

Conference Report



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

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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 <ul style="list-style-type: none"> - 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

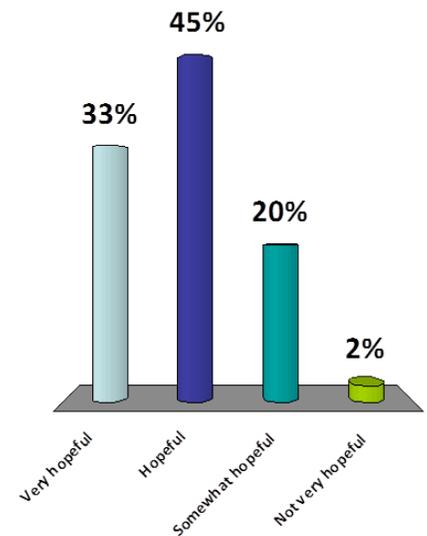
Audience Poll

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 topic 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

Process and Outcomes

- 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%

Process and Outcomes

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. They 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?)

Process and Outcomes

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

Process and Outcomes

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.

Process and Outcomes

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

Process and Outcomes

Rank	Action/Recommendation	Topic
8	Support integrated planning by <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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.

Process and Outcomes

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.

Governor's Conference on Natural Resources - Program

Conference Program



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

Governor's Welcome to the Conference



Hello and welcome to the Governor's Conference on Natural Resources!

In 1974, the Missouri Department of Natural Resources was created in order to serve the citizens of our state, and to better protect Missouri's great outdoors.

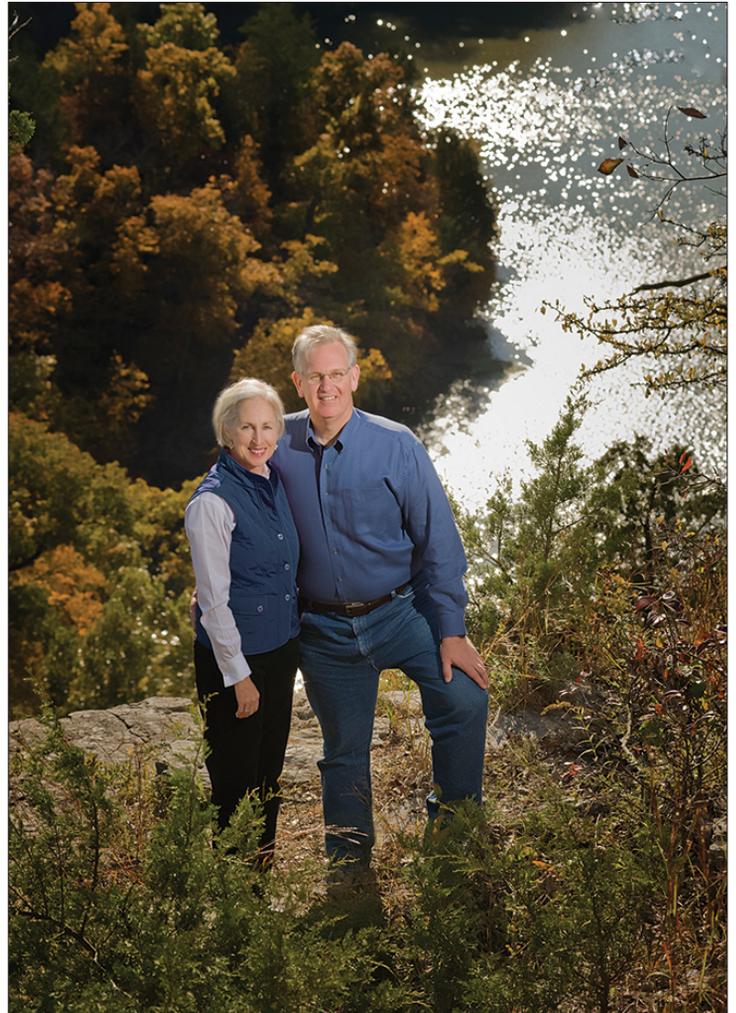
In the four decades that have followed, Missourians have worked hard to protect our state's beloved natural resources. From our award-winning state park system, to the crystal clear waters of Ozark streams, to the diverse geological landscapes of rolling prairie and rugged hills across the state, the people of Missouri are committed to the responsible management of our natural resources, and united in the belief that we have a responsibility to leave this place better than we found it.

I congratulate the Missouri Department of Natural Resources on 40 years of partnering with citizens, communities and businesses to protect the Show Me State's abundant natural resources.

Thank you for your tireless efforts to succeed in this worthy, ongoing mission.

Sincerely,

*Jeremiah W. (Jay) Nixon
Governor*



Director's Welcome to the Conference

Greetings,

I am delighted you are joining us at the Missouri Department of Natural Resources' first Governor's Conference on Natural Resources in the past 25 years!

In the early 1970s, Missourians recognized the need to protect and preserve the state's natural and cultural resources. As a result, the Missouri Department of Natural Resources was created on July 1 under the Omnibus State Reorganization Act of 1974.

For the past 40 years, the department has been protecting Missouri's air, land and water, preserving the state's unique natural and historic places, and providing recreational and learning opportunities for Missourians and the many visitors who come to enjoy those resources.

I hope you enjoy the conference as we celebrate the accomplishments of the past 40 years, and perhaps more importantly, gain your insights and ideas for meeting the challenges of the next 40 years. Thank you for helping us take care of Missouri's natural resources.

Sincerely,



Sara Parker Pauley

Director, Missouri Department of Natural Resources



Wednesday, Nov. 12, 2014

7:30 a.m.	Registration, Continental Breakfast and Exhibits - Foyer and Pre-Function Area
8:30 a.m.	Welcome and Opening Plenary Session - <i>Sara Parker Pauley</i> - Dogwood Canyon
9 a.m.	A Look Back - A Conversation with Four Former MoDNR Directors - Moderated by Director Pauley - Dogwood Canyon
9:45 a.m.	Conservation from the Show-Me State and Across America - <i>Collin O'Mara</i> Dogwood Canyon
10:15 a.m.	Networking Break and Exhibits - Pre-Function Area
10:30 a.m.	The Vital Role of States in Clean Energy - <i>Bob Perciasepe</i> - Dogwood Canyon
11 a.m.	Environmental Protection and the Great Outdoors - <i>Ramona Trovato</i> - Dogwood Canyon
11:30 a.m.	Demographic and Economic Trends in Missouri: The Next 40 Years - <i>Dr. Larry Brown</i> - Dogwood Canyon
Noon	Lunch, 40th Anniversary Video and Exhibits - Dogwood Canyon/Pre-Function Area
1 p.m.	Four Concurrent Sessions - Resource Management Challenges - Dogwood Canyon The People/Natural Resource Connection - Sportsman's Lodge The Costs and Benefits of Natural Resources' Protection - White River Hall Environmental Impacts of Extreme Events - Cave and Prairie
2:40 p.m.	Networking Break and Exhibits - Pre-Function Area
3:10 p.m.	Concurrent Sessions Repeated
5 p.m.	Reception, Tours of WOLF School and Exhibits - Pre-Function Area
5:30 p.m.	Music by <i>Roots & Fifths</i> - Sportman's Lodge
6:30 p.m.	Evening Keynote Address and Awards Banquet - <i>Gov. Jay Nixon</i> - Dogwood Canyon

Thursday, Nov. 13, 2014

7 a.m.	Breakfast and Exhibits - Pre-Function Area
8 a.m.	Welcome and Discussion Topic Selection - <i>Director Pauley</i> - Dogwood Canyon
8:30 a.m.	Cleaning America's Rivers: From the Bottom Up <i>Chad Pregracke</i> - Dogwood Canyon
9:30 a.m.	Now is the Time: Action to Seize the Incredible Opportunities Offered by Missouri's Great Outdoors - <i>Derrick Crandall</i> - Dogwood Canyon
10 a.m.	Introduction to Facilitated Discussion Groups
10:30 a.m.	Networking Break and Exhibits - Pre-Function Area
10:45 a.m.	Facilitated Discussion Groups – Round 1
11:30 a.m.	Facilitated Discussion Groups – Round 2
12:15 p.m.	Lunch - Pre-Function Area and Dogwood Canyon
1:15 p.m.	Closing Plenary Session - Dogwood Canyon
3 p.m.	Adjourn - Dogwood Canyon

Program Descriptions

Wednesday, Nov. 12, 2014

7:30 a.m. Registration - Foyer and Pre-Function Area

Registration, Continental Breakfast and Exhibits

8:30 a.m. Welcome and Opening Plenary Session - Dogwood Canyon

*Sara Parker Pauley, Director, Missouri Department of Natural Resources
Bob Stephens, Mayor of Springfield*

9 a.m. A Look Back - A Conversation with Four Former MoDNR Directors - Dogwood Canyon

*G. Tracy Mehan, III, David Shorr, Stephen Mahfood and Doyle Childers
Moderated by Director Pauley*

9:45 a.m. Conservation from the Show-Me State and Across America - Dogwood Canyon

Collin O'Mara, President and CEO, National Wildlife Federation
Despite widespread public support for wildlife and natural resource conservation, growing challenges to the public trust doctrine and attempted privatization of public trust resources threaten to undermine more than a century of conservation work across the nation. Drawing upon examples from Missouri and across the United States, O'Mara will discuss how our generation can fulfill our stewardship responsibilities for current and future generations.

10:15 a.m. Networking Break and Exhibits - Pre-Function Area

10:30 a.m. The Vital Role of States in Clean Energy - Dogwood Canyon

Bob Perciasepe, President, Center for Climate and Energy Solutions
In the past, Congress has looked to states to see what works. Today, we see our cities and states inventing new policies and partnerships to encourage investment in clean technologies and promote clean transportation and energy. As we face the climate and energy challenges of the future, how can state successes help lay the foundation for a more comprehensive approach?

11 a.m. Environmental Protection and the Great Outdoors - Dogwood Canyon

Ramona Trovato, U.S. Environmental Protection Agency Headquarters
The richness of our nation relies on our natural resources. Through four decades of efforts by the Environmental Protection Agency and the states – the greatest environmental enterprise in the world – we have helped to protect and improve the quality of the waters we swim and play in, the air we breathe, and the lands we enjoy. Highlighting our partnerships and accomplishments, this presentation will provide an overview of the link between natural resources, environmental protection and public health.

