



Missouri  
Department of  
Natural Resources

## **WATER QUALITY COORDINATING COMMITTEE**

Lewis & Clark State Office Building  
LaCharrette Conference Room  
1101 Riverside Drive  
Jefferson City, Missouri

January 21, 2014

10:00 a.m.

### **MEETING AGENDA**

Hellbender Restoration and Conservation, Jeff Briggler, Herpetologist,  
Missouri Department of Conservation

SWCP – Plans for the Future, Colleen Meredith, Director, Soil & Water Conservation  
Program (SWCP), Department of Natural Resources

Other

Agency Activities

Meetings & Conferences

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MINUTES

**Attendees:**

John Johnson	DNR, Water Protection Program	Ken Tomlin	DNR, Water Protection Program
Graham Freeman	DNR, Water Protection Program	Kirk Lambrecht	DNR, Water Protection Program
John Ford	DNR, Water Protection Program	Steve Hefner	USDA - NRCS
Amy Meier	MDC, Stream Unit	Valerie Hentges	DNR, Water Protection Program
Anna Nowack	DNR, Water Protection Program	Jane Davis	DNR, Water Protection Program
Mike Kruse	DNR, Water Protection Program	Trish Rielly	DNR, Water Protection Program
Colleen Meredith	DNR, Soil & Water Conservation Pgm	Ruth Wallace	DNR, Water Protection Program
Bob Broz	University of MO Extension	Ken Struempf	DNR, Soil & Water Conservation Pgm
Derrick Steen	Barr Engineering/MO Corn Growers	Jeff Briggler	MDC
Terri Brink	EPA Region 7	Darlene Schaben	DNR, Water Protection Program

John Johnson chaired the meeting for Greg Anderson.

Introductions were made.

**Hellbender Restoration and Conservation**, Jeff Briggler, Herpetologist, Missouri Department of Conservation  
PowerPoint Presentation

Jeff has been working as a Herpetologist for the Missouri Department of Conservation for 14 years. He said there are two sub-species of Hellbenders in the United States—Eastern and Ozark. The Eastern Hellbenders are historically found in 16 states; Ozark Hellbenders are only found in Missouri and Arkansas. Missouri is the only state with both species. Eastern Hellbenders are found in streams flowing north and northeast into the Missouri and Mississippi rivers. Ozark Hellbenders are found in streams flowing south. The Ozark Hellbenders prefer the habitat of springs and the rocks found in the springs. They are mainly nocturnal and slimy and absorb oxygen through their skin. As an adult they rarely leave their habitat area. They live approx. 35-38 years. The males are the guardians of the nests.

Jeff said there is a lot of information published on the decline of hellbenders. On average there is approx. a 70-80% decline. There is ongoing work to try to re-establish populations. Hellbenders were listed as endangered in 2003 and placed on the federal list in November 2011. The decline may be due to changes in habitat, water quality issues, predation, diseases and pathogens, and exploitation.

He talked about their research and propagation efforts. They have been surveying and monitoring populations, investigating abnormalities, assessing health conditions, determining survival and movement, comparing genetics, and assessing sperm quality, to name a few. On average approx. 50% of Eastern Hellbenders found in Missouri are almost perfect; approx. 72% of Ozark Hellbenders found have some kind of abnormalities. Jeff showed pictures of some of the abnormalities they have found. The problems are reported by location. Studies



show 20% of Ozark Hellbenders found in the North Fork River have Amphibian Chytrid Fungus, which is found in the skin layers, where approx. 7% of the Eastern Hellbenders in the Niangua River may have this fungus. The spring-fed cooler temperatures of these rivers are ideal for the fungus to stay and grow.

They are working with the University of Missouri Science & Technology to try to get baseline data on general health conditions. Ozark hellbender leeches are found on the hellbenders, which may be helping to spread the fungus. On average there are about three on each animal. They are still studying the effects these leeches have. They also have tested for Mercury and have the data archived to use for future comparisons.

Historically, Hellbenders like stable stream banks, deeper pools, narrower channels and large rocks. These streams are now slowly changing to be shallow, wide, and eroding. The Hellbenders do not like sedimentation. Bank erosion, streamside gravel removal, gravel loading and impoundment, roadway and access runoff, streamside homes and riparian clearing can impact Hellbender homes. These will also impact reproduction efforts.

MDC's propagation efforts involve searching for eggs and permanently removing hellbenders from the wild, which are held in captivity long-term. They try to not disturb nests since the Hellbenders always return. Jeff said they found 20 nests in 2013. The males are very protective of their nests. Approx. 60 artificial nest boxes have been placed in several areas which has made the nests easier to locate, reduces habitat and animal disturbance, and easier to monitor nests. They feel the nest boxes were successful because in 2010 they had one egg clutch; two clutches in 2012; and eight in 2013. The biggest challenge is hiding the nest boxes from people.

