

## **Ozark Summit 2009 Breakout Session Notes 1**

**Topic:** Energy & Natural Resource Management (Energy Development)

**Moderator:** Mark Sattelberg

**Recorder:** Andy Turner

**Objective:** Discuss new energy developments that will be coming to the Ozarks.

**Attendees:** Jane Anderson (AGFC), Maggie Bailey (Audubon Arkansas), Steve Filipeck (AGFC), Gary Gaines, Richard Stark (USFWS), Buck Ray (ODWC), Mike Slifer (USGS), Michelle Evans-White (U of A), Jim Peterson (USGS), Paul Imrie (citizen), Ken Collins (USFWS), Jack Arnold (USFWS), Phillip Hays (USGS), Andy Turner (AGFC), Kim Winton (USGS)

### **Discussion Points:**

- Mercury in “pristine” streams-
  - MO has mercury showing up on pristine streams that don’t have a source, other than atmospheric deposition from coal fired power plants.
  - AR has mercury in the Ouachita Mountains, most likely from the Texas drift geology.
  
- Nuclear Energy-
  - MO has a company that wants to build a nuclear power plant, but may pull back the application because they can’t get MO to change regulations to allow them to charge customers before the plant begins construction.
  - May be more popular due to low emissions, but need to plan for waste fuel rods.
  
- Natural Gas – Fayetteville Shale Play-
  - Gas companies have been using Nationwide Permit (NWP) #12, to cross many streams, but have not been using erosion control effectively. The NWP #12 does not require any notification to the Corps or other agency.
  - Corps is working on a General Permit that will require notification and a review for Threatened and Endangered Species before the permit is issued.
  - Still to be found out is how, where, and when there will be an interface of fracturing fluids and the groundwater aquifers.
  - Oil and Gas is exempt from many environmental regulations, this has been to the gas companies advantage. Regulatory agencies are playing catch-up.
  - Gas companies are now using one well pad to drill multiple wells, it is less impact on the environment, plus it is less cost to the gas companies because there is no need to remobilize the equipment.

- Assumption is that because of royalties, some people may not be complaining about environmental issues, a lot of money is given to the owners if a well produces.
  - There is no incentive for the gas companies to do any environmental cleanup, possibility is to have companies to post a bond before allowed to continue.
  - In Oklahoma, the Energy Resources Board collects 1 cent per barrel of oil produced. The money is used to monitor and remediate any pollution.
  - Due to loud noises from compressor stations, noise pollution could be another big problem.
- Wind Energy-
    - It is common knowledge about bird and bat mortality due to wind farms.
    - Mortality typically in the fall at low wind speeds.
    - One solution is to feather the turbine (shutting them down) during this period. Cut in and Cut out management can be used during migration times.
    - Agencies need to address life history questions to identify problem areas – migration times (seasonal and diurnal), migration routes, migration elevations.
- Biofuel-
    - MO has had a glycerin spill from a biodiesel plant in the southeast part of the state. The glycerin killed a listed mussel species
    - Ethanol production for E85 fuel has caused several issues.
    - Corn production has increased, there are several financial incentives for farmers to grow corn.
    - CRP lands were taken out of the program to increase corn production.
    - Corn uses more water than other crops.
    - Public really did not want ethanol based fuels.
    - Research is showing that cellulose based ethanol is better than corn. Even native prairie grasses are being looked at. Duck weed was also a good candidate.
- Other Alternative Energy Sources-
    - Hydrokinetic energy – uses turbines similar to wind energy, but uses water current (rivers or tidal) to drive the turbines.
    - One company is seeking permits for pilot projects in the Mississippi River. Other rivers may be looked at in the future (depends on current and depth).
    - Some companies are looking to retrofit navigation dams for run of the river power production.

### **Where do we go from here?:**

- We need to work on promoting the public opinion. We need their support; we can't do it without them. We need to keep them informed about issues that we see.
- Work on marketing for the public support
- We need to have a different mindset, instead of status quo. We need to be proactive rather than reactive.
- We need to keep current of all the new technologies that will be coming on-line.
- We need to determine where we are now and where we want to be, and then determine what we need to get there.
- Some change needs to start at a grassroots level, to do that the basic needs of the residents need to be provided (food, shelter, clean water).
- We need to work with the politicians, support the good legislation. Get involved.
- Need to work on the public perception of "big government"
- For wind, work on Habitat Conservation Plan for the wind farms. Research the migratory routes of the birds and bats.