11:30 a.m. Demographic and Economic Trends in Missouri: The Next 40 Years - Dogwood Canyon

Dr. Larry G. Brown, Assistant Professor of Geography, Retired, University of Missouri-Columbia
The growth and distribution of human population in Missouri over the next few decades in conjunction with economic trends will change land-use patterns, alter transportation corridors, and shift consumption of resources such that natural resources will experience serious short-term and long-term impacts.

Noon Lunch and Exhibits - Pre-Function Area and Dogwood Canyon

Program Descriptions

Wednesday, Nov. 12, 2014

1 p.m. Concurrent Sessions

These moderated sessions are focused on the future challenges facing Missouri's natural resources. Speakers will offer varied perspectives within each topic area. Short, thought-provoking presentations will be followed by interactive, moderated discussions. Each session will be repeated so participants will be able to attend two of the four.

Resource Management Challenges - Dogwood Canyon

The People/Natural Resource Connection - Sportsman's Lodge

The Costs and Benefits of Natural Resources' Protection - White River Hall

Environmental Impacts of Extreme Events - Cave and Prairie

1 p.m. Concurrent Sessions Descriptions

Resource Management Challenges - Dogwood Canyon

Moderator - Todd Sampsell, Deputy Director, Missouri Department of Natural Resources

There is no question that Missouri faces numerous natural resource management challenges. This session will explore those challenges from both urban and rural perspectives, as well as explore water quantity and quality. How are the challenges facing cities and urban communities similar or different from those faced by agriculture and rural communities? What are the implications for water supply and water quality?

Topics and Speakers:

Advancements in Agriculture: Efficiency is the Name of the Game

Richard Fordyce, Director, Missouri Department of Agriculture

A rapidly growing world population, which research suggests could reach 9 billion by 2050, makes it essential for the agriculture industry to develop the most efficient way to produce safe and nutritious food. Learn about some of the groundbreaking advancements happening in Missouri, and how the use of technology is increasing yields and enhancing animal agriculture, while minimizing environmental impact.

Creating Prosperous, Healthy, Vibrant Communities

David A. Wilson, Senior Manager, East-West Gateway Council of Governments

OneSTL used extensive community engagement to develop a framework for collaboration for the St. Louis metropolitan region. This broad based regional plan considers economic development, effective governmental services, improving neighborhood quality of life along with protecting and restoring local environmental conditions.

Water: Thirst and Balance

Gail Melgren, Executive Director, Tri-State Water Resource Coalition

Are we on the path to a sustainable water future? Key sectors of the Missouri economy, like recreation, power generation, agriculture, fish and wildlife, must have water to thrive. How do we balance the competing needs for water, and in particular, how do we ensure adequate public drinking water supply for the future?

Water Quality and the Future of Streams in Missouri

Steven J. Herrington, Ph.D., Director of Freshwater Conservation, The Nature Conservancy, Missouri Chapter

Numerous factors increasingly degrade the water quality and natural resources of our rivers and streams across Missouri. Despite these challenges, coordinated conservation efforts can improve water quality, reduce habitat degradation, and ensure the long-term viability of riverine resources for people and nature alike.

Program Descriptions

Wednesday, Nov. 12, 2014

1 p.m. Concurrent Sessions Descriptions Continued

The People/Natural Resource Connection - Sportsman's Lodge

Moderator - *Bill Bryan, Director, Missouri State Parks, Missouri Department of Natural Resources*

Outdoor recreation contributes to people's physical, mental and social well-being. A healthy environment is also essential for outdoor recreation as well as for public health and our quality of life. How do we better connect people with the outdoors and ensure a healthy environment in which to live, work and enjoy the great outdoors?

Topics and Speakers:

Connecting People to the Great Outdoors: A High-Stakes Challenge for the Recreation Community

Derrick A. Crandall, President and CEO, American Recreation Coalition

Today's recreation community partners must do a much better job of connecting people to the outdoors, and keeping our outdoor legacy relevant to a population that is more urban and less exposed to the Great Outdoors. We need to work together to first (1) invite all Americans to have fun outdoors – and then (2) work seamlessly as partners to make these initial visits fun. And we need to make sure that what we are doing is sustainable – environmentally and financially. Taking action now will help protect the long-term health of both America's Great Outdoors and the American people.

Why a Healthy Environment is Essential for Our Well-Being and Health

Ramona Trovato, Acting Principal Deputy Assist. Admin., EPA Office of Research and Development

"A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people." This Franklin D. Roosevelt quote is as true today as it was in his time. When FDR spoke these words environmental challenges were quite different than they are today and will be tomorrow. And yet, we have learned from studying the environment, ecosystems and public health that we share common ground and that our destinies are intertwined.

Public Health Partners with Neighborhoods to Create Healthier Communities

Heather Parker, Springfield-Greene County Health Department

If you do not feel well, how likely are you to go outdoors? Local neighborhood initiatives are opening dialogues and implementing change to improve health in urban environments. Walkability assessments give a street view of why the neighborhood environment may become a barrier to recreation. Community gardens create a hub for garden education while increasing an overall sense of community and expanding access to fresh produce. Community Health Advocates advance chronic disease prevention efforts by relying on established social networks within their neighborhood.

What's in it for Me?

Dave Murphy, Conservation Commissioner

Who is responsible for the health of our environment? What about the Environmental Protection Agency, department's of Interior, Agriculture, Natural Resources, Conservation, Health and Senior Services, or private organizations like Sierra Club, Coalition for the Environment, or Conservation Federation of Missouri? ALL of these and other agencies and organizations will play their roles of empowerment and encouragement, but NONE can ever do anything without a supportive public. What you and I are willing to invest in time, effort and cold hard cash (through taxes, fees, gifts and membership dues) always have and always will shape our world. Your choices matter! Invest these precious and very limited resources wisely.

Program Descriptions

Wednesday, Nov. 12, 2014

1 p.m. Concurrent Sessions Descriptions Continued

The Costs and Benefits of Natural Resources' Protection - White River Hall

Moderator - *Roger Walker, REGFORM*

There are costs and benefits of natural resources' protection. Clean air, land and water support strong economies. Their beauty draws millions of tourists to the clean water of our many man-made lakes including Table Rock Lake. Our Missouri State Parks attract more than 18 million visitors annually and also provide a positive economic impact on the state and local communities. How can we make smart investments, balance those costs and continue to protect our natural resources?

Topics and Speakers:

Smart Investments for a Better Future

G. Tracy Mehan III, Former MoDNR Director and Assistant Administrator for Water, U.S. EPA

The cost of water, wastewater and stormwater infrastructure is going up as are rates and prices. That said, we have to be smarter in terms of long- and short-term investments and other management practices to ensure the maximum benefit for every dollar invested. Asset management, source water protection, water quality trading, green infrastructure and other approaches must become standard practice going forward.

Is There a Better Way?

Gene Schmittgens, Evans & Dixon

Polls show the general public seems to like a clean environment. Therefore, it seems likely the environmental regulations are here to stay. Studies seem to indicate that "market based" regulations are more efficient and effective than the traditional "command and control" regulatory regimen, which has historically formed the basis of environmental regulations. And so, the question is now - is there a better way?

One City's Approach to Balancing the Environment and Affordability

Greg Burris, Springfield City Manager

In Missouri, our quality natural environment equals economic success. Cities and counties throughout the state, however, are balancing environmental stewardship vs. community affordability. Can cities and counties afford to implement the various environmental mandates on the horizon? If not, how do we get the biggest bang for our citizens' buck? And, if they don't implement the mandates - how will it affect our quality of life and our natural resources?

Missouri State Parks—A Billion Dollar Business—and Much More

Dan Witter, D.J. Case & Associates

Missouri State Parks contribute significantly to Missouri's economy in terms of direct expenditures, as well as sales, jobs and more. In addition, Missouri State Parks provide untold intangible benefits as growing scientific evidence confirms that nature, the outdoors and wildlife are essential to human health, fitness and quality of life.

Soil and Water Conservation Districts Help Preserve the State's Natural Resources

Gary Vandiver, Chair, Soil and Water Districts Commission

Missouri's Soil and Water Districts Commission and the Soil and Water Conservation Program have become a successful tool for addressing soil erosion and water quality through voluntary conservation on agricultural land. It has also proven to be an economic stimulator for agricultural communities. This presentation will explore the benefits of the program to Missouri's natural resources and economy.

Program Descriptions

Wednesday, Nov. 12, 2014

1 p.m. Concurrent Sessions Descriptions Continued

Environmental Impacts of Extreme Events - Cave and Prairie

Moderator - *Ryan Mueller, Director, Water Resources Center, Missouri Department of Natural Resources*

In the past few years, Missouri has experienced extreme drought, floods and an EF-5 tornado. What is the science saying about the future? What are the implications for managing ecosystems, drinking water or waste disposal? What is our role in planning for and protecting natural resources when events occur?

Topics and Speakers:

Climatic Realities and Uncertainties

Pat Guinan, MU Extension/State Climatologist

Historic climate records are an extremely valuable resource for putting recent trends into perspective and it's imperative we continue monitoring and documenting these environmental conditions. Missouri has experienced some interesting climatic trends over the past few decades and it's important to put these changes into context and to look at the climatic realities, and uncertainties, that lie ahead for us in a warming world.

Will Nature Embrace the Change?

Ken McCarty, Natural Resource Management Section Chief, Missouri State Parks, a division of the Missouri Department of Natural Resources

Missouri's natural places and resources are fundamental parts of our lives. How have the past climate and conditions influenced our present-day native ecosystems? What important experiences have we gained during the last 30 years through Missouri's conservation community by restoring our native natural environments? All of this information provides us with insight towards how we might prepare for the latest changes and conservation challenges on the horizon for Missouri's natural ecosystems.

The Role of Science in Preparing for and Responding to Natural Disasters

Joe Gillman, Director and State Geologist, Missouri Geological Survey, a division of the Missouri Department of Natural Resources

The May 2011 Joplin tornado illustrated the challenges facing communities and states in preparing for and responding to natural disasters. In addition to the immediate concerns for life, health, and safety in a natural disaster, science plays an increasingly important role in planning for and mitigating impacts from these events. This discussion will use Missouri case studies to highlight the roles of science in natural hazard preparation and response.

