

Cottonwood Workshop
Upper Missouri River Breaks National Monument
December 1-2, 2010, Great Falls, MT
Summary Report

Approximately 45 people representing diverse local, State, Federal government entities along with private citizens and non-governmental entities met for two days in the Great Falls Civic Center on December 1-2. The purpose of the meeting was to begin the development of a common understanding of both the legal considerations and level of scientific knowledge relative to exploring the use of managed flow levels within the Monument to aid in recovering/restoring cottonwood as one of the “objects of protection” designated by the establishment Executive Order of January, 2001. At the heart of the discussion was the importance of river flows, and whether or not a program of “shaped environmental peaking flows” might improve the environment for long term recovery and management of cottonwood and related ecosystem components.

Day One was devoted to an introduction of the people present, an overview of the River within the Monument, and presentations regarding the legal/regulatory and policy framework within which future considerations would be made. A case study of the Provo River restoration in Utah was also provided to give people the understanding that major projects such as the one being considered are indeed possible; however, the complexity and costs require a highly planned and managed approach for success.

The morning of Day Two focused on sharing information about what is known from scientific research on both cottonwood silviculture and the ESA listed pallid sturgeon in relation to current riverine conditions and changes over time. In the afternoon, agency panelists discussed their views on how to bring this information together, information gaps, barriers to proceeding, short and longer term activities to continue moving the discussions forward, and whether or not it seemed reasonable that continued exploration might lead to successful work. The panelists included the Bureau of Land Management (BLM), the Corps of Engineers (COE), the Bureau of Reclamation (BOR), Montana Fish Wildlife and Parks (FWP) and the Montana Department of Natural Resource Conservation (DNRC). The panelists and workshop participants further provided written comments about these topics, which are documented in the report and provide the foundation for the summaries shown in the following sections.

Group Process Summary

Question 1 – “Based on what you heard the past two days, do you believe the authorities and science support continued exploration of a proposal for development of shaped environmental peaking flows?” (This question was addressed only to the agency panelists.)

Summary – Panelists expressed strong general agreement that efforts to explore the possibilities related to peaking flows should continue. It was understood that many questions remain in the legal arena that may remain unanswerable until specific proposals and increased information is available; however, all panelists generally felt optimistic that some range of program options could be identified that would be legal and also socially acceptable. The information was believed to be more conclusive in the science arena about the importance of shaped flows

contributing to propagation of cottonwood at river levels where they could be more easily sustained over time. Many people also emphasized the importance of strong collaboration and education related to the efforts.

Question 2 – “What if any, additional information is needed to move forward?”

Summary Numerous information needs were identified by both panelists and workshop participants and are summarized below. The actual words of the participants are shown in the attached section concerning additional information needed.

- **Flood Mapping** – Based on the science, flood flows of 50,000 CFS appear to be in the range of beneficial flows although higher and/or lower flows will also be under consideration. There are several sources of peaking flows, including prairie and foothill runoff under chinook conditions and supplementation from Canyon Ferry, Gibson, and Tiber Dams. The group strongly supported increased understanding of the conditions under which flow supplements might be most effective, and how to minimize the likelihood of property damages and/or loss of life from higher flows.
- **Water Rights** – Clearly more information is needed to ascertain how flows might affect existing water rights and contracts related to dam storage and release. This is important both from a legal standpoint as well as from the need for public support by potentially affected water users.
- **Cottonwood** – Cottonwood propagation and management has been extensively researched in the Monument and on other rivers, and much is essentially “settled” science. The remaining questions largely focus on impacts of ice drives and the ability to move through the various age classes from seedling to young trees and on through the age classes to mature stands of cottonwood forests.
- **Ecosystem Integration** – Along with cottonwood, a broader suite of species and processes are affected by flow levels, sediment transport and ice drives. Most important among these is the ESA listed pallid sturgeon. While there are a number of studies ongoing and active recovery management by planting hatchery reared fish in the Monument, many questions remain about the ability to influence successful natural reproduction and rearing in the River above Fort Peck Reservoir.
- **Social/Cultural/Political** – Many people, user groups and agencies will be important to continued exploration who were not present at this initial meeting, and the relationships and needs of those groups to flow management will be critical in future steps.
- **Legal/Accountability** – While no legalities appeared to pose insurmountable problems, there are several legal issues that will need to be clarified based on actual plans. Furthermore, the issue of government accountability for purposely developing peaking flows raises questions of exposure and liability from any damages that might be incurred to private lands and/or facilities. Those will need considerable investigation and collaborative resolution.
- **Other** – Several people addressed the issue of livestock grazing within the Monument, and the potential for cattle operations to reduce the effectiveness of cottonwood restoration if not properly managed. Monitoring was also cited as an important activity to insure that if high flows do occur, it will be possible to understand and document how those flows affected cottonwood.

