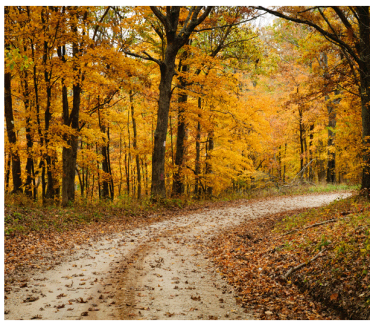
Conference Report



Nov. 12-13, 2014
White River Conference Center
Springfield

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Missouri Governor's Conference on Natural Resources

40 years

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Exploring Our Legacy Charting Our Future

Missouri Governor's Conference on Natural Resources Final Report

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With your help, the Missouri Department of Natural Resources ensures a healthy environment in which to live, work and enjoy the great outdoors.

Executive Summary

The Missouri Governor's Conference on Natural Resources: Exploring Our Past Charting Our Future was held November 12-13, 2014 at the White River Conference Center in Springfield. More than 200 people attended the conference, representing business and industry, environmental organizations, elected officials, agriculture, Department of Natural Resources' boards and commissions, local governments, state and federal agencies, and college students.

Keynote speakers provided a national perspective and four concurrent sessions focused on Missouri-specific issues through presentations and moderated discussions. At the conclusion of the concurrent sessions, participants developed a total of 72 topics to be considered for the discussion sessions to be held the next day. These were consolidated to 15, and out of those, using TurningPoint®, participants selected eight for the facilitated discussions:

- Identify strategies to develop and enhance natural resource literacy for youth
- Identify strategies to help small communities meet water/wastewater obligations
- Identify strategies for developing water resource plans
- Set water quality priorities based on cost and benefits to focus resources and education efforts
- Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
- Identify strategies to include the economic value of nature in policy decisions
- Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
- Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.

Missourians value our natural resources and the quality of life they provide.

Executive Summary

During facilitated discussions, participants developed recommendations and actions to address the issues discussed. Four actions/recommendations were brought forward from each group and these were ranked by participants. The top ten actions identified were:

Rank	Action/Recommendation	Discussion topic
1	Focus on source water protection	Identify strategies for developing water resource plans
2	Identify and quantify the "Cost" of value gained: emphasize the benefits to health, environment and the economy	Identify strategies to include the economic value of nature in policy decisions
3	Prioritize and understand the cost/benefit ratio associated with environmental improvement (such as reducing phosphorus)	Set water quality priorities based on cost and benefits to focus resources and education efforts
4	Clearly identify common issues	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
5	Bring awareness and education on natural resource issues by bringing responsibility back to local residents. Present a common message from agencies and connect the public to issues.	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
6	Clearly identify issues and problems, and clearly identify the stakeholders involved	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
7	Include outreach to external stakeholders; need public trust	Identify strategies for developing water resource plans
8	Support integrated planning by - Developing new multimedia permits - Training staff - Developing a framework for communities - Integrate flexibility into DNR's processes	Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
9	Collaborate with private industry to promote outdoor activity (e.g. GoPro, Garmin, FitBit)	Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
10	Enhance coordination between federal and state agencies to determine strategies	Help small communities meet water obligations

Introduction

The Missouri Governor's Conference on Natural Resources: Exploring Our Past Charting Our Future was held November 12-13, 2014 at the White River Conference Center in Springfield. More than 200 people attended the conference, representing business and industry, environmental organizations, elected officials, agriculture, Department of Natural Resources' boards and commissions, local governments, and state and federal agencies. In addition, scholarships contributed by businesses and organizations enabled 24 college students to participate in the conference.

Conference Goals

The conference goals included:

- Celebrate the Department of Natural Resources' 40th anniversary
- Reflect on the past 40 years and lessons learned to apply to the future
- Provide thought-provoking information on the future of Missouri's natural resources
- Provide a forum for substantive dialog and input on critical issues and actions for the future, and
- Inspire participants

Conference Program

The program was designed to address each of the conference goals. The conference began with a conversation with three former agency Directors, who provided insights into the past 40 years and lessons learned. The department's 40th anniversary video, shown during lunch the first day, celebrated the accomplishments of the past 40 years.

Keynote speakers on Wednesday and Thursday mornings provided a national perspective on the natural resource issues facing Missouri and other states. Four concurrent sessions focused on Missouri-specific issues through presentations and moderated discussions. These sessions included: Resource Management Challenges, the People/Natural Resource Connection, the Costs and Benefits of Natural Resources Protection, and Environmental Impacts of Extreme events.

Topics for the breakout discussion groups were identified and selected by participants using a TurningPoint® polling process. During breakout discussion groups on Thursday morning, participants identified actions to address the topic under discussion, and during the closing plenary session, indicated their sense of the priorities for those actions, again using TurningPoint®. The topic selection and discussion group outcomes are discussed in more detail below.

The detailed conference program, with presentation summaries and speaker information, is located in Appendix A.

Process and Outcomes

Multiple methods were used to solicit participant input before and during the conference, including a pre-conference survey, TurningPoint® polling and facilitated discussion groups.

Pre-conference Survey

Registrants were asked to complete a short survey prior to the conference indicating what they hoped to gain from the conference, their thoughts on the greatest success of the past 40 years and threat of the next 40 years, and to share their vision for the future of Missouri's natural resources.

Responses to "what is the most significant natural resource accomplishment in Missouri in the last 40 years?" included:

- Clean water protection
- Recovery of Johnson's Shut-ins State Park
- Landscape enhancement of air, water, soil health and quality
- Establishment of the Department of Natural Resources and moving the needle on air quality
- Partnerships
- Water quality and soil conservation
- State Park system
- Stream Teams; citizen-approved tax to support parks and soils.

Responses to "what is the greatest natural resource challenge facing Missouri in the next 40 years?" included:

- Clean water protection
- Dealing with climate change and its effects on water resources, agriculture and wildlife
- Meeting the needs and expectations of Missourians with respect to clean, available water
- Improving soil and water health
- Balancing public support between the perfect and the acceptable on environmental issues
- Environmental and nature awareness education
- Growing isolation from the outdoors
- Diminished quality of waste water and drinking water infrastructure

Respondents were hopeful about the future when asked "What is your vision for Missouri's natural resources in 40 years?" Responses included:

- Every waterway is fishable and swimmable. Native biodiversity maintained and expanded. Every day in every city is a green flag day (for air quality). A thriving economy based on sustainable use of renewable resources (water, soil, plants and animals) and green manufacturing practices A healthy population based on walkable neighborhoods, clean air, safe water and local foods.

- I see an arena in which many partners understand the needs and efforts of each other on water issues and find it fulfilling and meaningful to cooperate and seek ways to help each other.

- Healthy and resilient soils and waters. You can't have one without the other, improving water quality and soil health, combined with a greater awareness of nature that leads to a greater conservation/nature ethic for more Missourians. Outreach and education are critical components of sustaining and expanding our shared mission of conserving nature and natural resources.

- That our children and grandchildren will enjoy the same or better environmental quality of life that we do today

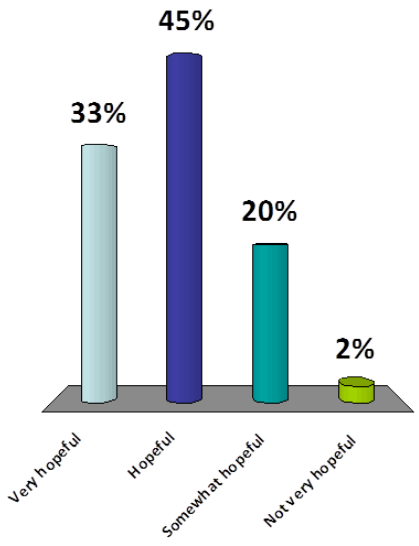
- 40 years from now, a quality outdoor experience and healthy environment will be as much a part of Missourians' lifestyles as today, or more so, and opportunities to experience the outdoors will be as diverse and readily available as today, or more so.

