

Red Bird River Watershed Collaborative Meeting – May 16, 2013 Meeting Minutes

Location: Red Mission, Cramer Room

In attendance: Jonathan Baxter, Julian Campbell, Mark Davis, Thomas Dozier, Paul Finke, Lynn Garrison, Sherry Harrel, John Hull, Tracy Nolan, Mike Rock, Kim Tarter, and Jon Walker

The meeting was started about 30 minutes late since road work on I-75 near Mount Vernon caused a traffic delay which affected everyone who was coming from west of Mount Vernon to the meeting. This included one of the speakers. Some people who may have planned to attend the meeting may have given up when they encountered the traffic problem.

Opening Comments

Thomas Dozier opened the meeting by welcoming everyone. He introduced Lynn Garrison who asked everyone to introduce themselves and then reviewed the agenda and introduced the speakers.

Agenda

1. Opening remarks, Thomas Dozier (USFS), Lynn Garrison
2. Welcome to Red Bird Mission, Tracy Nolan, RBM
3. Overview of Red Bird River Watershed Collaborative, John Walker, USFS
4. Finding Solutions, Chapter 5 Draft, Jon Walker, USFS
5. Red Bird Mission and "Grow Appalachia," Tracy Nolan
6. Kentucky Arrow Darter, Jonathan Baxter, Graduate Student Eastern Kentucky University
7. Pickup comments on Chapter 4, No one had any comments
8. Next steps, Jon Walker, USFS
9. Adjourn

Welcome to Red Bird Mission, Tracy Nolan, Director of Community Outreach, Red Bird Mission

Tracy Nolan welcomed the Red Bird River Watershed Collaborative to the Red Bird Mission. She gave an overview of Red Bird Mission programs and the current need for such programs. The Red Mission has been providing ministries in this region of the Appalachian Mountains since 1921. Challenges include chronic poverty, lack of jobs, and poor housing. Mission programs include education, health and wellness, community outreach, economic opportunity, and community housing improvement. Julian Campbell mentioned that with the Appalachian Regional Commission, U.S. Forest Service and various missions that the problems with chronic poverty and associated problems seem to continue. Are we addressing these problems at the correct scale? Would the upper Kentucky River be an appropriate scale? Tracy said the problem is not limited to the area covered by the Red Bird Mission but that the Red Bird Mission work is critical for the area it covers. There was some mention of secondary wood product manufacturing.

Overview of Red Bird River Watershed Collaborative and “Habitat and Water Quality Analysis”, Chapter 4, Jon Walker

Since Tracy Nolan was the only new participant from the area and since Jon Walker had talked with her about the Red Bird River Watershed Collaborative prior to the start of the meeting, the overview was abbreviated. He briefly discussed some of the results of the “Habitat and Water Quality Analysis, Chapter 4 and gave Tracy Nolan and Julian Campbell copies. Some of the things he mentioned were:

- sulfate
- dissolved oxygen
- total iron
- total manganese
- specific/electrical conductivity
- nitrate-N
- *Escheria coli*

Finding Solutions, Chapter 5, Jon Walker

Jon Walker gave a short overview of “Finding Solutions,” Chapter 5 and gave copies to participants to review. The primary problems are: garbage, total suspended solids, conductivity, sulfate, and hardness and manganese, and altered stream morphology. Best Management Practices (BMPs) for addressing these problems are included in this chapter. We may be able to get grants, in particular 319 grants, to implement some of BMPs. He mentioned that in the last meeting participants were very concerned about the garbage problem and some had suggested adding garbage bills to property tax bills as one possible solution. It is not feasible to address problems, such as conductivity and heavy metals, associated with coal mining.

Red Bird Farmers Market and Grow Appalachia, Tracy Nolan

Tracy Nolan discussed the Red Bird Farmers Project where families receive instruction and materials assistance to expand horticultural and livestock family food production boosting family nutrition and income. They received starter grants from Global Board of Global Ministries Women’s Division and Heifer International. The first year of the farmers market some farmers did not want to charge for their produce. They felt they wanted to pay back for things people had done for them. Emphasis is placed on using sustainable techniques. The University of Kentucky Extension Service and others help provide training.

Tracy also discussed Grow Appalachia and the Red Bird Mission’s participation in this program. Grow Appalachia was organized in 2009 with funding from John Paul DeJoria, John Paul Mitchell Systems and Patron Tequila to address food security in Appalachia. Berea College functions as the administrative arm of Grow Appalachia. First gardens were grown in 2010.

Red Bird Mission was one of the original 4 partners. The Red Bird Mission Grow Appalachia Project serves people in Bell, Clay, and Leslie counties. Participants include 5 community gardens: Queendale Campus Garden with residents at Red Bird Mission, the Early Childhood Development Garden where 3 and 4 year olds grow gardens; the Dewart Senior Center Garden, the Red Bird Mission Elderly Apartment Garden by residents, and the Central Presbyterian Community Garden in Hyden, KY. Karen Dial is the Project Coordinator and Chad Brock, a graduate of the Red Bird Mission School, is Red Bird's Field Worker.

