

APPENDIX V

SCIENTIFIC EVALUATION OF THE ROLE OF RIVER HYDROLOGY IN THE CONSERVATION OF MISSOURI RIVER ENDANGERED SPECIES

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Modification of the current pattern of flow releases from Gavins Point Dam to conserve endangered species is probably the most controversial issue associated with the Missouri River Operations section 7 consultation. For that reason, Ralph Morgenweck, the U.S. Fish and Wildlife Service's (Service) Regional Director for Region 6, requested that a panel of experts conduct an analysis of the scientific basis for flows and habitat quality below Gavins Point. Brigadier General Strock, Commanding General for the Portland Division of the U.S. Army Corps of Engineers, also orally endorsed the concept of conducting a scientific analysis of this issue.

Recognizing that input from the scientists would be useful in developing a reasonable and prudent alternative (RPA), the scientists were asked to respond to three questions relative to flows and habitat quality for threatened and endangered species below Gavins Point. They were not asked to review the RPA, nor would they be asked to review the biological opinion. Thus, from the onset, there was little time to identify and establish a capable panel of scientific experts, acquiring input from them and using the analyses they provided.

The Corps agreed that the Service would take the lead on this project and the task was assigned to the Service's Ecological Services Field Office in Columbia, Missouri. Recommendations for panel members were solicited informally from the Corps, Service, other Federal and state agencies, the Missouri River Basin Association, Missouri River Natural Resources Committee, and the Tribes. The Service and the Corps Interagency section 7 work group jointly developed a list of 45 potential scientific experts in the fields of fishery biology, ornithology, and lotic systems (aquatic ecology/hydrology/habitat, etc.) that the workgroup believed had relevant expertise to effectively contribute to this scientific review project. The list of candidates included nominees from government research offices, academia, and the private sector. Representatives from all three of these broad categories were eventually selected to serve on the review panel. A subcommittee of the interagency section 7 workgroup, consisting of one Service and three Corps representatives were assigned to shepherd the scientific review process to completion.

Since the Service had the lead on this project, personnel from the Ecological Services Field Office in Columbia, Missouri, began contacting people from the list of candidates in early April 2000, to identify willing participants. Consideration was given to the candidates' areas of specialty to adequately represent all areas of expertise and in hopes that the perspectives of the panel members would be broader based and have a wider range of application.

Time constraints prohibited canvassing all 45 candidates included on the original list. Solicitation of candidates for the scientific panel ceased when positive responses were received from seven candidates. A list of the people chosen to serve on the scientific panel is included in this appendix.

Candidates were initially contacted by telephone and subsequently sent a follow-up e-mail note soliciting their participation in a scientific evaluation of proposed modifications to the current pattern of annual flow releases from Gavins Point Dam to conserve endangered species. The telephone interview queried each candidate regarding the applicability of his/her academic background and experience relative to the scientific evaluation being proposed, asked them to identify any appreciable conflict(s) of interest and, whether they could perform the evaluation within the time limitations of the project. The e-mail note contained a request for a resume or curriculum vitae and asked each candidate to sign a confidentiality form that reiterated their belief that they were unaware of any matter that might inhibit their ability to participate in the proposed evaluation in an objective and unbiased manner.

The Corps/Service Interagency Peer Review Subcommittee jointly developed three questions to submit to the scientific panel members. The group strived to develop questions that would focus the panel member's expertise directly upon the controversial issue at hand: the biological validity of recommending flow release modifications from Gavins Point Dam to conserve endangered species.

Prior to their review and analysis, background material was mailed to the panel members and two conference calls were held to brief the scientific panel members and let them ask questions. The Corps and the Service both participated in these conference calls. During these calls, the panel members were informed that their evaluations would be independent, and that they were not expected to come to a group consensus regarding answers to the three questions.

The panel members began their review on May 3, 2000, and were asked to provide their input to the Service by May 23, 2000, to be included in the draft biological opinion (originally scheduled for release June 1, 2000). Six panel members provided their input on or about May 23, 2000. Late in the evaluation period, one panel member had to excuse herself from the scientific review process due to computer-related technical problems. The three questions and six evaluations follow. A full administrative record is on file at the Service's Columbia, Missouri, Ecological Services Field Office.

Questions for Scientific Review Panelist Consideration:

1. Based on the most current information on pallid sturgeon, interior least tern, and piping plover:

Is there a generally accepted relationship between Missouri River flows (and stage) and habitat quality for threatened and endangered species? In addition to the need for physical habitat restoration, will it also be necessary to restore some semblance of the historic (pre-project) annual hydrograph (i.e., higher spring and lower summer flows) to the Missouri River downstream from Gavins' Point Dam to improve habitat conditions for and conserve pallid sturgeon, least tern, and piping plover? For example, will flows that more closely simulate the historic hydrograph provide endangered species with spawning or nesting cues, thus providing more effective utilization of available physical habitat.

2. Can populations of the Federally listed threatened and endangered species associated with the Missouri River ecosystem be conserved by some other means not involving flows specifically targeted for that purpose? For example, could the physical habitat modifications by themselves, or in combination with the other management and restoration techniques result in the conservation of the listed species without modifying the current operational schedule? Can we adequately define how the target species respond to habitat conditions and is there adequate information describing what each species needs in order to thrive?
3. If physical habitat restoration and hydrological modifications are both necessary for the conservation of Missouri River threatened and endangered species, are there greater benefits to phasing implementation (one before the other) of those measures or various proportions of each that would yield the greatest benefits?

(Note: questions should be considered within the scope of the existing projects - i.e., dams and channel in place.)