- The implementation of long-term strategies to assure that human interaction with the environment is sustainable and in harmony with natural resource preservation and management.

Process and Outcomes

Audience Poll

During opening remarks, Department of Natural Resources' Director Sara Pauley asked participants to respond to the question "How hopeful are you about the future of Missouri's natural resources?" using TurningPoint® response devices. Overall, 78 percent of participants indicated they are hopeful or very hopeful, an encouraging result.



Discussion Topic Selection Process and Results

During the last ten minutes of each of the concurrent sessions, participants were asked to identify topic or issues they would like to discuss during facilitated discussion sessions on Thursday morning. Participants were seated at tables, and, in order to keep the number of suggestions somewhat reasonable, were asked to identify one topic per table. A total of 72 topics suggestions were generated by this process (Appendix B).

Some of the topics were very similar in intent, and these were combined. Other topics were written as specific actions and these were added as examples where they fit under a broader topic. Finally, suggestions were reviewed to determine the extent to which they would lend themselves to realistic actions (as opposed to philosophical discussion that, while important, were not the focus of this process). Through this process 72 topic suggestions were narrowed to 15:

A. Identify strategies to develop and enhance natural resource literacy for youth, for example
   - School curricula
   - School adopt-a-farm
   - Grandparents and kids
   - Community gardens

B. Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.

C. Identify strategies to develop and enhance natural resource literacy for adults, for example
   - Community gardens
   - Grandparents and kids

D. Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?

E. Set water quality priorities based on cost and benefits to focus resources and education efforts

F. Identify policies and strategies to support nutrient trading

G. Identify strategies to include the economic value of nature in policy decisions

H. Identify strategies to help small communities meet water/wastewater obligations

I. Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services

J. Identify strategies for preparing to deal with natural resource disasters, for example:
   - Partnerships
   - Communicating resiliency
   - Statewide building codes to ensure safe structures
   - Create environmental risk maps from scientific data
   - Riparian corridors as a protection against natural disasters
   - Best practices from past events

K. Develop plans and regulations to address hydraulic fracturing risks

L. Identify strategies to consider invasive species impacts on natural resources

M. Identify strategies to focus the discussion about climate change on resiliency

N. Identify strategies for balancing water use and users

O. Identify strategies for developing water resource plans, for example
- Use of gray water
- Alternatives to surface water impoundments
- Uses, nutrients

Using TurningPoint® polling, participants were asked to select the top eight to ten topics for the facilitated discussion groups by rating the priority that should be given to each of the above topics.

The following eight topics were selected for discussion (complete results in Appendix C):

1. Identify strategies to develop and enhance natural resource literacy for youth (mean = 3.12)	
Not interested	6.85%
Somewhat interested	21.92%
Interested	23.29%
Very interested	47.95%
Totals	100%

2. Identify strategies to help small communities meet water/wastewater obligations (mean = 3.03)	
Not interested	8.97%
Somewhat interested	18.62%
Interested	32.41%
Very interested	40.00%
Totals	100%

3. Set water quality priorities based on cost and benefits to focus resources and education efforts (mean = 3.02)	
Not interested	8.33%
Somewhat interested	18.75%
Interested	35.42%
Very interested	37.50%
Totals	100%

4. Identify strategies for developing water resource plans (mean = 2.97)	
Not interested	10.07%
Somewhat interested	22.82%
Interested	26.85%
Very interested	40.27%
Totals	100%

5. Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach? (mean = 2.95)	
Not interested	9.72%
Somewhat interested	24.31%
Interested	27.08%
Very interested	38.89%
Totals	100%

6. Identify strategies to include the economic value of nature in policy decisions (mean = 2.89)	
Not interested	10.34%
Somewhat interested	24.83%
Interested	30.34%
Very interested	34.48%
Totals	100%

7. Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services (mean = 2.83)	
Not interested	11.72%
Somewhat interested	27.59%
Interested	26.21%
Very interested	34.48%
Totals	100%

8. Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc. (mean = 2.75)	
Not interested	15.44%
Somewhat interested	26.17%
Interested	26.17%
Very interested	32.21%
Totals	100%

Process and Outcomes

Discussion Session Process, Content and Recommendations

Conference participants were given the opportunity to attend two of the eight facilitated discussions. Each round of discussions lasted 45 minutes. During each session, participants clarified their understanding of the topic, identified actions to address the topic, and using a dot process, identified the top two actions/recommendations to report on in the final plenary session. Because each discussion was held twice, four actions/recommendations were carried forward from each group.

Following is a summary of each of the discussion sessions with the four actions/recommendations from each.

Topic 1: Identify strategies to develop and enhance natural resource literacy for youth

The facilitated discussions related to natural resource literacy for Missouri's youth were very well attended and generated constructive discussion. Participants acknowledged that there is a wide variety of resources, associations and tools already available and that our focus should be on delivery of this information. The discussion also focused on potential challenges that schools or educators might face

The discussion covered topics related to in-school curriculum-based concepts, field trips for experiential learning, and ways to reach younger children not yet part of a school system. In general, there was consensus that the best way to build natural resource literacy is to establish a way for children and families to have repeated exposure to and experiences of nature. Any approach should utilize the large amount of information and resources already available through partners and other organizations and should be targeted with specific outcomes in mind.

Top 4:

- Develop an Education Section of DNR
- Funding for substitute teachers and transportation to get to parks
- Target non-science curriculum in upper grades
- Partnerships for community gardens linked with other outdoor classrooms

Topic 2: Identify strategies to help small communities meet water/wastewater obligations

The facilitated discussions on strategies to help small communities meet their water obligations were well attended. Both groups began by defining small communities; group one defined small communities as populations of under 3300, while in the second round, the group defined them as 3,000 or fewer residents. The also talked about what constitutes a community, for example subdivisions and mobile home parks, or private vs public. Challenges discussed included funding/inability for small communities to get loans, lack of sewer systems, and demographic changes.

Top 4:

- Examine a way to do intergovernmental funding and mitigate liability (upstream)
- Examine loading-based permitting
- Coordination between Federal and State agencies to determine strategies
- Develop Department strategy before new rules/standards (etc.), change

Topic 3: Set water quality priorities based on cost and benefits to focus resources and education efforts

The two sessions for topic #3 considered the topic in fairly different ways, somewhat based on the participant make-up. In the first session, participants leaned more toward a global focus, brainstorming on how a wide variety of stakeholders could work together to set priorities. The second session's participants focused a little more specifically around specific water resource types and water quality concerns. These thought processes are reflected in the top two actions reported from each session.

Overall, both sessions contained very good conversation, allowing participants to share information from their varied backgrounds to enhance the understanding and idea generation of the group. Both groups appreciated that there is both a need to take actions that present a return on investment (i.e. if we have $1, where is it best spent?) and a need to understand what is valued by the local communities (i.e. where do local citizens place their priorities?)

Top 4:
- Agencies define shared goals and present in a unified manner then all stakeholders prioritize
- Meet regulatory and private citizens needs
- Inventory water resources and set criteria based on stakeholder interest (e.g. wetlands)
- Prioritize/understand the cost/benefit ratio associated with environmental improvement (such as reducing phosphorus)

Topic 4: Identify strategies for developing water resource plans (e.g. use of gray water, alternatives to surface water impoundments, uses, nutrients)

The two sessions for topic #4 Develop Resource Plans were fairly different in nature. The first session immediately asked the question of whether this meant there would be one plan or multiple plans. The group then discussed OMW and felt that should be somewhat of a baseline for the development of one plan and that outreach to external partners should be the most important part of the process along with identifying future needs and growth. The second session immediately assumed we were referring to one plan and that there would be multiple facets based on several components such as regions, users, demand, capacity etc….