Question 3 – “In your opinion, what are the major barriers or hurdles that need to be overcome?”

Summary – Numerous barriers of differing complexity and significance were identified by the group. These are the opinions of the agency panelists and the workshop participants; no effort was made to rank or prioritize importance or determine validity. While no seemingly insurmountable barriers were identified, a number of factors could, if not properly managed, present difficulty.

- **Long Term Commitment** – It was widely recognized that this is an effort that will require considerable upfront work and study, and that it may be a number of years before adequate work has been accomplished to attempt the work on the River. Keeping people energized, good communications and relationships, and regular reports on progress were seen as important components to maintaining an effort of this scope and timeframe.
- **Legal/Regulatory Issues** – Most of the barriers are related to the authority of the Corps of Engineers (COE) and Bureau of Reclamation (BOR) to modify flows for environmental purposes, and the potential legal consequences that might result from unintended consequences. NEPA requirements were cited by several as presenting a potential barrier or added workload, depending on whether or not the flow modifications can be made within the current standard operating procedures (SOP) of the various dams.
- **Social/Cultural** – It was widely recognized that a major educational/informational campaign will need to be developed as society typically does not view floods as a positive force, and the fear of floods is high among many people. People will have to understand the purposes for which the flows are being sought, and clear information will need to be presented as to flood effects and location. Without social/political support, this activity likely is not feasible.
- **Grazing Issues** – Some people see the issue of grazing management within the Monument as inseparable from discussions regarding peaking flows. Information from published research was presented that shows marked diminishment of established cottonwood seedlings to poles and young trees as grazing intensity increases. It was also noted that some of the landowners who will be critical to moving ahead on flow releases are also the same people who are being criticized for grazing practices.
- **Private Landowner/Utility Concerns/Issues** – This group of comments primarily relates to the impacts of higher flows on private lands/facilities and utilities, along with needed compensation for damages.
- **Agency Commitment and Relationships** – There was a general sense expressed that because this is a complex and long duration effort, special efforts will be necessary to bring together and maintain relationships among a variety of agencies, some of which seldom work with the others in an active capacity.
- **Science/Technical Barriers** – These potential barriers largely focused on the importance of having sound science on such issues as ice drive impacts, potential to affect pallid sturgeon, and the impacts of various flow levels on different points within the Monument.
- **Water Rights** – Water rights must be carefully researched and any issues resolved before proceeding.

Question 4 – “What is at least one short term action (3-6 months) that needs to be undertaken and by whom?”

Summary – Several short term actions seemed to have the support of all or most of the participants.

- The core agencies need to each designate a representative that can become part of a small task force who can meet in the next few months and keep the planning/actions moving as the issue of shaped environmental peaking flows is further explored. One of the important activities for this group is to develop an initial draft of a purpose statement that can be the foundation for people working together. BLM District Manager Stan Benes stated he would provide leadership for continued activities by the Task Force.
- DNRC needs to research the issue of water availability, water rights, and potential barriers that might result from these topics.
- Move forward with modeling efforts by BOR and COE, particularly the COE hydrology.
- Develop a communications document, such as newsletter articles, about the cottonwood workshop that can be broadly shared and plan for future communication. Mary Jones, Friends of Monument, will provide leadership along with others for this task.
- Don't lose track of existing and older information, much of the previous work can still be used to answer important questions.

Question 5 – “What is at least one long term action (6 months-two years) that needs to be undertaken and by whom?”

Summary – While stated several different ways, in general the following activities/plans were seen as important to developing successful longer term approaches.

- Formalized commitment by the core agencies through development of a Memorandum of Understanding that details the purpose of the work, role of the participating agencies along with any limitations, and signed off by the appropriate organizational leaders.
- Continuing research on the pertinent questions regarding cottonwood management, pallid sturgeon reproduction and management, and flow modeling to describe the impacts and benefits associated with various water levels at various points within the Monument.
- Extensive and intensive public outreach that fully engages the potentially affected interests, and provides full opportunities for them to be heard and to have impact on decisions that might be reached. Development of strong relationships among the various involved parties will be critical to long-term success. Outreach to other entities including Tribal governments, FERC, WAPA, utilities and others should begin soon and be continuing.