## **Ozark Summit 2009 Breakout Session Notes 2**

**Topic:** Climate Change – Aquatic & Terrestrial Combined

**Moderator:** Allison Shipp

**Recorder:** Esther Stroh

**Objective:**

**Attendees:** Dixie Birch, David Bowles, Steve Duzan, Josh Duzan, Jeff Haas, Steve Hensley, Kurt Homeyer, Mike Mac, Dan Magoulick, Jacqueline Morgan, Paul Nelson, Tom Owens, Bill Posey, Charlie Scott, Ken Smith, Jeff Spooner, Allison Vaughn, Brian Wagner.

**Discussion Points:**

Brainstorming:

- What might an Ozark-based strategy look like for climate change action plan?
- We need to better understand three characteristics within Ozark ecosystems in order to address management of these systems under climate change scenarios:
  - Vulnerability
  - Recoverability
  - Resiliency
- Pilot Project: pool existing information, expertise. Climate change centers. What are the geographic pieces? We have the partnership infrastructure. We could look at consistency/compatibility across databases. We have detailed protocols for detecting floristic quality and understanding prescriptions for degraded sites based on previous work. We know where on the landscape we want to focus efforts (esp. MO; AR not as explicit, but the work has been done to identify places).
- Work in aquatic systems brings in a new suite of concerns regarding climate change, especially in karst systems. Resiliency of aquatic systems is dependant on condition of uplands. Water is the most important forest commodity. We need to look at whole watersheds and set examples for private landowners. TNC does watershed analysis including roads, other stressors; restoring resiliency applies in watersheds as well.
- Within Department of Interior, USFWS may have incoming \$ for Climate Change focus areas in FY10; USGS has \$ for FY09 to establish Climate Change (multi-agency multidisciplinary) virtual hubs. NPS has I&M networks that collect terrestrial and aquatic-related monitoring data intended in part to address climate change issues. Department of Interior needs to communicate on internal plans for this \$ and how programs relate. Within USDA, Mark Twain National Forest

needs to engage more in the process and provide guidance/standards for on-the-ground managers, education for harvesters. Forest Inventory Analysis program is considering GCC applications of their database. Central Hardwoods Joint Venture/Southeast Aquatic Resource Partnership, other multi-agency groups exist. Agencies need to inform each other re: Ozark efforts and we need to coordinate all the Ozark efforts.

- Private landowners, local communities and Indian Nations need to be included, especially those adjacent to public lands. Conservation easements, other tools can be applied. Private groups are already doing large-scale management for game species; we need to tap into this, and provide education on techniques, especially management for early seral stages to facilitate succession on wetlands, riparian areas and uplands. Fire management is a great tool working for collective value to both forest communities and anthropogenic issues. There is a need to work with the community to implement fire ecology in various ecosystems across the landscape.
- We need good information on benchmark conditions. We need to work to enhance resiliency and vulnerability and tie forest thinning efforts to markets. Outreach to forestry groups/commissions think through opportunities and entrepreneur capabilities. We need to evaluate how to bring private landowners into education and participation. Work with citizen restoration groups, extension programs. We need to develop markets for cedar, other wood products from restoration activities. Investigate uses of hydrokinetics (waterwheels) for energy generation and stream bank stabilization. We need to address nonnative species and spread of diseases. (Intact, resilient terrestrial systems keep them out; situation different for aquatic systems). Consistency is very important when comparing data; we should use similar sampling protocols when possible.
- No collaborative center exists currently; there is a need to set up a collaborative center so everyone is “on the same page.” Interagency cooperation can be facilitated through myozarkcommunity website:  
<https://my.usgs.gov/home/portal/community/Ozark>
- A suggestion was made to use the term Interior Highlands and include Ouachita Mountains in the region of focus. No clear decision on that point was made. Perhaps it will evolve in agency discussions at higher levels.

### **Where do we go from here?:**

The ultimate goal is to formalize an Ozark Partnership to facilitate collaboration effectiveness of research and management.