2:40 p.m. Networking Break and Exhibits - Pre-Function Area

3:10 p.m. Concurrent Sessions Repeated

Resource Management
Challenges -
Dogwood Canyon

The People/Natural
Resource Connection -
Sportman's Lodge

The Costs and Benefits
of Natural Resources'
Protection -
White River Hall

Environmental Impacts
of Extreme Events -
Cave and Prairie

5 p.m. Reception - Sportman's Lodge and Pre-Function Area

Music provided by Roots & Fifths; View Exhibits and Tour the WOLF School

6:30 p.m. Awards Banquet - Dogwood Canyon

*Keynote Address and Presentation of the Governor's Natural Resources Awards of Excellence
- Governor Jay Nixon*

Program Descriptions

Thursday, Nov. 13, 2014

7 a.m. Breakfast and Exhibits - Pre-Function Area

8 a.m. Welcome and Discussion Topic Selection - Dogwood Canyon

Director Pauley will recap Wednesday's highlights and discuss Thursday's events.

8:30 a.m. Cleaning America's Rivers: From the Bottom Up - Dogwood Canyon

Chad Pregracke, Living Lands and Waters, 2013 CNN Hero of the Year

As the founder of America's only "industrial strength" river cleanup organization and the 2013 CNN Hero of the Year, Chad Pregracke tells a compelling and funny story about growing up on the river and how his river experiences led to his unique vision to clean up the Mississippi River and start an internationally recognized not-for-profit, Living Lands & Waters. Pregracke's presentation will take the audience on one of the world's greatest rivers – a journey filled with endless challenges and gripping adventures. His delivery is motivating, captivating, genuine and refreshingly spontaneous. From the darkness of underwater shell-diving to the brightness of open-air community cleanups, Chad's tale embodies the importance of setting goals (one river, one piece of garbage at a time) and illustrates how determination, hard work and persistence works!

9:30 a.m. Now is the Time: Action to Seize the Incredible Opportunities Offered by Missouri's Great Outdoors Dogwood Canyon

Derrick Crandall, CEO, American Recreation Coalition

Missouri's Great Outdoors are an incredible asset waiting to be fully tapped to provide significant social and economic benefits tied to improving our health, to increasing awareness of our shared values, to protecting our public lands and waters and to strengthening our economy – helping individuals, families, and communities long into the future. Missouri can build on the vision its leaders have already shown by finding new ways to provide sustainable funding for recreation opportunities, for natural resource conservation and for outreach to all. Now is the time for leaders to take action – to walk the talk about cooperation, partnerships and bipartisanship to make the Great Outdoors an important part of the lives of every Missouri resident and visitors.

10 a.m. Introduction to Facilitated Discussion Groups - Rooms will be Announced at Conference

The challenges facing Missouri's natural resources have been identified. Now it's time to talk about what actions are needed to create the future we want to see for Missouri. Discussion topics will be identified by conference participants.

10:30 a.m. Networking Break and Exhibits - Pre-Function Area

10:45 a.m. Facilitated Discussion Groups – Round 1 - Rooms will be Announced at Conference

11:30 a.m. Facilitated Discussion Groups – Round 2 - Rooms will be Announced at Conference

12:15 p.m. Lunch - Pre-Function Area and Dogwood Canyon

1:15 p.m. Closing Plenary Session - Dogwood Canyon

Outcomes from Discussions; Identify Priorities for Action

3 p.m. Adjourn

Speaker Biographies

Jeremiah W. (Jay) Nixon, 55th Governor of Missouri

Missouri Governor Jay Nixon has been a champion of Missouri's natural resources and the outdoors since long before being elected to the state's highest office in 2008. As Attorney General, Nixon created the office's first ever environmental protection division to enforce Missouri's environmental laws. Prior to that, he was recognized by the Conservation Federation of Missouri for his environmental work as a State Senator. He has continued protecting the state's natural resources well into his second term as Missouri Governor. His accomplishments include the creation of the State Parks Youth Corps, a program designed to provide young people with real work experience in an outdoor setting, and the launch of the 100 Missouri Miles Challenge, which encourages Missourians to get outdoors and get moving and supports both physical health and appreciation for the state's incredible outdoor opportunities. More recently, the Governor initiated the development of a comprehensive State Energy Plan to make clean, reliable, affordable and abundant energy a priority for the state.



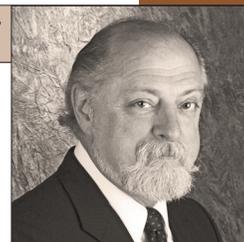
Greg Burris, Springfield City Manager

Under Greg Burris' leadership, Springfield has developed one of the first comprehensive Integrated Management Plans and last month became one of five communities nationally to receive a technical assistance grant from the U.S. EPA. Burris previously served as vice-president for Administrative and Information Services at Missouri State University for six years. He created the University Staff Ambassadors program and coordinated a project that resulted in a \$1.8 million federal Title III grant. In 2008, he was given the O. Franklin Kenworthy Award for Outstanding Leadership from Leadership Springfield. Burris enjoys playing music in his spare time. He resides in Springfield with his wife and daughter.



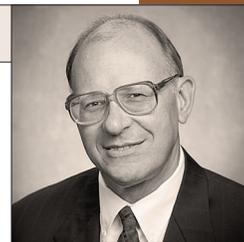
Dr. Larry G. Brown, Assist. Professor of Geography, Retired/Adjunct, University of Missouri

Dr. Larry Brown is an Assistant Professor of Geography (retired/adjunct) at the University of Missouri, Columbia, where he has been teaching since 1990. He holds a Ph.D. in Policy Studies from the University of Missouri, Columbia; Bachelor's in Sociology from the University of Nebraska; the Masters of Divinity from Christian Theological Seminary, Indianapolis; the Masters of Arts in Geography from the University of Missouri, Columbia. Dr. Brown continues research concerning White Nationalism in the Ozarks Region; as well as continuing to teach Regional, Political and Human Geography courses, including the Geography of Missouri, as adjunct faculty.



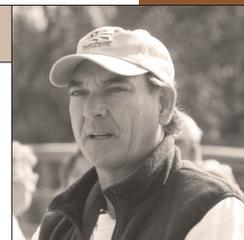
Doyle Childers, Former Director Department of Natural Resources, Flotron & McIntosh LLC

Doyle Childers was born on a farm near Ironton. He began his public service by volunteering for the Peace Corps in Central America. He began his legislative career in 1982 in the Missouri House, where he served for fourteen years before running for the Missouri Senate in 1996. In the Senate, he chaired the Senate Economic Development, Local Government and Tourism Committee which included natural resource issues. He was appointed director of the Department of Natural Resources in 2005 by Governor Matt Blunt. During his tenure, he created an ombudsman program, promoted the need for succession planning and held scores of town meetings across the state. Childers currently serves as director of the Environment and Energy Division for Flotron & McIntosh LLC promoting energy conservation, renewable fuels and sewer and water technologies for government and businesses.



Derrick A. Crandall, President and CEO, American Recreation Coalition

Derrick A. Crandall has served on many national organizations including, the National Park Hospitality Association, a steering group member for the National Park Service Centennial Advisory Committee, co-chair of Great Outdoors Month and the Coalition for Recreational Trails. Crandall was appointed to the President's Commission on Americans Outdoors and was named to the President's Commission on Environmental Quality. Another important area of work for Crandall has been his service to the National Park System's Advisory Board of Health and Recreation Committee where he was an early champion of using the outdoors to fight obesity and related chronic diseases through increased active time outdoors.



Speaker Biographies



Richard Fordyce, Director, Department of Agriculture

Richard Fordyce, a fourth-generation Missouri farmer from Bethany was named director of the Missouri Department of Agriculture in December 2013 by Governor Jay Nixon. Fordyce has held leadership roles in agriculture on the local, state and national levels for more than 20 years. He served as chairman of the Missouri State Soil and Water Districts Commission from 2008 until his appointment as Director of Agriculture. Fordyce received the 2012 Soil Conservationist of the Year award from the Conservation Federation of Missouri. He has held leadership positions and has been involved on various boards and committees of the Missouri Farm Bureau and the American Farm Bureau Federation. Fordyce and his wife, Renee, grow soybeans and corn as well as raise beef cattle on the family farm in Harrison County.



Joe Gillman, Director and State Geologist, Department of Natural Resources

Joe Gillman, RG, holds a B.S. in Geology from Missouri State University and has more than 19 years of experience managing geological investigations in areas of economic geology and natural resource evaluation, environmental geology and waste disposal, and geologic hazards. As state geologist, Gillman represents Missouri interests related to geologic issues and policy development on a state and federal level. He is a member and President-Elect of the Association of American State Geologists and serves as the central states representative on the National Cooperative Geologic Mapping Program and National Geological and Geophysical Data Preservation Program. Gillman is a member of the State Oil and Gas Council, Missouri Mining Commission, Missouri Board of Geologists Registration, Well Installation Board, and Industrial Minerals Advisory Council. Gillman represents the state's interests in the Plains CO2 Reduction Partnership, Interstate Oil and Gas Compact Commission and Central United States Earthquake Consortium.



Pat Guinan, State Climatologist, Director, Missouri Climate Center

Pat Guinan attended the University of Illinois in Urbana-Champaign where he received a B.S. in physical geography in 1986 and an M.S. in atmospheric science in 1988. He came to the University of Missouri to continue his education in atmospheric science and serve as a climatologist with the Agricultural Experiment Station. Since 1996, he has been employed by the University of Missouri's Extension Commercial Agriculture Program as a climatologist. Guinan received his Ph.D. in Soil, Environmental and Atmospheric Sciences in 2004 and, in addition to his extension and campus activities as an Associate Professor in Climatology, he operates a statewide network of 31 automated weather stations, serves as the State Climatologist for Missouri, Director of the Missouri Climate Center, and co-coordinator of the Community Collaborative Rain, Hail and Snow network in Missouri.



Dr. Steven J. Herrington, Director of Freshwater Conservation, The Nature Conservancy

Dr. Steven Herrington is an aquatic ecologist with more than fifteen years of experience examining fish and stream ecology. Dr. Herrington completed his Bachelor's and Master's degrees at the University of Illinois at Urbana-Champaign and Doctoral Degree at Auburn University in Alabama. Dr. Herrington joined the Nature Conservancy in 2004 and currently directs all freshwater conservation actions in Missouri, as well as leads and collaborates on several large-scale freshwater initiatives across the U.S. Successful conservation actions Dr. Herrington has directed include several on-the-ground dam removal and stream and spring restoration projects, advocating science-based ecological flow recommendations for water allocation in the Apalachicola River Basin, and long-term ownership and legal protection of priority freshwater habitats.