They have two facilities for long-term propagation: Shepherd of the Hills Hatchery in Branson and the St. Louis Zoo. They try to mimic the natural area. It was a big victory when the eggs were first fertilized. Jeff talked about their history of breeding success. Some have been released in the wild. Survival rate was 75% and 48% at different sites; they have adapted to the environment and are growing and gaining weight. In defining success for augmentation or reintroduction, Jeff said survivorship is comparable or better than those in the wild; the animals are healthier and fit for reproduction; reproduction is successful; an increase in population size and distribution; positive population trajectory; and reasons are learned for decline via introduced animals. The St. Louis Zoo is currently raising 4000 Hellbenders.

Jeff said they have a Conservation Strategy for the recovery of the Hellbender in Missouri and Arkansas and they are responsible for updating the watershed objective, which states "Improve water quality (physico-chemical parameters) in those watersheds containing Hellbender populations by reducing or eliminating physical and chemical contaminants in rivers and streams." Now they are drafting the Ozark Hellbender Federal Recovery Plan. They are waiting until this plan is written before moving forward with any new projects. Jeff said they have an Ozark Hellbender Augmentation Plan and is currently writing the Eastern Hellbender Augmentation Plan. They are working to establish a joint project with Arkansas for establishing stream corridor restoration on the Eleven Point River in Missouri and Arkansas; increasing their knowledge of larvae and nesting behaviors; habitat augmentation; and assess habitat for reintroductions.

There is a multi-agency, multi-discipline approach to the recovery of Hellbenders in Missouri. Funding has been provided by numerous agencies and individuals. They are looking for some water quality experts to join their group.

In answer to a question, Jeff said they will have to study the threat analysis effects of the fungus on animals in captivity. The best protective watersheds seem to be the Current and Eleven Point rivers. The Big Piney River would be next. Jeff can be contacted for copies of any of the publications he mentioned.



## SWCP – Plans for the Future, Colleen Meredith PowerPoint Presentation

Colleen said the Soil and Water Districts Commission requested the “Plan for the Future” to be updated. Last update was in 2005. Soil and water has changed over the years and can have an impact on water quality in the state. Discussions at a Commission meeting resulted in the forming of five subcommittees (Outreach, Info/Ed, Program Delivery/Operations, Current Conservation Practices, and Emerging Issues). The Outreach and Info/Ed committees realized their goals were similar so those were combined to make one committee. The Program Delivery/Operations group looked at the soil & water districts to see what they are currently doing and what they should be doing in the future, how many there are, and staffing. The Current Conservation Practices group will look at the conservation practices to see if all are still needed and used; will new practices be needed and are they being adopted. Emerging Issues need to be included to ensure they are covered should an issue arise in the future.

Meetings were held with the soil and water conservation districts (SWCDs) at the fall Training Conference. The Soil & Water Conservation Program (SWCP) staff asked questions and had the SWCDs answer them using the Turning Point Software. The information was then given to the subcommittee. Committees will report their recommendations back to the commission. The commission will then put the information out for public comment.

Methods for showing success include using the Turning Point Software as a new voting method; hosting area and regional meetings and asking several questions; diversity in the subcommittees; and piloting ideas of subcommittees. Colleen provided the list of agencies involved in the Subcommittees.

SWCP staff works with each of the committees. Ken Struempf is working with the Outreach Subcommittee. Their Mission Statement states that “Through Outreach and Education, increase Missouri farmers’ awareness and knowledge of the Soil and Water Conservation Program opportunities to protect the soil and water resources of the state. Make known the benefits of these efforts to the general public.” The targeted audiences are farmers and the public. The goal for the farmers is to “Increase the farmers’ understanding of the benefits derived from the Soil and Water Conservation Program to enable the most effective use of the soil and water resources.” The goal for the public is to “Increase the public’s understanding of the economic, recreational, water quality and soil savings benefits of the Soil and Water Conservation Program.” As a way to get the message out they looked at identifying the target audience, identifying information gaps, developing a consistent message, and measuring the impact/outcomes.

The Program Delivery and Operations subcommittee is the biggest group. Colleen, Jim Boschert, and Colette Weckenborg are the staff working on this subcommittee. The committee consists of board members, district technicians, program specialists (admin in districts), and watershed partners (NRCS, FSA, MDC, Dept. of Ag). The group needed to define the problems in the districts. They discussed whether staffing in the districts needed to change. The group will also evaluate impacts from the points of view of all potentially affected parties. Problems generally occur by overlooking or underestimating a negative impact or unexpected consequence of a proposal. They want to look at all the pieces before trying to implement a plan.