- Urgent:
  - We should develop joint letters of support to agencies within the next month or two. Federal agencies should develop a separate letter and take first stab.

Purposes of the letters: 1) to recognize the Ozark Partnership; 2) to recognize that climate change is affecting Ozark resources, 3) to recognize the need for collaboration; 4) to facilitate interagency collaboration and coordination of Ozark-based activities. Summit attendees should inform Regional executives that a letter will be prepared, would like their signature (Charlie S., Allison S, Steve H., Paul N., David B.) Paul N. will deliver to USFS Chief in June.

- States, NGOs, others will prepare a separate letter Audubon: Ken S., TNC (no name volunteered); Ozark Area Community Congress (not represented at either Summit, but idea suggested); Paul I., others.
  
  - A consensus statement among the Ozark Summit attendees will be included in the letter (Allison Shipp (USGS) to coordinate consensus statement, with assistance from Dixie Birch and Charlie Scott (both USFWS). Ken Smith (Arkansas Audubon) might have examples they can look at as examples.
- Next 6 – 12 months:
    - The group recommends that USFWS, USGS, NPS, USFS establish a Federal Working Group to show support for collaborative Ozark efforts, including financial support of coordination, and take to next level, including States and NGO's in a broader partnership.
  
  - Next 12 months:
    - The group recommends that various State and Federal agencies consider and work toward development of an MOU/MOA. The agencies should formalize the collaborative partnership with agency signatures, and potentially financial support.

## **Ozark Summit 2009 Breakout Session Notes 3**

**Topic:** Data Sharing & Management

**Moderator:** Dave Mayers

**Recorder:** Jeff Quinn

**Objective:** Create a plan to increase efficiency of information sharing for agencies, NGO's, and the public.

**Attendees:** Dave Mayers, Jeff Quinn, John Turner, Jim Petersen, Stephen O'Neal.

### **Discussion Points:**

- Continue USGS webpage <https://www.ozarks.cr.usgs.gov> as a depository of information. Can USGS continue to support this? Esther Stroh's site.
- Send this web page link to all 2009 Ozark Summit attendees & encourage use.
- What is information? Final report, ongoing project status, short summary, web link, contact info, meetings, training, workshops.
- Information needs request section – add to USGS webpage where members can ask, “Do you have information on...” listserve; blog??
- Need to sell using this webpage.
- Share opportunities to join in on project site visits & implementation for education?

### **Where do we go from here?:**

- Determine if webpage is a good course of action with USGS.
- Encourage use of webpage.

## **Ozark Summit 2009 Breakout Session Notes 4**

**Topic:** Recreational Use

**Moderator:** Mark Oliver

**Recorder:** Katrina Heath

**Objective:** Incorporate outdoor recreation in Ozark Summit operational agenda.

**Attendees:** Gary Vequist (NPS), Shea Hammond (USF&WS), Matt Schroeder (AGFC), Reed Detring (NPS), Teresa Accord (Jacks Fork Watershed Committee), Lisa Ruller (NRCS), Katrina Heath (AGFC), Mark Oliver (AGFC) .

### **Discussion Points:**

The break-out discussion topics grouped out into four major categories:

- Promotion of sustainable outdoor recreation.
- Education of managers and resource users regarding acceptable and sustainable use of resources.
- Economic value of recreational use.
- Collaboration and cooperation among managers and resource users.
- Promotion
  - The group concluded that the Ozark Summit should work to promote the wise use of natural resources and encourage recreational use. Recreational users are a source of funding and support for natural resource management and can be productive partners in the conservation of those resources. As managers, we often focus only on resource issues and neglect the resource users. Wise use of our resources promotes better quality of life for us all and better ethics.
  - We discussed means of attracting recreational users to our parks, waterways, and outdoor facilities. One topic was the use of some new recreational activities that are gaining in popularity such as wildlife viewing, geocaching and disc golf, combined with outdoor education to draw people into educational experiences. For instance, the hoops for the disc golf can have educational signage.
- Education
  - This topic accounted for at least 80% of our discussion and therefore is considered the most important aspect of the break-out session. It was considered vital that the Ozark Summit (when it gets into its action phase)