Steve Mahfood, Former Director of the Missouri Department of Natural Resources

Steve Mahfood has a 40-year track record as an innovator and leader in the environmental, energy and natural resource fields. Appointed as director of the Department of Natural Resources for eight years by three successive governors, Mahfood added more than 60,000 acres to the state park system and led the development and construction of the first LEED Platinum state office building, which now houses the MoDNR. He also represented Missouri and the U.S. in a number of prominent roles including chairing the NAFTA-US Governmental Environmental Advisory Commission. He received the U.S. Presidential Environmental Achievement Award in 1989. Currently, as principal of Mahfood Associates, he advises the Nature Conservancy and many influential organizations on environmental, energy, natural resource and climate change issues. Mahfood holds a Bachelor's Degree in Environmental Science from Rutgers University and is a graduate of the Yale University Environmental and Management Leadership Program.

Speaker Biographies

Ken McCarty, Missouri State Parks, Missouri Department of Natural Resources

Ken McCarty is chief of the Natural Resource Management section with the Missouri Department of Natural Resources' Division of State Parks. His thirty-three year professional career has focused on studying and managing Missouri's natural environments, particularly tallgrass prairie, savanna, woodland and wetland ecosystems. His work with Missouri State Parks has focused on restoring some of the best modern examples of Missouri's historic natural landscapes. McCarty received an MA in biology from the University of Missouri in 1981. He is the current chair of the Missouri Natural Areas Committee, and authored the Ecosystem Management chapter for their 2005 book, *The Terrestrial Natural Communities of Missouri*. McCarty was named the 1999 Professional Conservationist of the Year by the Missouri Conservation Federation, and received the Missouri Native Plant Society's 1998 Arthur Christ Memorial Research Award "for contributions to the conservation of the natural biodiversity of Missouri."



G. Tracy Mehan, III, Former Director MoDNR and Assist. Admin. U.S. EPA

G. Tracy Mehan, III is national Source Water Protection Coordinator for the U.S. Endowment for Forestry and Communities and Adjunct Professor at George Mason University School of Law. He was Principal with The Cadmus Group Inc., an environmental consulting firm, from 2004 to 2014, and served as Assistant Administrator for Water at the U.S. Environmental Protection Agency from 2001-2003. Mehan also served as director of the Michigan Office of the Great Lakes from 1993-2001 and as Associate Deputy Administrator of EPA in 1992. He was director of the MoDNR from 1989 to 1992. Mehan is a graduate of Saint Louis University and its School of Law. Mehan serves on the Committee on the Mississippi River and the Clean Water Act for the National Research Council of the National Academies.



Gail Melgren, Executive Director, Tri-State Water Resource Coalition

Gail Melgren became the Executive Director for the Tri-State Water Resource Coalition after serving in a volunteer capacity. The coalition's mission is to provide adequate, affordable, long-term water supplies for southwest Missouri and represents municipalities, counties, utilities and private water providers. In 2006 while working for Missouri State University, Melgren developed two leadership development programs for the non-profit and civic sectors. Melgren also served as District Director for Senator Claire McCaskill.



Dave Murphy, Commissioner, Department of Conservation Commission

Dave Murphy developed a love of the outdoors and conservation through hunting, fishing and trapping while growing up on his family's farms in Lewis and Clark counties in northeast Missouri. He has shared that passion throughout his career: as a biologist with the MO Department of Conservation, as assistant science coordinator for Columbia Public Schools, with the National Wild Turkey Federation, and as executive director of the Conservation Federation of Missouri to name a few. He was appointed to the Missouri Department of Conservation Commission in 2014 and serves as vice-chair. Murphy has been recognized with many awards during his career, including the "Conservationist of the Year Award" from corporate Bass Pro Shops in 2012. He believes absolutely in the value of ordinary folks working together to accomplish extraordinary feats, and maintains that of all his roles, he is most proud of his role as citizen.



Collin O'Mara, President and CEO, National Wildlife Federation

Collin O'Mara joined the National Wildlife Federation as President and CEO on July 7, 2014. Prior to his appointment, he served as Secretary of the Delaware Department of Natural Resources and Environmental Control, where he led the state's efforts to conserve and restore wildlife and fishery habitat, improve air quality and public health, ensure access to clean water, expand outdoor recreation and environmental education opportunities, and enhance the state's resilience to extreme weather and other climate impacts. His initiatives included Delaware's "No Child Left Inside"/ Children In Nature campaign, the First State Trails and Pathways Plan, and the Delaware Bayshore Initiative. He also led the largest investment in environmental infrastructure in Delaware's history, including more than \$200 million in wastewater and storm-water systems, beach restoration, dam and dike repair, drainage projects, and park and wildlife areas. He and his wife Lindsay are the proud parents of young daughter Riley Elizabeth.



Speaker Biographies



Heather Parker, Community Outreach Coordinator, Springfield-Greene County Health Department

Heather Parker has led efforts to civically engage and empower low-income neighborhoods to improve health while creating Springfield's first Community Health Advocate program. Parker's diverse background includes work experience as an environmental inspector for the Springfield-Greene County Health Department, a field biologist for the Missouri State University-U.S. Army Floristic Inventory Grant, water lab technician for City Utilities, Park Ranger for the Army Corps of Engineers, field biologist for an International consulting company, field biologist for the National Park Service, and management of a local family farm. Parker received her Bachelor of Science in Wildlife Conversation and Management (1997) and Master of Science in Plant Science, Natural and Applied Science (2000), both from Missouri State University.



Bob Perciasepe, President, Center for Climate and Energy Solutions

Bob Perciasepe is a leading, independent voice for practical policy and action to address the twin challenges of energy and climate change. He has been an environmental policy leader in and outside government for more than 30 years, most recently as Deputy Administrator of the U.S. EPA. Previously, he served as chief operating officer of the National Audubon Society, Secretary of the Environment for the state of Maryland and as a senior planning official for the city of Baltimore.



Chad Pregracke, President, Living Lands and Waters - 2013 CNN Hero of the Year

Chad Pregracke is the President and Founder of Living Lands & Waters (LL&W), the world's only "industrial strength" not-for-profit river cleanup organization. Pregracke formed LL&W at the youthful age of 23, after spending his life growing up and working on the Mississippi River. Early on, he became appalled by the amount of garbage in the river and decided that if no one else was going to do something about it, he would. During the last 16 years, he, his crew, and nearly 70,000 volunteers have removed more than 7 million pounds of garbage out of our nation's rivers. He's also broadened his mission to include a Million-Trees and an Adopt-A-River Mile Project, as well as a new floating classroom aboard a barge that he and his crew live on 7 months of the year, teaching students, educators and individual citizens about the value of our rivers and natural resources. Most recently, Pregracke was named the 2013 CNN Hero of the Year!



Gene Schmittgens, Evans & Dixon

Gene Schmittgens is a member and Chair of, the Business Law Practice Group at Evans & Dixon, LLC. He represents clients in environmental law issues including compliance, enforcement, administrative litigation, insurance, permitting, transportation requirements and transactional issues arising out of the sale of real estate and businesses. He is a frequent lecturer and author on a wide variety of environmental issues. Schmittgens is a current member and past chair of the Illinois State Bar Association's Environmental Law Section Council, as well as the Secretary of the Association's Business Advice Section Council. He has been active in a number of other environmental law committees of various bar associations and civic groups and also an Assistant Adjunct Professor at Saint Louis University of Law where he teaches a course on Environmental Due Diligence.



David Shorr, Former Director of the Missouri Department of Natural Resources, Lathrop & Gage

David Shorr serves as Partner in Charge of Lathrop & Gage's Jefferson City and Columbia, Missouri offices. He is the past director of the Missouri Department of Natural Resources. Currently, he represents clients in regulatory matters in the environmental, energy, and utilities arenas and handles complex cases involving the scope of legal authority and government public policy. Shorr is a registered Missouri lobbyist and assists clients with legislative strategies.

Speaker Biographies

E. Ramona Trovato, Acting Principal Deputy Assistant Administrator, Office of Research and Development, U.S. Environmental Protection Agency



E. Ramona Trovato has served in numerous positions in the offices of the Administrator, Water, Enforcement and Compliance Assurance, Air and Radiation, Environmental Information and Solid Waste and Emergency Response, as well as her present leadership position during her 33 year career at EPA. Her work has included protecting and promoting children's health; developing and implementing the Comprehensive State Ground Water Protection Program; working with the private sector and states to make the best and highest use of properties cleaned up under the Superfund program; and, developing and implementing the National Environmental Laboratory Accreditation Program. She received the President's Meritorious Executive Rank Award for building strong coalitions and partnerships to achieve environmental and public health goals. Trovato has a BS Degree in Zoology from the University of Maryland at College Park.

Gary Vandiver, Chair, Soil and Water Districts Commission



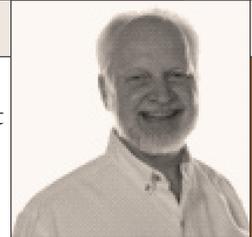
Gary Vandiver is a lifelong resident of Ray County and a graduate of the University of Missouri-Columbia with a degree in Agricultural Economics. Vandiver grew up on a family farm and continues to enjoy spending time on the farm every day. As managing partner of his family's grain and crop nutrient business in Orrick, Vandiver is able to stay involved with all facets of agriculture and promote Missouri agriculture to many people. Vandiver is a graduate of ALOT (Ag Leaders of Tomorrow), Past Chairman of MO-AG and a member of the Soil and Water Conservation Districts Commission, currently serving as Chairman. Vandiver is married to Penny and they have three children.

David A. Wilson, Senior Manager, East-West Gateway Council of Government



David Wilson has worked on regional sustainability, water and air quality and community development since 2002 in the East-West Gateway Council of Government's Environmental and Community Planning. In 2010, Wilson organized eleven major partner organizations to develop strategies for a prosperous, healthy and vibrant St. Louis region. This initiative has resulted in the completion of OneSTL, a regional plan for sustainable development approved by East-West Gateway's board of directors in 2013, and the development of nearly seventy-five supporting plans and studies. Wilson previously worked at Missouri Botanical Garden, the St. Louis Science Center, and spent several years as an education consultant to electric, gas and water utilities. He and his wife live in Webster Groves and are hiking the Ozark Trail one weekend each month.

