC by MDC. Ten sites have been harvested; the other five remain as controls. They instrumented to collect water within the stream channel and hillslope monitoring channels to collect water off hillside. They were looking for any difference on water quality between what was in the stream channel versus what was on the hillside. There were about 200 instruments across the sites. The sites are located in the Upper & Lower Gasconade and one close to the Eminence-Potosi formation. The region is limestone karst with steep hillslopes; no bottomland. The streams are first and second order streams and one third order stream. All are ephemeral streams. John talked about how the hillslope monitor and instream monitor works. He explained the number of samples and locations taken at this stage. They also measure precipitation and soil moisture. With the streams being ephemeral, it is difficult to get samples. John thought that in the karst environment, only about 20-40% of the precipitation come down the channels. The samples are analyzed for about 12 different parameters. They have about 900 pre-harvest samples and 90 post-harvest samples. They are still collecting post-harvest samples so they can't do the full comparisons yet. For background concentration data, they decided to look at distribution, number of observations versus total suspended solids, for example. John showed a graph of hillslope versus instream background concentrations which showed they were about the same. Some conclusions they have drawn are background concentration is highly variable; the background concentration upper limit was established at three standard deviations above the mean (99.87%); and post-harvest concentration generally is within the variation of the background levels. All sites were harvested by November-December 2007. Water samples are still being collected; hydrology characteristics, logging practices and loggers, size of the cuts of sites, climatic conditions and topographic conditions are still being analyzed for pre-harvest conditions. This project was initially funded by MDC and DNR SWCP and now is continuing with MDC funding. Others involved include Forest Service, NRCS, UMC Staff and Students.

Discussion was held on whether BMPs were used or not, would water quality still be protected. John said the clear cut areas were to regenerate oak tree declines.

Agency Activities

Sarah Fast said the agenda for March includes RC&D efforts on watershed planning with the Southwest RC&D and Osage Valley RC&D; Soil Survey efforts and research with Dick Henderson and Wyn Kelley of DNR's Soil & Water Conservation. Let Sarah know if anyone has topics they would like to hear about or present.

Priscilla Stotts announced the Volunteer Water Quality Monitoring Introductory Workshop schedule is now available for the year. Attendance is free.

Greg Anderson said the 2008 Request for Proposals should be available soon. They are working on prioritizing watersheds.

Terri Brink reminded everyone of the 2008 Wetlands & Watersheds Conference, April 7-11, 2008, in Kansas City. They are currently reviewing papers and workshops to decide on the agenda.

Meeting adjourned.