STATE OF MISSOURI
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DEPARTMENT OF NATURAL RESOURCES
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MEMORANDUM

DATE: JUN - 8 2011

TO: Regional Directors and Water Protection Program Managers

FROM: Leanne Tippett Mosby, Director
Division of Environmental Quality

SUBJECT: Collaborative Adaptive Management

The use of collaborative adaptive management has received significant attention within the department recently, especially with regard to reaching resolution of some of our more challenging problems. As the meaning of this term varies in different contexts, we want to be clear on what it means to us and how we will use it in the department.

Adaptive management is based on the cyclical use of assessment, planning, action, monitoring, evaluation and adjustment based on knowledge gained. When it works, it is both effective and efficient and improves decision-making over time as more is learned.

Collaborative adaptive management is a stakeholder-based process for decision-making. The department is one stakeholder in the process. While there are goals or standards we must achieve, we understand the participation of stakeholders in fashioning the solution will be essential to a durable solution.

Collaborative adaptive management is a process to help contend with scientific unknowns present in many ecological systems. The scientific understanding of ecological systems continues to develop and the variables inherent in any ecological system present more possible avenues for action than we could possibly assess accurately using a trial and error approach. Collaborative adaptive management provides a way to make decisions based on the best information available, share that understanding with all those involved, monitor the results of our actions and make adjustments in our approach based on what we learn.

In other words, collaborative adaptive management is used only in cases where there is a need for action within a system where significant scientific uncertainty exists. Additionally, because collaborative adaptive management is a resource-intensive process, it can only be used where the

stakeholders (including the department) are committed to long-term engagement on the issue at hand. Therefore, we will not use collaborative adaptive management where we can make straightforward decisions based on regulatory requirements or unambiguous scientific information, or, where the relevant stakeholders are unable to make the commitment necessary to achieving a successful outcome.

Collaborative adaptive management is an iterative process that makes changes and then determines the effect of those changes by ensuring an effective monitoring protocol accompanies the changes. As the response of ecological systems is variable, and may be influenced by factors beyond those we change, this process includes sufficient time and analysis to determine if the changes made actually influenced the desired results. Some short-term changes may appear obvious to stakeholders and they can be implemented as soon as possible. Others may require more careful planning and analysis before implementation. In either case, the effectiveness of each action is measured.

Collaborative adaptive management is a transparent process. Information related to the scientific and regulatory background, meetings, decisions, monitoring data, schedules, etc. must be readily available.

Collaborative adaptive management is obviously a resource-intensive undertaking. As such, it is not appropriate for every decision that comes before the department. Some individuals have received limited training in the conduct of collaborative adaptive management and implementation of the Hinkson Creek Total Maximum Daily Load will serve as a pilot project using this approach.

Attached to this memo you will find a Q&A developed by Joe Engeln for the Hinkson Creek CAM process. As this process unfolds we will establish a website containing relevant information so everyone can follow the progress and learn more about collaborative adaptive management as we move along.

In summary, for certain complex environmental problems, we believe this community-based process will be productive in reaching sustainable improvements in environmental quality.

Should you have any questions, please contact Joe Engeln or John Madras.

Attachment

LTM/jmm