Daniel J. Witter, Research Director, D.J. Case & Associates



Dan Witter has completed 90 projects during his tenure with D. J. Case & Associates, a natural resources communication firm. From 1978 to 2004, he held positions with the Missouri Department of Conservation as Outreach Programs Chief, Policy Chief, Social Scientist, and for six years, as a member of MDC's Regulations Committee, the group recommending fish and wildlife seasons, methods, and limits to the Conservation Commission. He holds a Ph.D. from the University of Arizona, with a major in Natural Resource Management and minor in Sociology. Witter's central research emphasis is studying the social, economic, and aesthetic values that we attach to nature and the outdoors - and applying these "human dimensions" to natural resource management.

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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.

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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

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

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- 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 with 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.

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- 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.

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- 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 stream 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 anglers, 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. Use 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.

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- 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

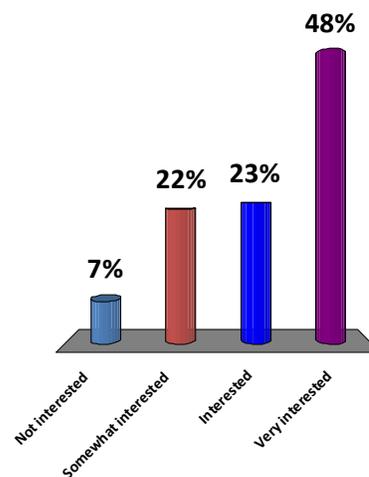
Discussion Topic Ranking Results

Governor's Conference on Natural
Resources

November 13, 2014

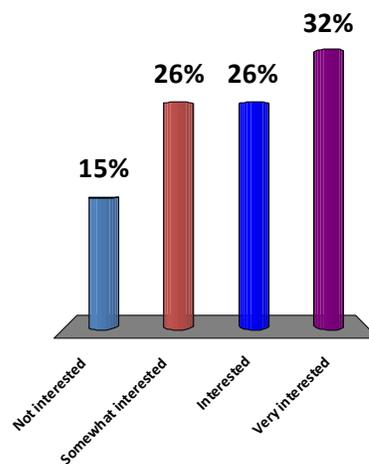
Develop & enhance natural resource literacy for youth

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



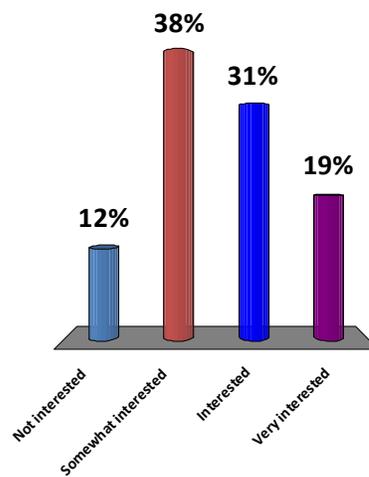
Creative ways to connect with plugged-in generation

- 1. Not interested
- 2. Somewhat interested
- 3. Interested
- 4. Very interested



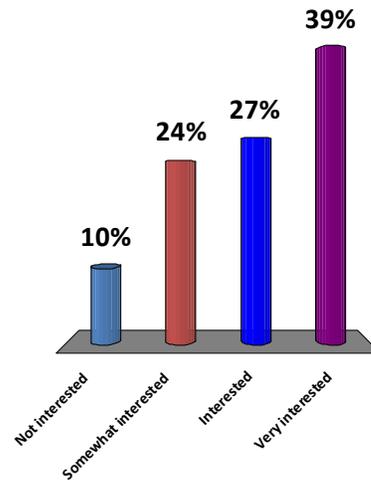
Develop & enhance adult natural resource literacy

- 1. Not interested
- 2. Somewhat interested
- 3. Interested
- 4. Very interested



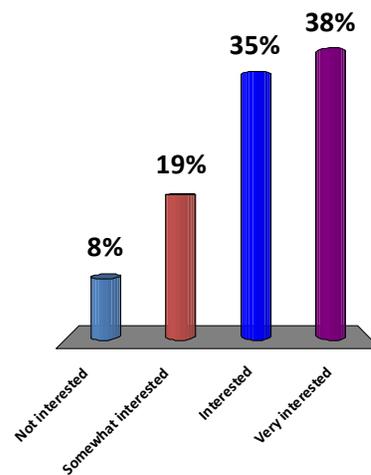
Common ground in solving NR challenges

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



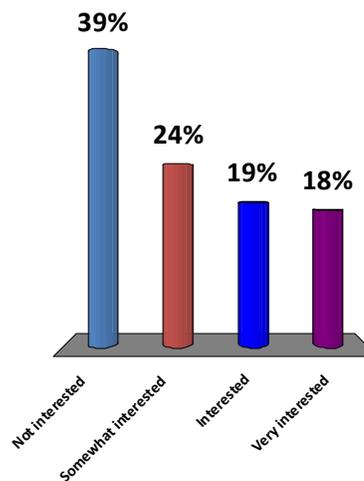
Set water quality priorities

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



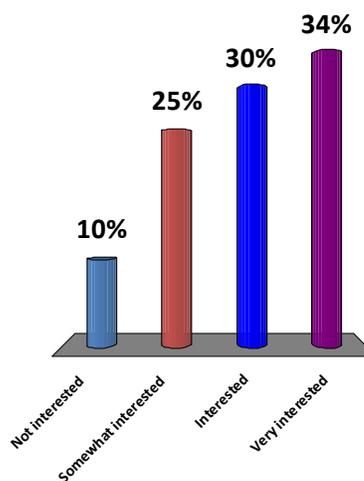
Policies & strategies for nutrient trading

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



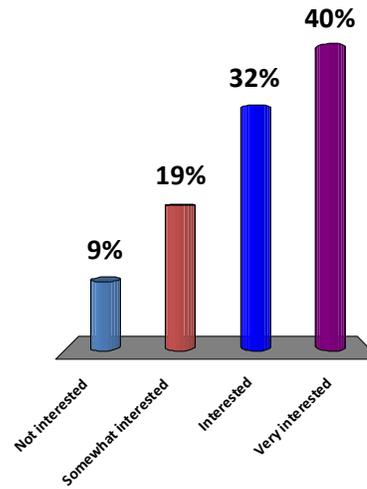
Economic value of nature in policy decisions

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



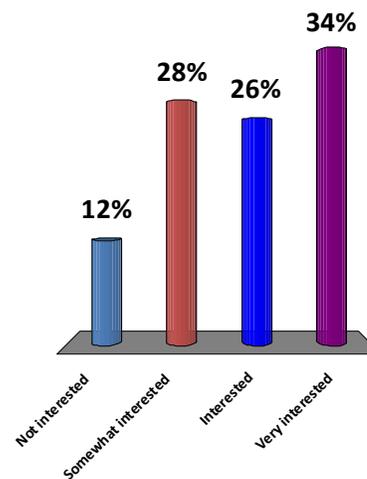
Help small communities meet water obligations

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



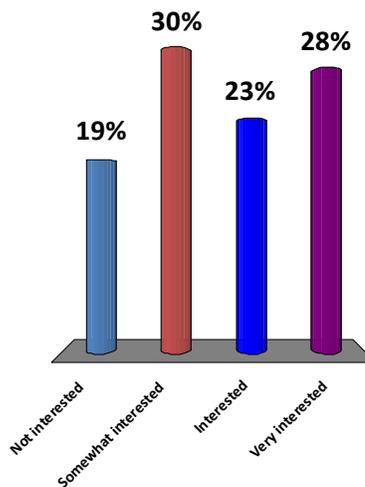
Move communities toward integrated planning

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



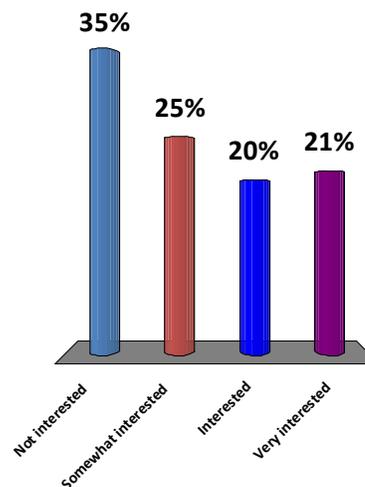
Prepare for natural resource disasters

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



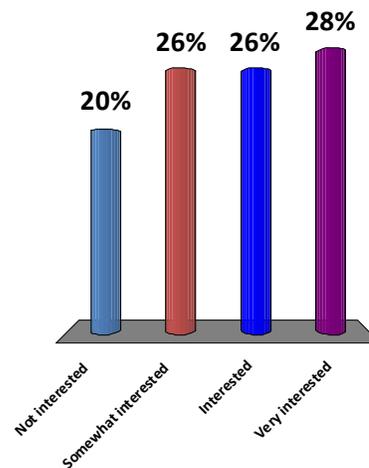
Plans & regulations for hydraulic fracturing risk

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



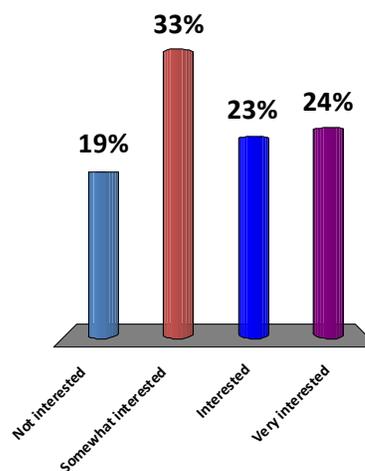
Invasive species impacts

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



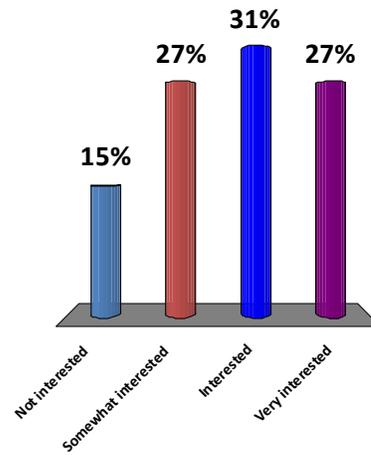
Focus climate change discussion on resiliency