Though both groups identified different action items as their top priority they both had several items on the list that related to communication with external stakeholders.

Top 4:
- Outreach to external; need public trust
- Identify stakeholders beyond users
- One plan-multiple facets
  - State, Region, User
  - Demands vs. Capacity
- Source water protection
  - Surface and groundwater

Topic 5: Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?

The common theme in these sessions was communication across agencies. There is a desire to learn more about what agencies are focusing and working on. While there is some agency coordination on issues, the general feeling was that it could be much improved. One example given was that the US Forest Service is working on watershed planning, and they "hear" that other agencies are doing the same, but they don't know who to contact in that organization. That is where the idea of Blue Book of Natural Resource professionals came about. Each year, a blue book would be created and divided by topic or issue. Under each of those topics would be the agency contact person. This would be widely distributed amongst resource professionals and updated as needed but definitely each year. The other idea was to have agency liaisons. These liaisons would meet periodically as a group to keep one another informed of the agencies shared issues, projects, and priorities. The Missouri Natural Resources Conferences seemed to be an obvious time and location to expand on some of this communication. It was felt that this could be expanded to include all partners. And lastly, a major point of discussion was that we, as natural resource agencies, need to have a common message on issues and how we present that to the public.

Top 4:
- Clearly identify issue/problem(s) and clearly identify stakeholders
- Natural Resources Partner Bluebook updated and shared annually
- Bring awareness and education on natural resource issues by bringing responsibility back to the locals. Present common message from agencies and connect public to issues
- Clear identification of common issues

Topic 6: Identify strategies to include the economic value of nature in policy decisions
These discussions considered the development and use of models and approaches that could make a stronger, more compelling case for the benefits of environmental protection and conservation by monetizing the range of ecosystem services provided by natural resources. This led to identifying various values provided by nature that are not addressed effectively or at all when looking at the costs and benefits of policy decisions. These costs and benefits include such things as impacts (and conversely) avoided impacts on physical and mental health, the economy, and the environment. The analysis would need to address costs and benefits of action or inaction. This valuation would require face validity that would align with public priorities to allow a clear and comprehensible message to the public. In some instances, it may be necessary to tailor the message to certain demographics and audiences.

Top 4:
- Tailor to certain demographics, economics, and use indicators, similar to GPI, to better quantify impacts (both positive and negative) to the public health, environment, etc.
- "Cost" of value gained: emphasize the benefits to health, environment, and the economy
- Develop replacement cost data- how much money to replace lost resources
- Research and adopt the use of existing modeling tools in furtherance of and to develop a "state conservation and green infrastructure plan"

Topic 7: Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
The topic became 'How does the department, working with our partners, get all communities to start thinking in terms of integrating planning?' Discussions included the various ways the department could utilize partners, including other agencies, Economic Development, regional planning commissions, counsels of government, solid waste districts, etc. The idea of the department or partners developing template framework for smaller communities to utilize in planning was highlighted. Another discussion area included the need for greater communication about integrated planning. Issues internal to DNR were also discussed, including staff training, understanding legal flexibilities, etc.

Top 4:
- Department will support integrated planning by:
  - Develop new multimedia permits
  - Train staff
  - Develop framework for communities
  - Integrate flexibility into DNR's processes
- Partnership Developments
  - Facilitate cross sector partnerships
- RPCs, MACOG, Landowners, Fed/Local Governments
- Develop a communication plan and work with partners on an outreach plan and tools for communications
- Look internally, analyze processes regulatory flexibility and to understand legal constraints

Topic 8: Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
From the beginning of the discussions, both groups expressed that it was very important to use technology as an inroad to educate and capture the interest of especially the younger generation. Many of the participants told stories of their children and grandchildren visiting state parks or gaining understanding of natural resources issues. The participants also expressed concern that if we are not proactive in using new technologies to educate, market to, and engage younger people, that we would not be able to effectively pass on our mission. The general consensus was that connecting with the plugged-in generation using creativity and technology is about leaving a legacy.

Top 4:
- Connected Parks
  - Internet connectivity
  - Scavenger ap. games
  - Interpretive trails connected with ap.
  - Achievement awards
  - Interaction throughout entire park
- Collaborate externally with private industry
  - Promoting outdoor activity
    - GoPro, Garmin, FitBit
- Use technology to motivate action
- Use more effective marketing campaign
  - Develop slogan and tagline

The discussion groups generated many excellent ideas, all of which have been captured and will be reviewed, even if they did not make it to the "top four." The complete list is located in Appendix D.

Actions/Recommendations Selection Process and Results

During the final plenary session, each of the discussion groups provided a short summary of their discussion and presented the top four actions/recommendations from the group. A total of 32 actions/recommendations were presented. Participants then ranked the 32 recommendations using the TurningPoint® ranking wizard. In ranking wizard, participants choose the level of importance for each recommendation individually (1 = not very important, 2 = somewhat important, 3 = important, 4 = very important), and the ranking wizard then calculates the results. The results for each individual action recommendation are included in Appendix E. The ranking results for all 32 items are listed below.

Rank	Action/Recommendation	Topic
1	Focus on source water protection	Identify strategies for developing water resource plans
2	Identify and quantify the "Cost" of value gained: emphasize the benefits to health, environment and the economy	Identify strategies to include the economic value of nature in policy decisions
3	Prioritize and understand the cost/benefit ratio associated with environmental improvement (such as reducing phosphorus)	Set water quality priorities based on cost and benefits to focus resources and education efforts
4	Clearly identify common issues	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
5	Bring awareness and education on natural resource issues by bringing responsibility back to local residents. Present a common message from agencies and connect the public to issues.	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
6	Clearly identify issues and problems, and clearly identify the stakeholders involved	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
7	Include outreach to external stakeholders; need public trust	Identify strategies for developing water resource plans

Rank	Action/Recommendation	Topic
8	Support integrated planning by - Developing new multimedia permits - Training staff - Developing a framework for communities - Integrate flexibility into DNR's processes	Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
9	Collaborate with private industry to promote outdoor activity (e.g. GoPro, Garmin, FitBit)	Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
10	Enhance coordination between federal and state agencies to determine strategies	Help small communities meet water obligations
11	Facilitate cross sector partnerships with Regional Planning Commissions, MACOG, landowners, federal and local governments, etc.	Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
12	Ensure "Connected" parks - Internet connectivity - Scavenger app games - Interpretive trails connected to apps - Achievement awards - Interaction through the entire park	Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
13	Develop replacement cost data; how much money is needed to replace lost resources	Identify strategies to include the economic value of nature in policy decisions
14	Ensure agencies define shared goals and present in a unified manner, then have all stakeholders	Set water quality priorities based on cost and benefits to focus resources and education efforts prioritize
15	Develop Department of Natural Resources strategy before new rules/standards, etc. change	Help small communities meet water obligations
16	Develop an education section of DNR	Identify strategies to develop and enhance natural resource literacy for youth
17	Develop a communication plan and work with partners on an outreach plan and tools for communications	Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
18	Tailor to certain demographics, economics, and sue indicators, similar to the GPI, to better quantify impacts (both positive and negative) to the public, health, environment, etc.	Identify strategies to include the economic value of nature in policy decisions
19	Use technology to motivate action	Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.