Jim Plassmeyer is the SWCP staff working with the Conservation Practices Subcommittee. The 43 conservation practices are all combined into seven resource area concerns and include nutrient and pest management; grazing; sensitive areas; sheet, rill and gully erosion; irrigation; woodland; and animal waste. One thing the subcommittee will need to determine is whether there are other conservation practices still to be implemented throughout the state. Through the federal NRCS Environmental Quality Incentives Program (EQIP), they have 2,810 open contracts with \$80,507,670 in obligations. The SWCP requests the districts to complete a “needs assessment” for the following year. The districts had requested \$69 million for FY15, which is a decrease from previous years. Requesting a “needs assessment” from the districts was started in FY2011. Colleen felt recent



requests have been getting more realistic. SWCP brings in approx. \$44 million of the Parks Soils and Sales Tax. Only 5% is for administering the program; 25% for districts; 70% is for practices on the ground. She showed a graph of amounts and percentages requested in the needs assessment for each conservation practice. Sheet, rill and gully erosion is the highest need. Colleen also showed a comparison state map of allocations from FY14 versus FY15. The maps showed the larger amounts going to the northwest part of the state for highly erodible lands. The central area uses most all practices. The southern area has mostly dairy farms, with the bootheel mostly using the irrigation practices. Colleen noted it is becoming accepted to fence cattle from streams. She felt that the education has shown the benefits to the landowner and the cost share incentive has allowed landowners to do the fencing. In looking forward at the Plan for the Future, they want to use the program the best way possible for the districts, landowners, and the rest of the state, to protect the resources.

The Emerging Issues subcommittee is still being formed but should start in the spring. Colleen thought this committee may include members of Missouri Corn Growers and Soybean Association, for example.

In answer to a question, Colleen said normally the appropriation has been \$27.7 million to go to landowners. This year the goal is to get \$31 million to landowners and to put a little more into the districts. The Info Ed/Outreach Subcommittee will work with districts to find the needs of each district. They are trying to get more water quality info out to the districts so they will know more of what is available and make better decisions for their watersheds.

It may be next summer before the Plan for the Future goes on Public Notice. The committees will have more information to report by then. Colleen felt it would be more beneficial to spread the word and get more buy-in before sending out a public notice.

Colleen talked about some of the practices that may be underutilized. A meeting is scheduled to discuss this topic. The SWCP cost share practices fit in where other state programs cannot fund. Colleen thought all the state's agriculture programs work very well together.

### **Meetings and Conferences**

Jan. 24-25	Watershed Management Planning & OMW Conference, Country Club Hotel, Lake of the Ozarks
Jan. 28	Nutrient Reduction Planning Committee, DNR Conference Center, 1738 E. Elm, Jefferson City
Jan. 30	Mid-Missouri Grazing Conference, Capitol Plaza Hotel, Jefferson City
Feb. 5-6	Missouri Natural Resources Conference, Tan-Tar-A, Osage Beach
Feb. 18	National SARE Cover Crop Live Streaming Conference, from NRCS offices
Feb. 25	Southwest Missouri Spring Grazing Conference, Univ. Plaza Hotel, Springfield
March 24-28	Community Development Academy – learning to work with people: one-on-one and as a group
April 1-2	St. Louis Earth Day Symposium, Powder Valley Nature Center, St. Louis
April 9-11	Missouri Annual Floodplain & Stormwater Mgmt Conference, Tan-Tar-A, Osage Beach
April 26	Volunteer Water Quality Monitoring Workshop, Jefferson City
July 8-9	National Manure Expo, Springfield - contact Teng Lim at 573-882-2731 for more information

### **Agency Activities**

Anna Nowack mentioned that under the classification rule they are finalizing the update of MORAPs VST data set to use for Use Attainability Analysis with water classification. It's been a long process.



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Steve Hefner mentioned they are continuing implementation of Mississippi River Basin Initiative (MRBI) and Nation Water Quality Initiative (NWQI). There is approx. \$9-10 million available for 19 MRBI projects; approx. \$1 million for NWQI in 3 watersheds. Two MRBI projects were completed in Stoddard County and were successful. Three other projects in Stoddard County were extended.

Valerie Hentges said the Nonpoint Source Unit is working on finalizing the workplans for the new 319 projects. She also informed the group that she has accepted a new position with MoDOT effective Feb. 3, 2014, with their wetland team.

Trish Rielly said the proposed 2014 303(d) List and proposed 2016 Listing Methodology Document is available for public comment. Comments will be accepted through Jan. 31, 2014. A public hearing is being held on Jan. 22.

Contact John or Greg Anderson if anyone has topics of interest they would like to present or hear about.

Meeting adjourned.