1. Not interested
2. Somewhat interested
3. Interested
4. Very interested



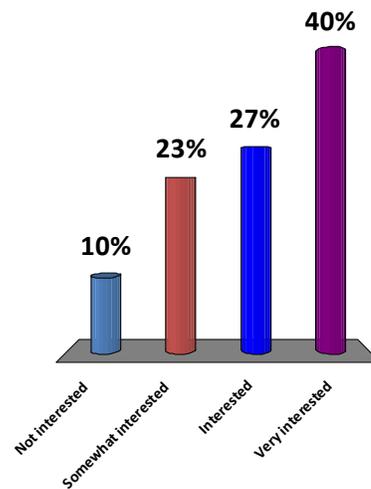
Balancing water use & users

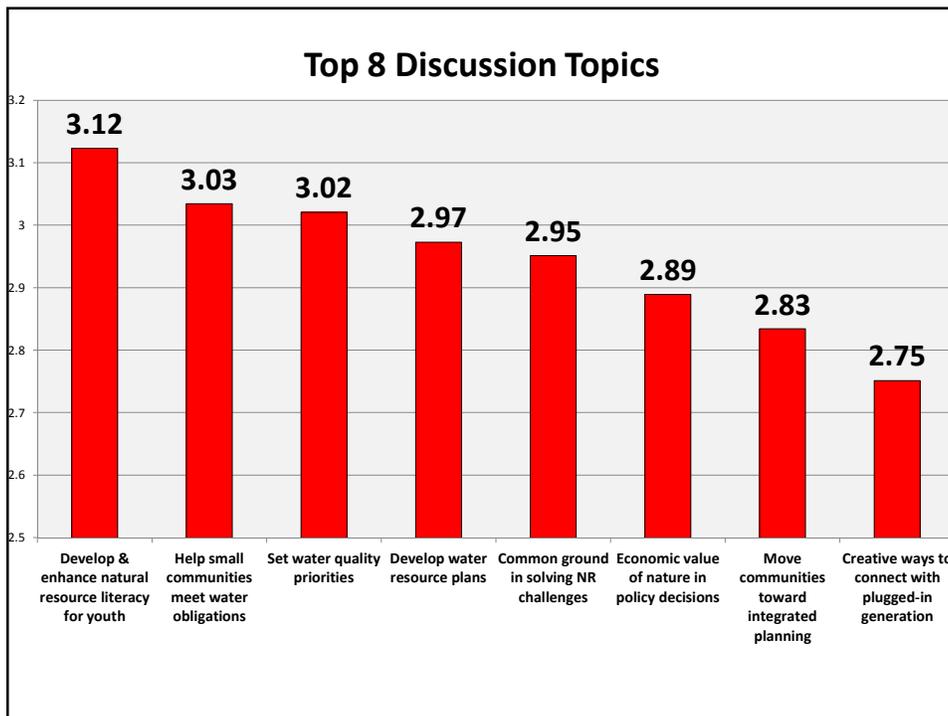
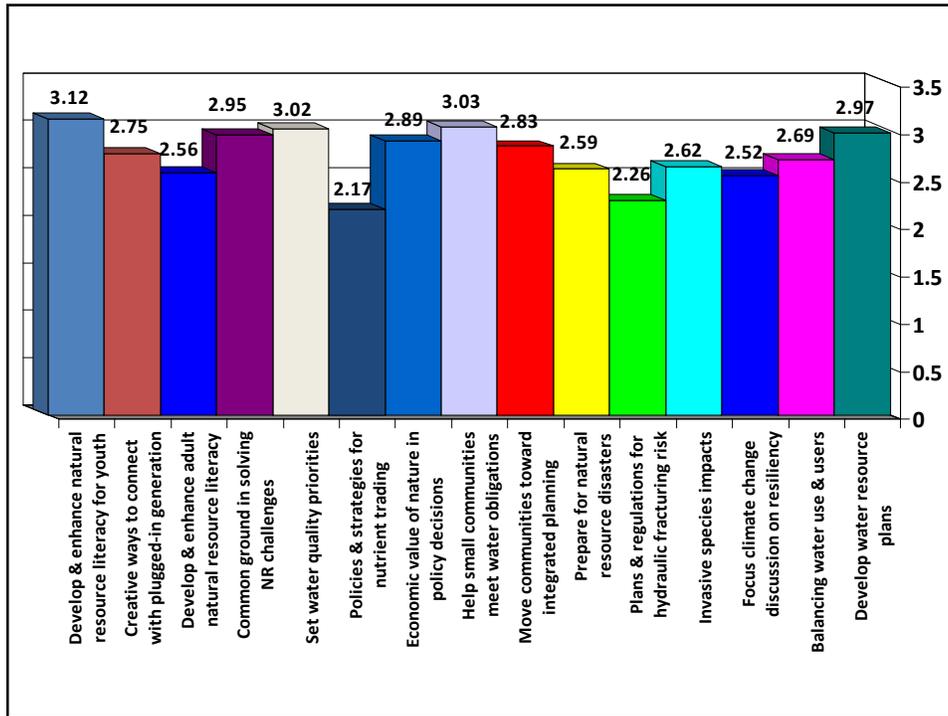
- 1. Not interested
- 2. Somewhat interested
- 3. Interested
- 4. Very interested



Develop water resource plans

- 1. Not interested
- 2. Somewhat interested
- 3. Interested
- 4. Very interested





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

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- 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.

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- 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

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- 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 mussels 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

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- 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 of 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. Drought 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...

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- 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

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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, economics, 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

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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.

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- 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

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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

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- 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.

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- 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

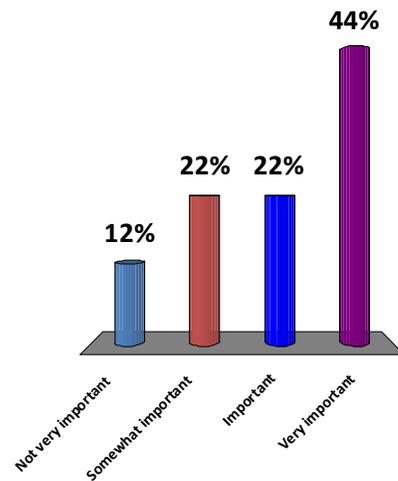
**Recommendations
Ranking Results**

**Governor's Conference on Natural
Resources**

November 13, 2014

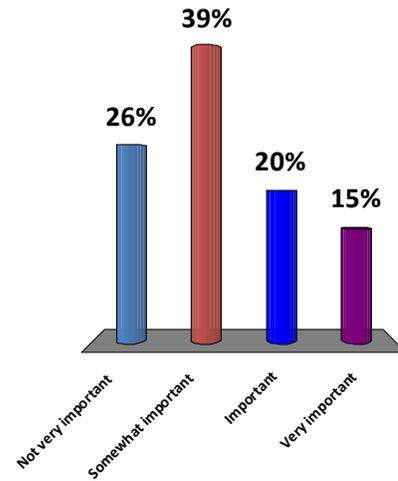
1.1 Develop an education section of DNR

1. Not very important
2. Somewhat important
3. Important
4. Very important



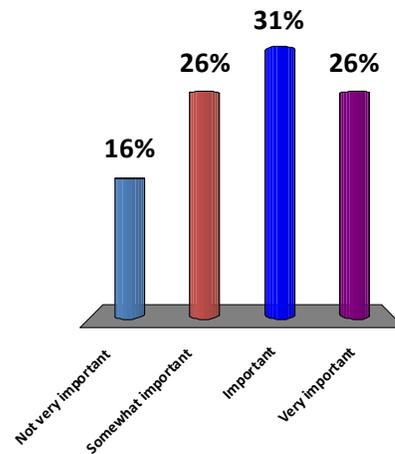
1.2 \$ for substitute teachers & transportation to parks

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



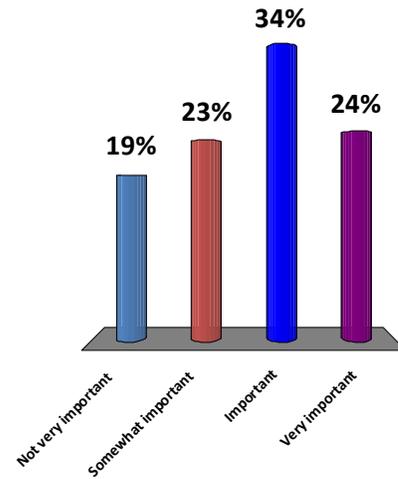
1.3 Target non-science curriculum in upper grades

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



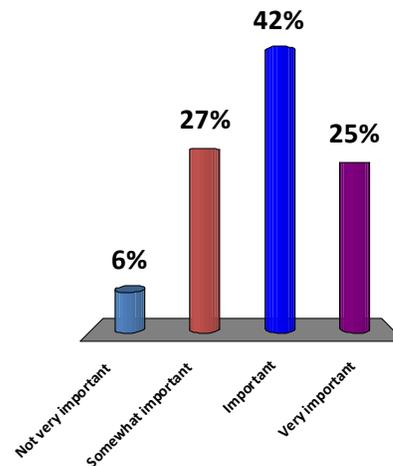
1.4 Partnerships for community gardens/outdoor classrooms

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



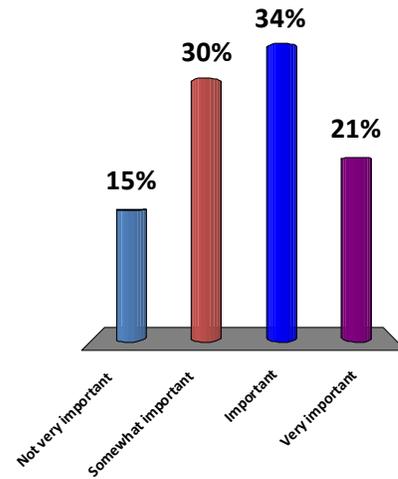
2.1 Intergovernmental funding & mitigate liability

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



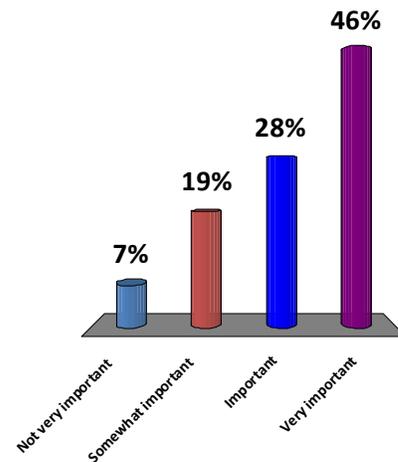
2.2 Examine loading-based permitting

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



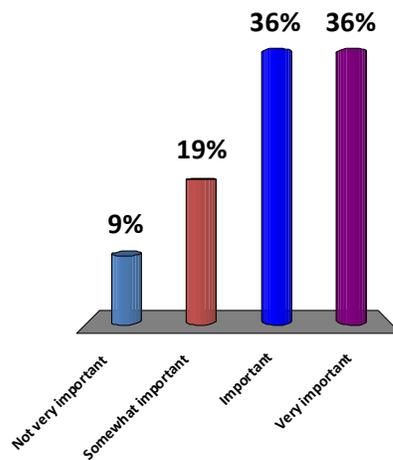
2.3 Coord strategies between state and fed agencies