Rank	Action/Recommendation	Topic
20	Meet regulatory and private citizens' needs	Set water quality priorities based on cost and benefits to focus resources and education efforts
21	Research and adopt the use of existing modeling tools in furtherance of and to develop a "state conservation and green infrastructure plan"	Identify strategies to include the economic value of nature in policy decisions
22	Examine a way to do Intergovernmental funding and mitigate liability (upstream)	Help small communities meet water obligations
23	Develop a Natural Resources Partner bluebook to be updated and shared annually	Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
24	Use more effective marketing campaigns - Develop slogan and tagline	Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
25	Develop one plan with multiple facets, e.g.: - State, Region, User - Demands vs. Capacity	Identify strategies for developing water resource plans
26	Inventory water resources and set criteria based on stakeholder interest (e.g. wetlands)	Set water quality priorities based on cost and benefits to focus resources and education efforts
27	DNR look internally, analyze processes, regulatory flexibility, understand legal constraints	Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services
28	Target non-science curriculum in upper grades	Identify strategies to develop and enhance natural resource literacy for youth
29	Identify stakeholders beyond users	Identify strategies for developing water resource plans
30	Develop partnerships for community gardens linked with other outdoor classrooms	Identify strategies to develop and enhance natural resource literacy for youth
31	Examine loading-based permitting	Help small communities meet water obligations
32	Provide funding for substitute teachers and transportation for teachers and students to get to parks	Identify strategies to develop and enhance natural resource literacy for youth

Conclusion

Missouri is blessed with natural resource diversity and abundance like few other states in the nation. Its varied landscapes extend from the rolling farmlands in the north to the Ozark hills in the south to the Mississippi River bottoms in the east to the open prairies in the west. Missouri's water resources are equally diverse, from crystal clear spring-fed streams to man-made recreational lakes to the major navigational waters of the Mississippi and Missouri rivers. And the quality of Missouri's air sustains its citizens in everything we do while spending time outdoors and exploring nature - whether it's working in the yard, floating down an Ozark stream or cycling through a Missouri State Park.

The health and quality of life for the more than 6 million people living in Missouri can be closely tied to the health and quality of our state's air, land and water resources. The Missouri we enjoy today is certainly more picturesque and pristine than it was 40 years ago. We've come a long way and though the impact of pollution may not be as visibly evident; there is still work to do.

The Department will consider all of the thoughtful discussions, suggestions and prioritization of future actions collected during the Governor's Conference on Natural Resources as we complete and implement our Strategic Plan and as the agency works to protect Missouri's air, land and water; preserve our unique natural and historic places; and provide recreational and learning opportunities for everyone.

Appendix A

Governor's Conference on Natural Resources - Program

Appendix B

Topic suggestions developed during concurrent sessions – 72 total topics

Costs and Benefits of Natural Resources Protection – 21

- How to help small water/waste water systems and communities meet their capital infrastructure obligations? And – how to increase the value of water among customers to pay for services?
- How do we ensure that smaller communities with fewer resources prepare for the future with environmental stewardship? Maybe in regards to education
- How do small communities pay for a system if they can't afford it?
- How do we address the issue of small water and sewer systems that have too small of a customer base to support the new/upcoming costs, maintaining infrastructure and meeting new environmental regulations?
- Lack of understanding of the costs associated with natural resources protection
- IDEA: education curriculum, preK-12, partner with Department of Education (state & federal). Also deal with lag by having a catch-up for the adults we missed; as part of 40 yr.
- Need to determine how to structure/develop an education campaign to explain to constituents/customers the value of water services and infrastructure and the need to pay for it.
- Consumers do not appropriately value the utilities (i.e. sewer, water) they receive. How can we reframe/educate the public about the true costs of the services they receive?
- How do we invest in infrastructure when things appear to be okay today? Education to action/investment
- Integrating the sectors – Air, land, water – can the needs be more easily prioritized? For instance, is there a need now to prioritize water infrastructure – focus on replacing it and then move to the next priority, while that infrastructure was stabilized
- Problem: scientific illiteracy. Solution: Add courses on natural resources to public school curriculum around the state.
- Value of natural resource protection should include physical & mental health and sociological (_?_) benefits
- How do we facilitate public/private cooperation and improvement of natural resource literacy?
- Interested in service-based rates vs volume-based rates as a way to deal with deferred maintenance costs
- How can a model be developed to determine an economic value to the 'ancillary' factors not currently considered in the policy making process when calculating the 'economic impact' of rulemaking (elephant in the room!!)
- How will cities and towns in Missouri be able to pay for all the state and federal regs that are being force on them and not lose necessary services like fire, police, etc.?
- Evaluation of soil district fund distribution
- Streamline the state SRF program to allow easier access by the small towns. Re-instate the non-regulatory technical assistance plan.
- Problem: How do you remove nutrients from the watersheds? Step forward: Implement a market-based approach: credits for reductions can equal dollars for companies

- Question: How to address cost/benefit of non-point source pollution (ag community)? (Air, water, soil) Solution: Education, enforcement, support (funding). Get Ag community/associations working toward a solution. Have them understand the problem and let them find a solution

- Population trends demonstrate that this will continue to be real and predictable. For smaller cities, DNR should recognize this trend when calculating discharge limits on NPDS permits and allow it to be a mitigation strategy.

People/Natural Resource Connection – 17

- Issue: increasing disconnect between younger generation and the natural environment, and, correspondingly very high rates of obesity, etc. Possible solution: continue efforts to reach youth, but begin efforts to reach the parents and other mentors (grandparents). Calculate health "costs" of lack of outdoor opportunities

- DNR work with DHSS Environmental Public Health Tracking (EPHT) to develop centralized web location for information on local community resources such as community gardens, walkable neighborhoods, complete streets, trails, outdoor activity equipment loan program. This resource could be used by community member to identify available resources and by local agency officials thinking of starting one of these programs to identify contacts for ideas
  - DHSS-EPHT web portal already includes resources for things like heat/cold stress

- Statewide connection via a website or app or a group, include:
  - Transportation facilities
  - Fishing locations
  - Canoeing options
  - Parks – locations and programs
  - Health agencies/resources
  - Stream teams
  - Organized hikes
  - Organized 5K or running groups
  - Sports organizations – scholarships for kids and adults
  - A source to enable people to connect with each other and organize their own groups to go outside

- Kid/parent outdoor recreational activity (mentoring) (promo) with electronic devices to highlight experience. "Kinda like the bucket challenge."

- Develop interactive outdoor themed gaming program with rewards and education opportunities (i.e. health/safety benefits, etc.)

- Social media, photo contests, Girl/Boy Scout, 4-H involvement

- Getting people out to the part: increased use of social media, offer incentives for particular outdoor achievements (badges, etc.), increased publicity of programs already in place

- Appeal to next generations' needs for our natural resources. Upgrade to next generation – badges vs Facebook recognition

- Increase public education and participation in outdoors and the environment. Partner wil other agencies to create the opportunities for children and parents

- Target grandparents and grandkids. Inner city kids school bus funding. Can DNR develop a program that gets/targets grandparents and kids out into the environment?

- Collaboration/partnership with Department of Education, DNR, MDC & others to incorporate OUTDOOR THEMES into elementary school required curriculum.