Grow Appalachia uses science based techniques. It recognizes and nurtures the traditional gardening and knowledge of Appalachia while applying commercial agriculture research to household level gardens. Tracy made the following points about Grow Appalachia:

- Uses sustainable techniques.
- Uses organic material.
- Heirloom seeds saving and sharing between sites.
- In 2012 shredded office paper was utilized as a highly effective mulch for tomatoes, peppers, and cucurbits.
- Uses Stake and trellising system for tomatoes.
- Uses grafted tomatoes.
- One market gardener tried corn starch based biodegradable plastic mulch that will aid elderly and disable gardeners with weed suppression without the complication of petro-based plastic mulch or herbicides.
- High tunnel designed to allow mountain family to have fresh vegetables year round without energy cost of traditional greenhouse.
- Educational programs.
- Continuing research and sharing results.

Red Bird Mission has a Community Housing Improvement project where volunteers provide home repair for low-income community residents and maintenance for Mission buildings and grounds. The Mission can encourage people to apply for grants to improve sewage systems. They have a large number of volunteers each year.

The Kentucky Arrow Darter, Jonathan Baxter, Graduate Student, Eastern Kentucky University

Jonathan Baxter gave an overview of the Kentucky Arrow Darter and what he plans to do in his research project on the Kentucky Arrow Darter. His work will provide essential information for conservation planning for the Kentucky Arrow Darter.

Following are some points he made about the Kentucky Arrow Darter:

- The Kentucky Arrow Darter (KAD), *Etheostoma spilotum* Gilbert, is a KY endemic fish that is restricted to the upper Kentucky River basin in eastern Kentucky.

- It was first collected in 1883 by Gilbert from Sturgeon Creek, Owsley County and described in 1887.
- Its closest relative, the Cumberland Arrow Darter, *Etheostoma sagitta* (Jordan and Swain), is restricted to the upper Cumberland River basin in Kentucky and Tennessee.
- KADs generally prefer 1st- 3rd order streams.
- The Kentucky River Drainage and the Cumberland River Drainage may have been connected in the past at Little Richland Creek.
- Status surveys completed from 2007-2010 by the Kentucky Department of Fish and Wildlife Resources (KDFWR), Kentucky State Nature Preserves Commission (KSNPC), and U.S. Fish and Wildlife Service (USFWS) revealed that the species has declined across its range. The species was observed at only 49% of historical streams and 45% of historical sites.
- Elevated conductivity and sedimentation appeared to be major limiting factors for the species; streams supporting KADs had better overall habitat conditions and tended to have much lower conductivity values.
- The best remaining populations were observed in the Red Bird River drainage (Clay and Leslie counties), Robinson Forest (Breathitt and Knott counties), and several direct tributaries of the North Fork Kentucky River (Breathitt and Lee counties).
- Habitat destruction/loss and range curtailment was identified as the primary threat to the species. Sources of this threat were identified as surface coal mining, logging, oil/gas exploration, land development, and agriculture. Specific stressors included dissolved solids (e.g., sulfates, metals), sediment, loss of riparian vegetation, and channelization.
- Based on evaluations of the species' status and the magnitude and imminence of its threats, the USFWS determined that the species warranted listing under the Endangered Species Act.
- There are 244 species of fish in Kentucky, 6 are listed under ESA

Jonathan plans to do the following in his research:

- Estimate population
- Investigate KAD movement behavior
- Genetic work of population
- Research will be primarily in 1-3rd order streams in Gilberts Creek and Elisha's Creek, and 4th order in Red Bird River.
- 7,433 ft. in Gilberts Creek and 10,457 in Elisha's Creek.
- Determine stresses and threats to the KAD
- Utilize pit-tagging and antenna station to conduct movement studies
- Surveys to identify migrations and movement of KAD
- Identify micro-habitat use
- Habitat preferences
- Water parameters recorded will include: temperature, pH, dissolved oxygen, conductivity,
- Temperature will help determine potential impact of Hemlock Woolly Adelgid on thermal regime.

- Water flow rate
- Habitat preferences of KAD
- Will use back pack electric shocker
- All species will be recorded
- Record tag #, weight, length, GPS coordinates
- Movement data
- Will use data logger for barometric pressure, temperature, etc.

Analysis will include:

- Occupancy modelling
- Population estimates
- Principal component analysis
 - Delineate habitat types
- Movement-Arc GIS
 - ANCOVA for seasonal variability

In summary the study will make population estimate, help understand movement, and habitat for KAD

Next Steps, Jon Walker

Jon mentioned that “Strategy for Success,” Chapter 6 will be the next step.

Meeting was then adjourned.