- 1. Not very important
- 2. Somewhat important
- 3. Important
- 4. Very important



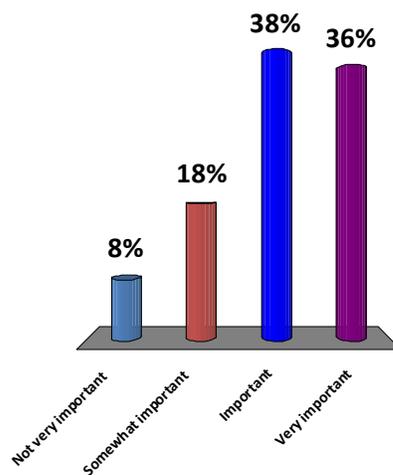
2.4 Develop DNR strategy before new rules/standards, change

1. Not very important
2. Somewhat important
3. Important
4. Very important



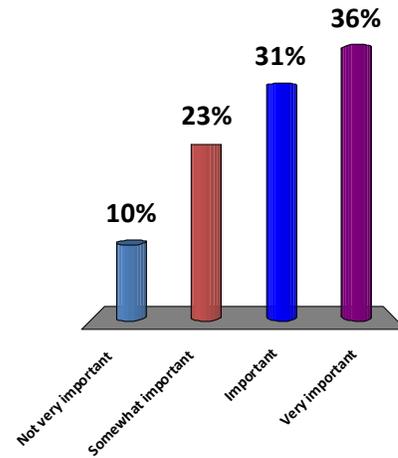
3.1 Agencies define shared goals & present in unified manner

1. Not very important
2. Somewhat important
3. Important
4. Very important



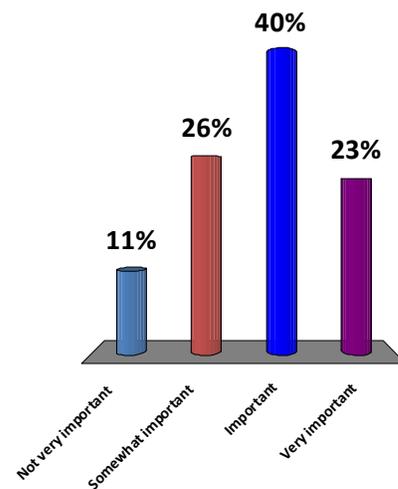
3.2 Meet regulatory & private citizens' needs

1. Not very important
2. Somewhat important
3. Important
4. Very important



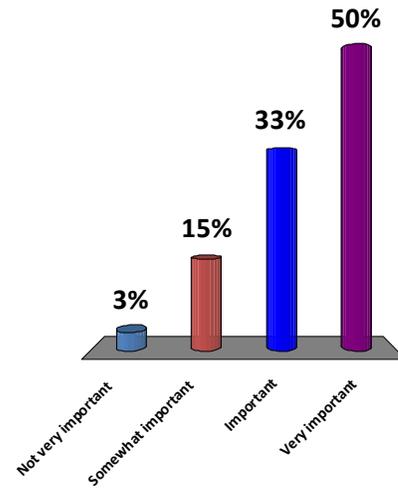
3.3 Inventory water res. & set criteria based on stakeholder interest

1. Not very important
2. Somewhat important
3. Important
4. Very important



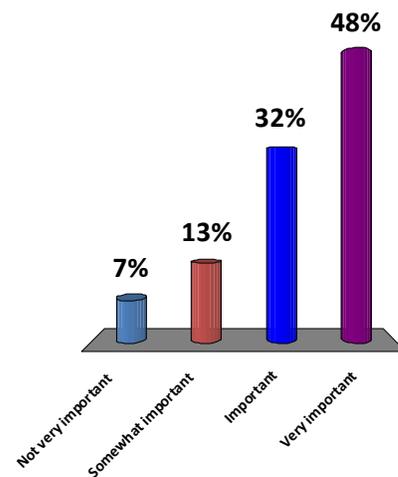
3.4 Prioritize cost/benefit of environmental improvement

1. Not very important
2. Somewhat important
3. Important
4. Very important



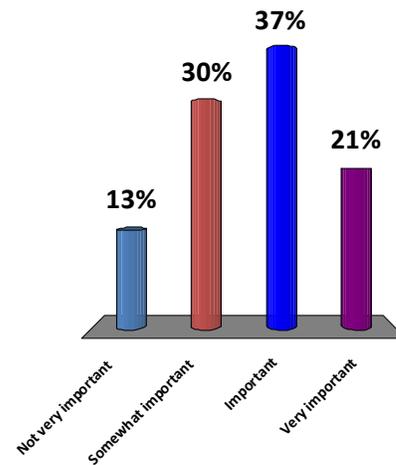
4.1 Outreach to external; need public trust Importance

1. Not very important
2. Somewhat important
3. Important
4. Very important



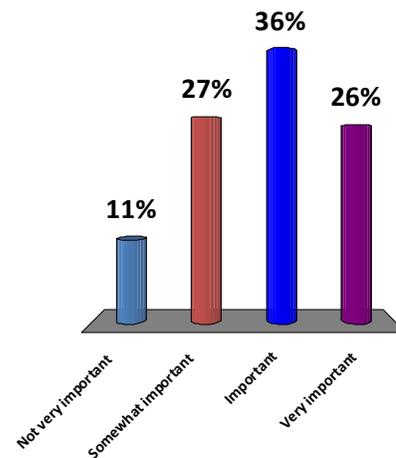
4.2 Identify stakeholders beyond users Importance

1. Not very important
2. Somewhat important
3. Important
4. Very important



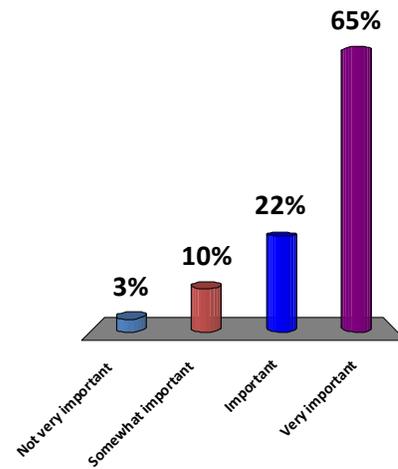
4.3 One plan multiple formats Importance

1. Not very important
2. Somewhat important
3. Important
4. Very important



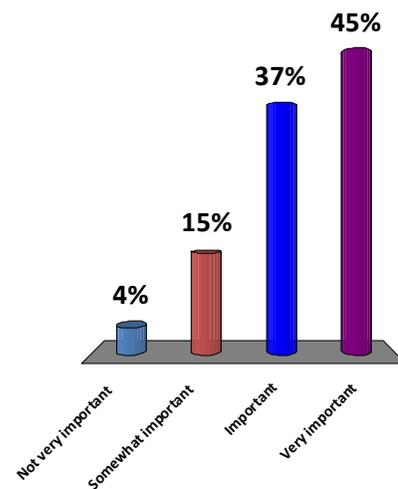
4.4 Source water protection Importance

1. Not very important
2. Somewhat important
3. Important
4. Very important



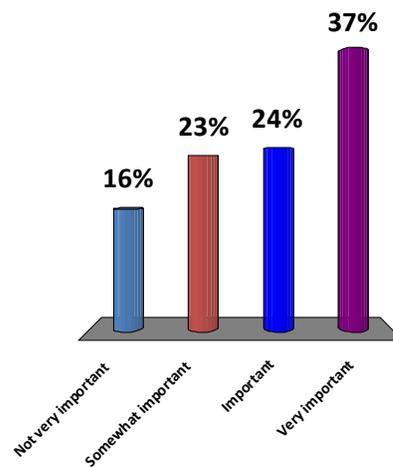
5.1 Clearly identify stakeholders Importance

1. Not very important
2. Somewhat important
3. Important
4. Very important



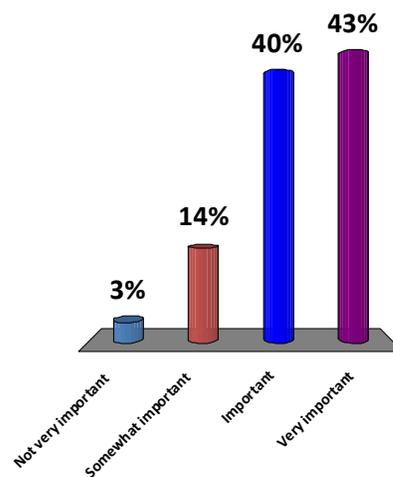
5.2 Natural resource partner bluebook

1. Not very important
2. Somewhat important
3. Important
4. Very important



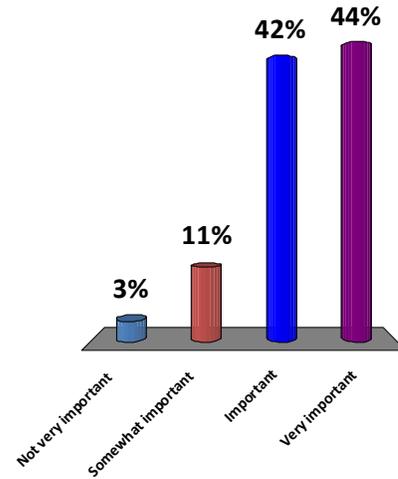
5.3 Awareness & education at local level; common messages

1. Not very important
2. Somewhat important
3. Important
4. Very important



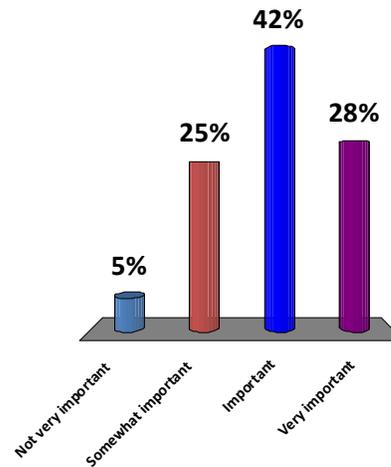
5.4 Clearly identify common issues

1. Not very important
2. Somewhat important
3. Important
4. Very important



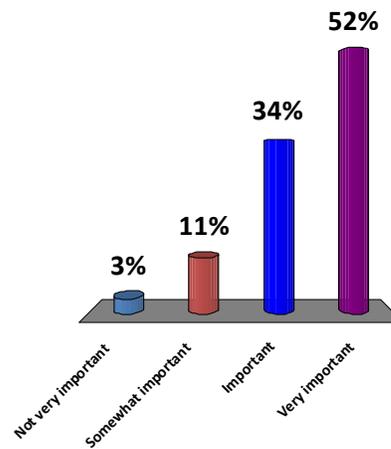
6.1 Tailor to demographics, economics & use indicators

1. Not very important
2. Somewhat important
3. Important
4. Very important



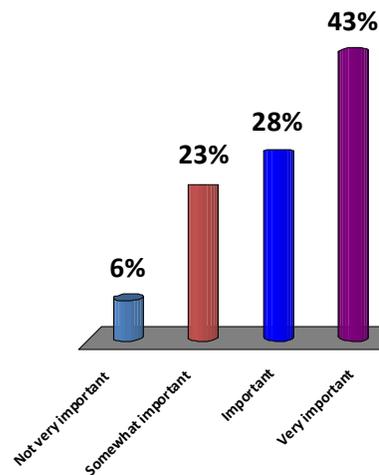
6.2 Cost of value gained - benefits to health/envmnt/econ.