- Partner with DESE to build or tailor curriculum to incorporate Missouri Natural resources. Build a hands on experience in the outdoors, with technology, and make it such that it also can influence parents on the value to natural resources.
- How can we include outdoor education in the school curriculum? Action items: more field trips, accredited/state law, adult training – include parents, community-based, classroom and outdoors.
- Develop unstructured nature play opportunities such as after school programs for children
- How can we provide outdoor education in the school curriculum?
- Problem: children disconnected from the environment. Solution: Make a friend, know a farmer! Every school/class adopt a farm. Partners: schools, farmers, USDA, Rural affairs, farmer, HHS, CDC, EPA, private landowner. Learn about: crops, prairies, animals, camping, food production, technology, soil conservation, gardening, the stars, bugs, creeks, etc.
- Community gardens @ schools – partnering community members and schools, mater gardeners/naturalists, Health Dept. – curriculum/food

Environmental Impacts of Extreme Events – 13

- How does DNR plan to form partnerships with other agencies to prepare for natural resources?
- How can we use data to convince policy makers and the public of the importance of infrastructure resiliency?
- How quickly can information about disaster response lessons-learned and best practices be generalized, consolidated, etc., and made available to all communities so they can be better prepared
- Communication between first responders and those involved in pre/post disaster planning (i.e. between government, scientists, private sectors, general public, etc.). Actions: Is the system in place not sufficient enough? Does it need to be revamped? Do we need one if one is not in place?
- How soon should Missouri have sustainable building codes to make structures less susceptible to impacts from natural disasters, and to improve on energy efficiency….then this would assist with waste reduction post an event (and would protect human life).
- Identify emergency response needs that the Department can provide scientific/technical guidance for communities to better plan for catastrophic events. Preplan for issues that would be assigned to DNR when they occur
- How can we collect and use the scientific data to identify the areas and populations at high risk to various environmental hazards. Action: Get this tool (information) to the decision makers to properly manage the risk.
- Hydraulic Fracturing causes a lot of serious problems to the environment, such as water pollution and earthquakes. My concern is to find the balance between hydraulic fracturing (gas supply?) and the environment. Or the possible solutions to water supply and pollution issues in oil production.
- Turning natural resources water conservation problems/liabilities (i.e. wastewater) into potential solutions (non-potable uses such as ag watering or power plant cooling)
- Finding other ways to get water other than impounding rivers, lakes, etc.
- What is the role of riparian corridors and aquatic channels in the adaptation and resiliency to climate change?
- Invasive species impacts to natural resources. Assess economic impacts and develop corrective actions for most significant problem species.

- How to remove the politics of climate and turn the discussion to resiliency and preparedness. How to make the issues "real" in the Midwest. How is DNR communicating impacts to the ag community.

Resource Management Challenges – 21

- Problem: sediment loading. Solution: Ask USDA, Governor, etc. to require addressing sediment loading first!
  - Pick worst issue
  - Engage multiple partners
  - Use of multiple partners' $ and resources
  - Pick the worst issue and continue down the list.
  - New technology not necessary – how old is the technology of building a fence to fence off livestock or planting a tree along the river bed – willows, etc.
  - Start somewhere – be the first state to conquer this issue!

- Encourage collaboration at the community level, individual level, between agencies and farmers, and municipals and small business and special interest groups. Find common ground where we can all work together toward the common goal without becoming defensive, without animosity. Education and communication is key.

- We need to work on finding a "happy medium" between agricultural practices and steam and water quality issues

- How do we cause change in our culture so that people value resources and behave differently (in a good way). Education is a tool. Advertising

- Problem: Communication between Agriculture and the Dept. of Natural Resources regarding water quality and quantity. Solution: greater negotiation and compromise

- How do you balance the demands (food and water) for a growing population with shrinking natural resources

- How should we measure success with environmental regulations and how can we use this success to influence decision makers.

- More emphasis on the reuse of reclamation water. Support new technology to make better use of our water

- Polish the jewel that is Table Rock Lake to promote fishing for all angers, especially disabled and youth along the banks. Conduct studies on erosion control, fish habitat, disabled usage

- Market attitude changes toward s water
  - Value (economic & supply)
  - Quality (life)
  - Timeline to addressing water issues
  - Overall plan
  - Economic accountability
  - Life depends on water
  - Availability

- The challenge is to identify major factors with potential or know water quality impacts and conduct cost/benefit analysis and focus resources and education in connecting and implementing those with the most opportunity.

- Determine areas of water demand within the state by making reporting requirements for water in agriculture use. Us the information to educate about best practices for farm production and benefits of water conservation.

- A "conservation design" (subdivision rules) approach needs to be put into place statewide to best manage urban sprawl through planned development to enhance the environment, conservation and human health.

Appendix B

- Communication, education and cultural attitudes toward resource conservation. How to engage local citizenry to take ownership of issues. How to get people to understand the issues and help make changes through voting, discussions with neighbors, community involvement
- Point vs non-point pollution. How to balance/solve competing issues
- How can we integrate/improve/enhance the soil and water district activities to further address private property ownership and use while achieving landscape scale public benefits.
- Ranking environmental problems proportionally and prioritizing the use of resources in context. (i.e. sedimentation most wide-spread because of acreage, but not necessarily "leading" problem)
- The Departments of Ag and Natural Resources should pilot a nutrient trading program
- Can channel integrity of streams be "incentivized" so that MDNR efforts are multiplied rather than being a community engagement morass?
- Education the public on the finite nature to water resources.
- What can be done to implement the water quality and agriculture plans? Who will do it and why? How to fund the plans? How to educate and get community support? How to verify results – is what's being done working?

Appendix C

Topic Selection TurningPoint® Results

Appendix D

Recommended Actions – All Actions, All Discussion Groups

Topic 1: Identify strategies to develop and enhance natural resource literacy for youth
The facilitated discussions related to natural resource literacy for Missouri's youth were very well attended and generated constructive discussion. Participants acknowledged that there is a wide variety of resources, associations and tools already available and that our focus should be on delivery of this information. The discussion also focused on potential challenges that schools or educators might face

The discussion covered topics related to in-school curriculum-based concepts, field trips for experiential learning, and ways to reach younger children not yet part of a school system. In general, there was consensus that the best way to build natural resource literacy is to establish a way for children and families to have repeated exposure to and experiences of nature. Any approach should utilize the large amount of information and resources already available through partners and other organizations and should be targeted with specific outcomes in mind.

Top 4:
- Develop an Education Section of DNR
- Funding for substitute teachers and transportation to get to parks
- Target non-science curriculum in upper grades
- Partnerships for community gardens linked with other outdoor classrooms

All recommendations:
- State parks have great reputation with communities – leverage that. Interpretive programs.
- Emphasize water quality in programs, air, etc. common message in all interpretive programs. 1 vote
- Stronger partnership with Parks and Conservation and better support for professional development. – written as training for interpreters. 1 vote
- Making elementary education a hot spot for community gardens. 2 votes
- Business community want to help schools – schools might not like everyone wanting to come in and change curriculum. Need to be careful. Action/hand on activity with students. Ideas: Growing small prairie, bus trip to park. 0 votes
- DNR used to have an Education position, then went away…need someone dedicated. Re-implement education program. Dedicated staff (1-3 people). 9 votes
- Developing an informal curriculum to schools. Work to try to make it a requirement. May need to engage with DESE. Thought was that the curriculum is there, but needs to be made a requirement for schools to use. Unify all the efforts together. Reinforce and collaborate. Summarized as develop a natural resource curriculum and offer it to schools. 2 votes
- Unify efforts to reinforce natural resources. 0 votes
- Experience – some kids don't have opportunities. Unstructured play time in natural settings. Outcome: make them want to learn more. 8 votes
- Kids want options. One thing is not going to catch all kids – curriculum isn't the only option that should be put forth. Offer a variety of options to gain interest. 0 votes
- Work with libraries or other organizations to develop a loan equipment program (for ex: fishing poles). 0 votes
- Develop a multicultural approach. 0 votes
- Establish school/state park partnerships. Schools adopt a park – clean up events, etc. 3 vote