use all sorts of media (print, video, electronic, local public workshops, interpretive signage, etc) to disseminate educational information to resource users and managers. A prime focus should be on youth but all age groups should be targeted. One bullet was that resource managers should involve children and youth in more projects as this will also attract parents to outdoor education opportunities. Some of the group had noticed a growing disregard for regulations and conservation ethics. There was a discussion as to whether this was related to heritage or lack of knowledge. Many people would take better care of the resources if they knew how their activities might be harmful. We discussed means of increasing awareness and respect for natural resources. Some of these means were through signage, enforcement, avoidance of areas by families and other conservation-minded individuals because of the presence of disrespectful and unruly resource users, development of outdoor education facilities by agencies and non-governmental organizations, training of teachers (including non-science teachers), development and integration of course work for schools, and assisting with funding for school outings.

- Resource managers also need to be encouraged to participate in continuing education opportunities.

- Economic Value

- Recreational use has great economic value. This value can be used to be used to protect resources from various types of negative impacts that result from other human use of the resources. Ozark Summit should support the collection of this type of data. The break-out group recommends that various studies of the economic value of Ozark recreational use be provided on our website as a GIS data layer and that data gaps that are exposed be filled.

- Collaboration

- The Ozark Summit should continue its primary function of providing collaborative forums for resource managers and should seek out new partners who represent other human uses of our Ozark resources. For instance, one of the participants receives a newsletter from dairy farmers that never discusses environmental issues. We should pursue opportunities to work with helpful locals to increase knowledge and good management of our resources. Other opportunities for partnering exist with tourism groups, Farm Bureau, etc. There are many associations and groups that deal with resource use and management in the Ozarks. This break-out group recommends that the Ozark Summit promote the formation of an umbrella group, with representatives from the diverse groups that can disseminate information and better coordinate all the diverse activities. Greater Ozarks Friends Association.

**Where do we go from here?:**

- OS should work with existing outreach and education organizations and programs to disseminate educational information. These are groups like Stream Teams, Project Wild, Project WET, HOFNOD, Project Learning Tree.
- OS should reach out to new and missing partners.
- OS should develop a recreational values data layer and encourage the filling of data gaps and put information on the website.
- We should promote an umbrella association for resource use and management issues in the Ozarks.

## **Ozark Summit 2009 Breakout Session Notes 5**

**Topic:** Riparian Habitat Restoration

**Moderator:** Paul Balkenbush & Dave Evans

**Recorder:** Andrea Daniel

**Objective:** To better enhance riparian restoration: (1) better communication, (2) including training in techniques (standardized collection of data), crosstraining, methodology, where to work & which projects to choose to do?

**Attendees:** Hope Dodd, Sam Dingfelder, Russ Runge, Ethan Inlander, Susan Bolyard, Diane Gately, Craig Uyeda, John Bird, James Ahlert, Bob Leonard, Len Weeks, Stephen O'Neal, Dave Woods, Bob Singleton, Eric Fleming.

### **Discussion Points:**

- Coordination of efforts across agencies/states.
  - Is there a need for coordination/communication?
  - Per post site data collection.
  - Internet site.
  - Message board.
  - Useable database for multi-agency use.
    - Geostor.
    - Stream Stats.
    - ST database.
    - COE has database as well.
    - All databases need to be linked.
    - What level would data or information be stored?
    - Would need a central location and administrator.
  - Working group meetings with all agencies.
    - Use Ozark Summit as meeting place for working group and website for database?
  - Check on notes from data collections & management breakout.
  - Can go to Ozark Summit website for data.
    - USGS is currently maintaining this.
    - USGS not best for our needs.
  - Multi-wildlife program stimulus \$ for funding.
  - More specific coordination with project leaders.
  - Do it on project level.
- Standardized data collection: Hard to do unless it's mandated.
  - GBIF pulls Databases together.
- Cross-training: meetings for project discussions, presentations, field trips, workshops.
  - Demonstration.

- Learning from other projects.
- Restoration / habitat enhancement meeting.
- Workshops.
- Hydromulch.
- River cane chopping & packing.

**Where do we go from here?:**

- Explore possibility of a 3 hour stream restoration session at next Ozark Summit.
- Need for website to link data together.
- Look into multi-state grants.
- Seek out project-specific communication via project leaders.
- Seek current watershed groups.