1. Not very important
2. Somewhat important
3. Important
4. Very important



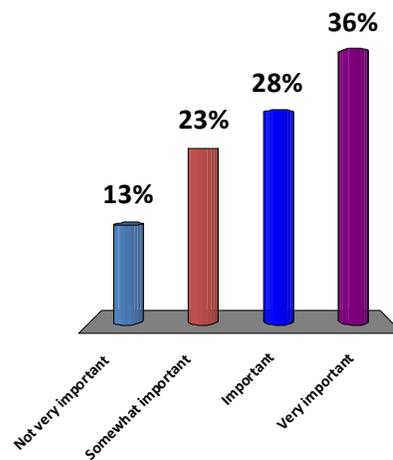
6.3 Develop replacement cost data - how much \$ to replace lost resource

1. Not very important
2. Somewhat important
3. Important
4. Very important



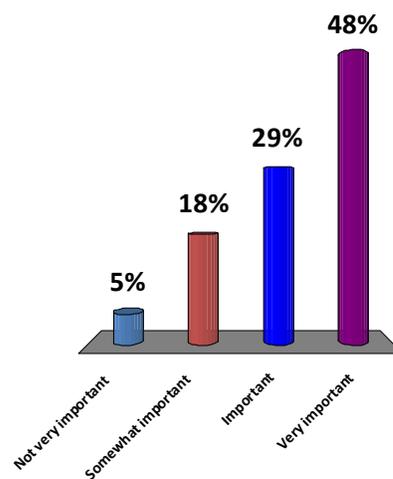
6.4 Research/adopt modeling tools to develop green infrastructure & conservation plan

1. Not very important
2. Somewhat important
3. Important
4. Very important



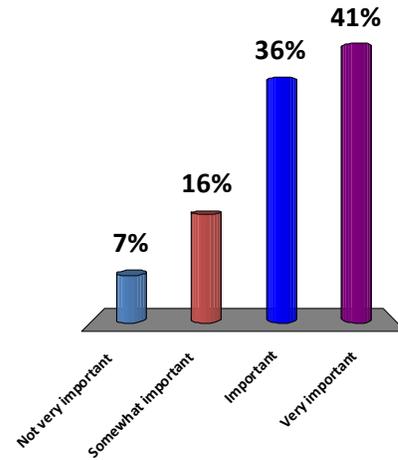
7.1 DNR support Integrated Planning

1. Not very important
2. Somewhat important
3. Important
4. Very important



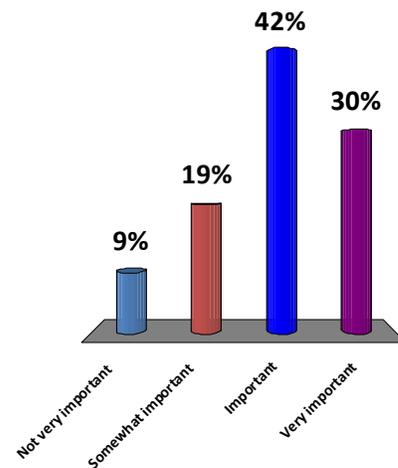
7.2 Facilitate cross sector partnerships

1. Not very important
2. Somewhat important
3. Important
4. Very important



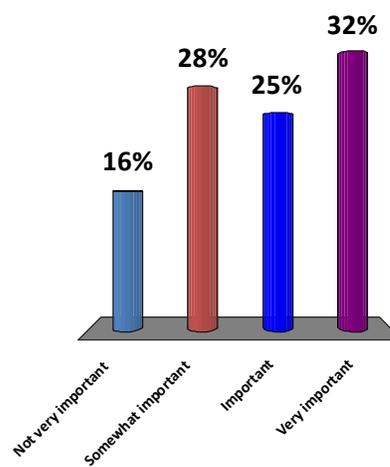
7.3 DNR develop comm. Plan; work w/ partners on outreach

1. Not very important
2. Somewhat important
3. Important
4. Very important



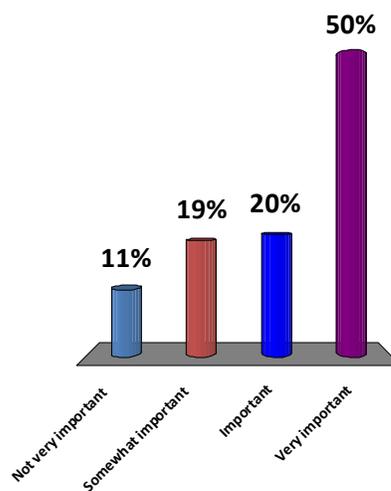
7.4 DNR look @ regulatory flexibility & legal constraints

1. Not very important
2. Somewhat important
3. Important
4. Very important



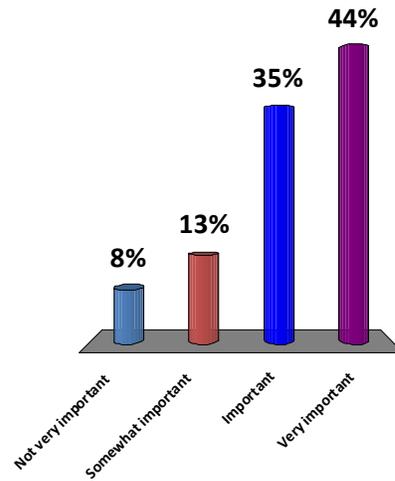
8.1 Interactive & connected park

1. Not very important
2. Somewhat important
3. Important
4. Very important



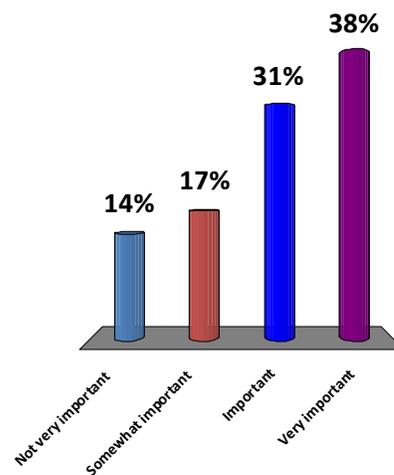
8.2 Collaborate with private industry to promote outdoor activity

1. Not very important
2. Somewhat important
3. Important
4. Very important



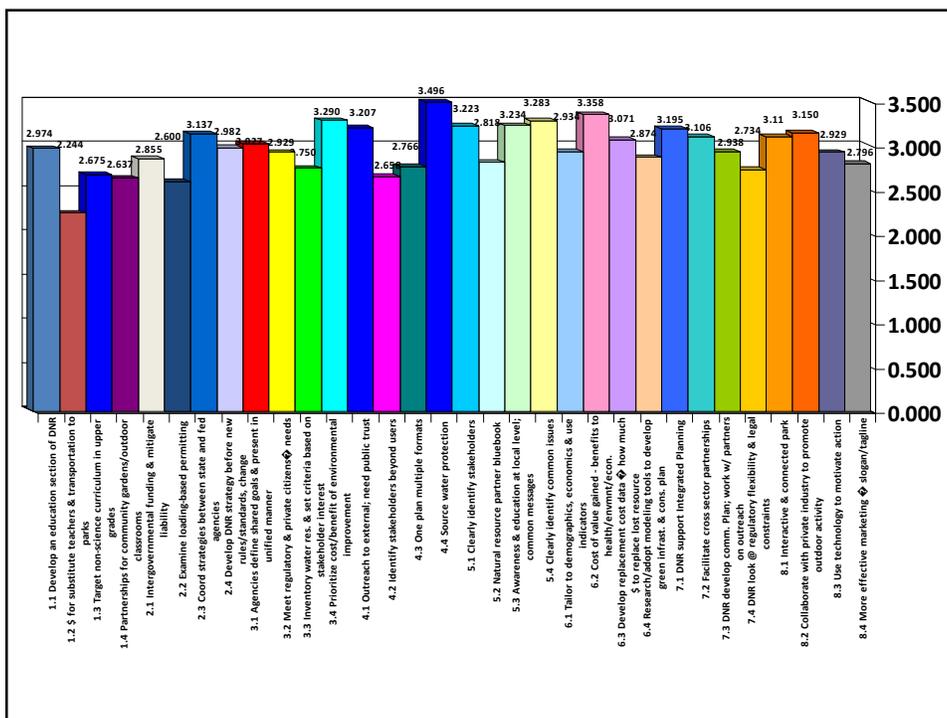
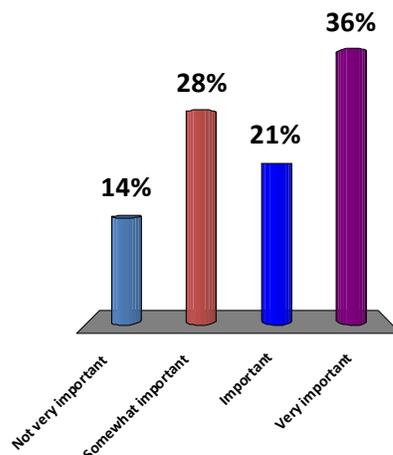
8.3 Use technology to motivate action

1. Not very important
2. Somewhat important
3. Important
4. Very important



8.4 More effective marketing - slogan/tagline

1. Not very important
2. Somewhat important
3. Important
4. Very important



Thanks for Attending the Governor's Conference on Natural Resources



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

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800-361-4827 dnr.mo.gov

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

Missouri Department of Natural Resources

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