Appendix D

- Cooperation b/t departments – teachers camp for free. Teachers need a positive experience first before they can give a positive teaching curriculum. 4 votes
- Teach teachers so they develop an outdoor attitude. 6 votes
- Incorporate hands on experiences into curriculum (journal sightings of things, etc.). Summarized as incorporate components of formal education into park programming/activities. 0 votes
- Awareness, building knowledge, making commitment to changing environment. Parents and teachers – perhaps doing something outside. Early childhood collaboration. 1 vote
- Volunteers – some schools require volunteers, not all. Improve communication in volunteer. Reach out to high schools…. give them options. 0 votes
- Outreach to principal/superintendent organizations. 0 votes
- Make conservation education required in statewide curriculum. 1 vote
- Partner with Boy Scouts and Girl Scouts. 2 votes
- Same message going out to formal/non formal formats from others. Students need to hear things over and over again to sink in. Summarized as – send a uniform message. 5 votes
- DNR should offer opportunities for teachers to come to parks. 0 votes.
- Facilitate seed money to provide for transportation and substitute teachers when we take kids out. (Note – some thought that substitute teachers might be needed to allow teachers to get the experiences). 8 votes
- Develop a statewide governmental plan NR literacy. 3 votes
- Form partnerships with schools. 0 votes
- Focus on the pipeline or the delivery of information. 1 vote
- Collaborate on programs with schools. 0 votes
- Develop a toolkit to target delivery – target the audience with the specific benefits. 2 votes
- Target parents who stay home with their kids. Give them ideas and resources. 4 votes.
- Increase marketing so parents can influence schools. 1 vote
- Target the non-science curriculum or non-traditional curriculum in upper grades in high school. 6 votes
  - Note – additional ideas brought up related to this topic included:
  - Mapping in geometry class – get kids outside
  - Teach environmental law as part of history
  - Teach about environmental/public health in history
  - Use natural resources or environmental concepts during English or writing
- Create a package – do a pilot with a school and measure results. 5 votes.
- Develop partnerships for community gardens linked with outdoor classrooms. 6 votes.
- Find leaders in DNR to champion these ideas and go to schools. 2 votes.

- Have a DNR mentorship program. 2 votes
- Partnerships with farmers. 3 votes
- After school programs/clubs. 1 vote

Topic 2: Identify strategies to help small communities meet water/wastewater obligations
The facilitated discussions on strategies to help small communities meet their water obligations were very well attended and generated constructive discussion. Both groups began by defining small communities; group one defined small communities as populations of 3300 or fewer while in the second round, the group defined them as 3,000 or fewer residents. The also talked about what constitutes a community, for example subdivisions and mobile home parks, or private vs public. Challenges discussed included funding/inability for small communities to get loans, lack of sewer systems, and demographic changes.

Top 4:
- Examine a way to do intergovernmental funding and mitigate liability (upstream)
- Examine loading-based permitting
- Coordination between Federal and State agencies to determine strategies
- Develop Department strategy before new rules/standards (etc.), change

All recommendations:
- Use incentives to encourage community partnership and coordination, 0 votes
- Examine a way to do intergovernmental funding and mitigate liability (upstream), 13 votes
- Use circuit riders for technical expertise, 1 vote
- Increase subsidization efforts using DNR/EPA to bring systems up to standards, 1 vote
- Grandfather in existing limits in permits – no renewal, 2 votes
- Prioritize based on the environmental benefit – cost/benefit analysis, 11 votes
- Examine loading-based permitting, 12 votes
- Mitigate permitting risk with new technology, 7 votes
- Offer more engineering grants, 7 votes
- Collaboration between communities (regionalization), 1 vote
- Consolidated management of decentralized systems, 2 votes
- Economic stability- long range planning, 8 votes
- Identify potential problem communities and initiate discussions, 1 votes
- Expand the use of engineering grants, 2 votes
- Coordination between federal and state agencies to determine strategies (Meant to be applied to individual small communities, not universal), 5 votes
- Develop Integrated planning lite, 2 votes
- Partner with local industry on public wastewater planning, 0 votes

- Engage third parties to resolve local politics (ties to regionalization and Prioritization setting at the local level), 0 votes
- Develop a department strategy before new rule, standard, etc., 5 votes
- Look at the cumulative impacts of potential variances (Effects on water quality in the watershed)
- Integrate asset management into infrastructure project funding, 4 votes

Topic 3: Set water quality priorities based on cost and benefits to focus resources and education efforts
The two sessions for topic #3 considered the topic in fairly different ways, somewhat based on the participant make-up. In the first session, participants leaned more toward a global focus, brainstorming on how a wide variety of stakeholders could work together to set priorities. The second session's participants focused a little more specifically around specific water resource types and water quality concerns. These thought processes are reflected in the top two actions reported from each session.

Overall, both sessions contained very good conversation, allowing participants to share information from their varied backgrounds to enhance the understanding and idea generation of the group. Both groups appreciated that there is both a need to take actions that present a return on investment (i.e. if we have $1, where is it best spent?) and a need to understand what is valued by the local communities (i.e. where do local citizens place their priorities?).

Top 4:
- Agencies define shared goals and present in a unified manner then all stakeholders prioritize
- Meet regulatory and private citizens needs
- Inventory water resources and set criteria based on stakeholder interest (e.g. wetlands)
- Prioritize/understand the cost/benefit ratio associated with environmental improvement (such as reducing phosphorus)

All recommendations:
- Keep education in the tool box but how do we spend out $
- One of the sessions discussed spring river plan… highlighted critical areas. When you bring in science connect local people and ask if they see these same issues as their priorities… i.e. sediment versus pesticides
- Look at the watershed low hanging fruit…control sediment, lower bacteria. Control nutrient side.
- Does the state have a clear idea of the watershed and what the pollutants are?
- Prevention best cure
- Continue a dialogue with US EPA and state priorities must be based on understanding with EPA and States
- Have our own integrated planning
- Federal endangered species act… in MO 12 fed listed freshwater mssels species, snails, fish, FWS monitors and this may be an opportunity to advocate as a grass roots action. Have a grass roots movement around mussels etc, turn a negative into positive. Issues overlap with current Missouri. Hellbender specie in Missouri and we are fortunate to have these
- What do we base priorities on?
- Prioritize by watershed?
- Give people the confidence that what they do has meaning

- Fresh water mussels, ammonia harmful based on toxicity testing.. Prioritization steps. If you can protect something… Mussels a place to start… example.
- Trying not to think solely for DNR EPA etc., grass roots interest in the watershed and water quality.. Help people make educated decisions.
- Sometimes agencies don't understand that they have shared goals. Capture both as priority agencies and stakeholders
- If agencies are taking time to prioritize based on technical issues, then meet with stakeholders after common issues are decided.
- Water quality standards for wetlands
- Implement permanent household hazardous waste collection and disposal program and events
  - Need to be year around/more frequently
  - Currently not permanent, just events that local governments/organizations put on
  - "access to do it right", instead of illegal dumping/disposal
- Prioritize/understand the cost-benefit ratio associated with environmental improvement
- Identify criteria/value or urban streams
- Inventory by water resource and set criteria based on stakeholder interests– ie wetlands and economic value, or how public health could be affected by water resource
- Educate/promote local and urban streams to help people understand the value of urban streams. Shifting idea between ditch, urban stream and river
  - Need to take care of tributaries (sometimes called ditches) that flow into big rivers
- Prioritize driven by drinking water quality first
  - resources that provide water should be prioritized

Topic 4: Identify strategies for developing water resource plans (e.g. use of gray water, alternatives to surface water impoundments, uses, nutrients)

The two sessions for topic #4 Develop Resource Plans were fairly different in nature. The first session immediately asked the question of whether this meant there would be one plan or multiple plans. The group then discussed OMW and felt that should be somewhat of a baseline for the development of one plan and that outreach to external partners should be the most important part of the process along with identifying future needs and growth. The second session immediately assumed we were referring to one plan and that there would be multiple facets based on several components such as regions, users, demand, capacity etc….

Though both groups identified different action items as their top priority they both had several items on the list that related to communication with external stakeholders.

Top 4:
- Outreach to external; need public trust
- Identify stakeholders beyond users
- One plan-multiple facets
  - State, Region, User
  - Demands vs. Capacity
- Source water protection
  - Surface and groundwater

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All recommendations:

- State water plan needs to be updated. Have new data to help us.
- Our Missouri Waters as part of the state-wide plan, help develop the plan
- Engage with water stakeholders – agriculture, industry, community drinking water suppliers, agencies
- Creating a budget for water - Project growth or need depending on each sector
- Plan will address quantity and quality – identify water resources, current uses by sector
- External communication about what, why, purpose, need. Outreach to public to explain process, communication plan (media).
    - Due to public trust – protecting and using correctly (DNR are guardians of the resource)
- Identify stakeholders beyond large users
- Develop goals and objectives to address discovered needs (gaps)
    - Data collection to identify/fill gaps
- Have a statewide plan consisting of several regional plans underneath.. all regions different. Based on exposure we have can't be a one size fits all… assess watersheds, regions. Drough etc must have quality before quantity.
- Address ag/irrigation usage
- Private wells must be registered but don't report consumption
- Total use verse total available
- Ground water versus surface water source… WR versus land private land areas..
- People on the ground working on those areas
- Consider habitat consumption as well
- Identify Funding gap(s)
- Regulated by PSC?
- Cities have infrastructure gaps… not sure this falls under water resource planning
- Public sector versus private sector…subset under regional?
- Agency education need…to work with landowners…sensitive area analysis to find issues can still be voluntary
- 3 agencies that have priority watersheds…there is overlap, how to combine efforts…dnr, conservation, us forest service, multi agency priorities.
- Engage public… when trying to affect water quality must tailor message to the specific area and needs. Consider peak demands as well as daily demands… must meet peak
- Seasonal usage
- Encourage conservation of the water in general, promotion of…

- Was there any discussion about mo water commission, with vigilance for water rights other states? no

Topic 5: Identify strategies to find common ground in solving natural resource challenges – how do we go from a fragmented to a collaborative approach?
The common theme in these sessions was communication across agencies. There is a desire to learn more about what agencies are focusing and working on. While there is some agency coordination on issues, the general feeling was that it could be much improved. One example given was that the US Forest Service is working on watershed planning, and they "hear" that other agencies are doing the same, but they don't know who to contact in that organization. That is where the idea of Blue Book of Natural Resource professionals came about. Each year, a blue book would be created and divided by topic or issue. Under each of those topics would be the agency contact person. This would be widely distributed amongst resource professionals and updated as needed but definitely each year. The other idea was to have agency liaisons. These liaisons would meet periodically as a group to keep one another informed of the agencies shared issues, projects, and priorities. The Missouri Natural Resources Conferences seemed to be an obvious time and location to expand on some of this communication. It was felt that this could be expanded to include all partners. And lastly, a major point of discussion was that we, as natural resource agencies, need to have a common message on issues and how we present that to the public.

Top 4:
- Clearly identify issue/problem(s) and clearly identify stakeholders
- Natural Resources Partner Bluebook updated and shared annually
- Bring awareness and education on natural resource issues by bringing responsibility back to the locals. Present common message from agencies and connect public to issues
- Clear identification of common issues

All recommendations:
- Clear identification of common issues.
- Awareness and education on natural resources issues (connect public to issue) and present common message from agencies.
- Interagency leadership training on delivering common natural resource messages.
- Bring responsibility back to locals.
- Clear identification of issue or problem. Clear identification of stakeholders.
- Natural Resources Partner Bluebook – updated and shared annually.
- Facilitated issues meetings to share projects, issues, ideas, priorities, etc, in conjunction with Natural Resources Conference. Expand to make sure all partners are involved.
- Communicate and educate common issues/priorities to the public.

Topic 6: Identify strategies to include the economic value of nature in policy decisions
These discussions considered the development and use of models and approaches that could make a stronger, more compelling case for the benefits of environmental protection and conservation by monetizing the range of ecosystem services provided by natural resources. This led to identifying various values provided by nature that are not addressed effectively or at all when looking at the costs and benefits of policy decisions. These costs and benefits include such things as impacts (and conversely) avoided impacts on physical and mental health, the economy, and the environment. The analysis would need to address costs and benefits of action or inaction. This valuation would require face validity that would align with public priorities to allow a

clear and comprehensible message to the public. In some instances, it may be necessary to tailor the message to certain demographics and audiences.

Top 4:

- Tailor to certain demographics, economics, and use indicators, similar to GPI, to better quantify impacts (both positive and negative) to the public health, environment, etc.
- "Cost" of value gained: emphasize the benefits to health, environment, and the economy
- Develop replacement cost data- how much money to replace lost resources
- Research and adopt the use of existing modeling tools in furtherance of and to develop a "state conservation and green infrastructure plan"

All recommendations:

- Health / Environment / Economy – quantity benefit to all of these, 6 votes
- "Cost" of value gained, eight votes
- Keep message simple, clear message to public, six votes
- Develop criteria to make rational decisions, 3 votes
- Tie into agency's priorities and what they can do, 0 votes
- Structured approach, interact with other agencies / organizations for greatest benefits, 2 votes
- Relating utility rates to the greater environmental benefit, 0 votes
- Human connection, educating public, will add value, 2 votes
- Marketing, making visual connections with nature benefits, 3 votes
- Why should you care – getting message across, 0 votes
- Don't use "big" picture as much – more local connections / message, 3 votes
- Tailor to certain demographics, economies, better strategy – using indicators like GPI, 9 votes
- Gather data to quantify value (ex.: land values near park vs. gravel mine), 1 vote
- Develop replacement cost data – were the resource to be lost, how much would it cost to replace?, 8 votes
- Develop new revenue sources to offset costs of new regulations (e.g. SWMD), 3 votes
- Recognize and capture human cost of depleted or damaged resources, 1 vote
- State conservation and green infrastructure plan, 7 votes
- Research and adopt use of existing modeling tools in furtherance of state plan, 9 votes

Appendix D

Topic 7: Identify strategies to move communities toward integrated planning – how do we create value for water infrastructure needs amid competing public services

The topic became 'How does the department, working with our partners, get all communities to start thinking in terms of integrating planning?' Discussions included the various ways the department could utilize partners, including other agencies, Economic Development, regional planning commissions, counsels of government, solid waste districts, etc. Suggestions included working with partners on communication plans, providing example successes and guidance documents/tools to smaller communities, developing regional plans that all communities can benefit from, model legislation or ordinances, providing all kinds of on-going assistance. The idea of the department or partners developing template framework for smaller communities to utilize in planning was highlighted.

Another discussion area included the need for greater communication about integrated planning. Developing a department communication plan was discussed at length along with the idea that the message could be provided to key groups who could then carry the message to others (Communication partners). Also mentioned were the ideas of including the message in our community assistance efforts, providing the message during conferences and highlighting integrating planning successes. The basic concept was that we have a public relations issue – communities need to buy into the concept and we need to get the information out there that will allow them to do that. One other component of this was the need to provide communities with new technical tools to help them in their integrated planning. New technology, social media, sustainable return on investment giving economic value to sources and multi-criteria decision analysis were all mentioned as possibilities.

Both groups also discussed issues internal to the Department, including the various ways that the department may need to re-train staff and evaluate current processes, particularly permitting processes, to ensure that integrated planning will be considered doable by communities. This includes understanding the legal flexibilities we have both in relationship to permitting requirements and our ability to provide credit for voluntary sustainable activities done by the community. The underlying idea seemed to be that communities would not have confidence to take on integrated planning until they felt sure that the department's processes and staff would support it as well.

The other major area of discussion for this group was related to the need for the department to understand our limitations. Do we have adequate resources to work with all communities? Do we need to conduct an internal analysis? What are the legal roadblocks for communities? We should research, identify points of the law where communities may run into issues and start working on understanding our flexibilities. Longer compliance schedules and enforcement discretion were discussed. In general, lack of department resources and legal mechanisms may be roadblocks for this effort and must be addressed.

Top 4:

- Department will support integrated planning by:
  - Develop new multimedia permits
  - Train staff
  - Develop framework for communities
  - Integrate flexibility into DNR's processes
- Partnership Developments
  - Facilitate cross sector partnerships
  - RPCs, MACOG, Landowners, Fed/Local Governments
- Develop a communication plan and work with partners on an outreach plan and tools for communications
- Look internally, analyze processes regulatory flexibility and to understand legal constraints

All recommendations:

- Need to look beyond just water to include land use.
  - All permits come together; not separate pieces.
  - Develop framework for communities to use when trying to create integrated plan. Templates. Presentations.

- DNR to engage RPCs with small communities. (Tap planning expertise)
- DNR to define their role in various partnerships to move plans forward. Facilitation, nurturing, supporting-new way of doing business.
- Permit writers need to understand each media and how they impact each other. Org training shift because planning staff need too.

- Work with MACOG.
- DNR needs to fully understand what EPA's looking for in a plan, but submit proposal.
- DNR needs flexibility. The law is limiting. Find a way to better use the laws we have.
- Integrated planning allows you to prioritize the things that need to be done – by law. DNR policy needed to allow community to develop their plan.
- Ability to revise plan – adaptive management.
- SIP development is not able to allow credit to communities doing good work in other areas

- Staging projects in a logical manner.

- Allow community to set schedule and spend funds most effectively.

Public Relations
- Highlight success
- Work with partners
- Implement in a small community to demonstrate feasibility beyond large communities

Legal Concerns
- Regulatory/legal relief
- Legal mechanism to work holistically
- Flexibility – time to comply – enforcement discretion
- Identify constraints/limits of law

Resource focus – best way to implement Partnerships
- Identify beneficial partners
- Regional effectiveness
  - Conservation design
  - Funding for areas surrounding metropolitan areas

Intergovernmental Flexibility
- Municipal – municipal

Communications Plan
- Polling to determine effectiveness after period of implementation
- Regional planning groups
- Key groups to communicate to/through

Community Assistance Program Technical Tools
- Articulate costs/benefits
- Quantitative
- Can be used by all communities

Appendix D

Department conduct internal analysis to determine interest/number of potential implementable areas

Communication Framework

- Easy translation between communities

Topic 8: Identify creative ways to connect with the plugged-in generation e.g. social media, gaming, technology, etc.
From the beginning of the discussions, both groups expressed that it was very important to use technology as an inroad to educate and capture the interest of especially the younger generation. Many of the participants told stories of their children and grandchildren visiting state parks or gaining understanding of natural resources issues. The participants also expressed concern that if we are not proactive in using new technologies to educate, market to, and engage younger people, that we would not be able to effectively pass on our mission. The general consensus was that connecting with the plugged-in generation using creativity and technology is about leaving a legacy.

The following list of ideas was generated and discussed by the participants for creatively engaging with this generation. Not all of the ideas are technology-based, but the majority of them involve media of some sort as the tool for connection.

Top 4:

- Connected Parks
  - Internet connectivity
  - Scavenger ap. games
  - Interpretive trails connected with ap.
  - Achievement awards
  - Interaction throughout entire park
- Collaborate externally with private industry
  - Promoting outdoor activity
  - GoPro, Garmin, FitBit
- Use technology to motivate action
- Use more effective marketing campaign
  - Develop slogan and tagline

All recommendations:

- Incorporate/integrate education into game/app
  - Instantaneous award
  - How to appeal to young kids?
- Before/after school programing
  - Use familiar characters/language – MineCraft
  - Creative use of outdoor applications to connect with trails (mountain bike, greenway)
- Have dedicated staff seeking grants/opportunity or partnerships to support these types of programs
- Rental equipment available
- Connected parks
  - Internet connectivity
  - Achievement/award
  - Interaction throughout park (based on achievement)
  - Games based on finds/ID wildlife/fishing to encourage further exploration. (*rarity challenge)
  - Promotional items/gifts

Appendix D

- Apps
  - 100 Mile Challenge

- Sharing activities/social network
  - Computer lab
  - Pictures

- GPS interpretive trails
  - Device housed in park
  - Or specific app
  - Website accessible by location only

- Photo logging/art gallery specific to park
  - Connecting individuals pictures to park

- Video log certain trails
  - Encourage users to upload (GoPro) to park site

- Devices available to loan – mountable cameras
  - Station for user to download/purchase video/pictures

- Nature/outdoor field trips for young kids

- Baby steps to connect
  - Local parks
  - Community areas
  - Expand to larger/wilder areas of comfort builds

- Educate through built-in apps
  - Health concerns, ticks

- Highlight what already exists
  - Positive reinforcement of what is available

- Collaborate externally with private industry to promote outdoor activity
  - GoPro
  - Garmin
  - FitBit

- Looking for ways to connect kids/nature.

- Using technology to motivate action.

- Reward based apps to get kids outside.
  - Educate/assist parents – encourage kids.

- Creating opportunities using electronics to get kids outside. Steering the interest.

- Use teaching models with apps that creates repeated exposure. 100 MO Miles App

- Live chat, "Ask a Ranger," upload photos.

- Improve ease of use of current electronic info.

Appendix D

- Adapt new ways, rather than trying what worked in past.
- Solar powered charging stations lock boxes on trails.
- Gather feedback from the young. What do they want?
- “Unplug: promotion/challenge.
- Find creative ways to “Plug-in” as a family.
- “Book” your visit through virtual tours, creating anticipation.
- Add/improve WiFi at parks.
- Incentives through company’s through number of visits, i.e. Pizza Hut, Six Flags.
- Encourage ALL outdoor activity.
- Encourage sharing of picture through social media.
- Using apps to connect with local, accessible outdoor opportunities.
- Scavenger hunts.
- Use more effective marketing campaign. (slogan, tag line)
- Set up social groups.
    - Online interest groups, activity oriented.

Appendix E

Appendix E: Actions/Recommendations TurningPoint® Prioritization Results

Thanks for Attending the Governor's Conference on Natural Resources

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The mission of the Missouri Department of Natural Resources is to protect our air, land and water; to preserve our unique natural and historic places, and to provide recreational and learning opportunities for everyone.

The Department of Natural Resources envisions a Missouri where people live and work in harmony with our natural and cultural resources, make decisions that result in a quality environment, and a place where we can prosper today and in the future.

40 years
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Celebrating 40 years of taking care of Missouri's natural resources.

"For people to appreciate something, they must understand it. We must help people understand the value of our natural resources. Only then will they be interested in protecting them." – Paul Nelson, retired Missouri State Parks employee

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