

Comments and Responses



INTRODUCTION

A Notice of Intent to prepare a draft environmental impact statement (EIS) on the operation of Flaming Gorge Dam and announcement of public scoping meetings was published in the *Federal Register* on June 6, 2000. A corresponding press release announcing that the Bureau of Reclamation was beginning the EIS process for Flaming Gorge Dam was issued the same date. In November 2001, a newsletter regarding the development of the EIS was sent to those on the EIS mailing list.

Input was actively solicited from a broad range of public constituencies as part of the ongoing public involvement process. Comments and involvement in the planning for and preparation of the Flaming Gorge EIS were generally sought through communication and consultation with a variety of Federal, State, and local agencies; Native American tribes and interest groups; and the formal EIS scoping process and EIS comment process, both of which invited input from the general public.

In June and July 2000, Reclamation, as lead agency, invited a number of State and Federal agencies and the Northern Ute Tribe to become cooperating agencies in preparing the Flaming Gorge EIS. The following are the eight cooperating agencies: the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, State of Utah Department of Natural Resources, U.S. Fish and Wildlife Service, United States Department of Agriculture Forest Service (USDA Forest Service), Utah Associated Municipal Power Systems, and Western Area Power Administration (Western).

The draft EIS was mailed to the interested public for review and comment in early September 2004, and a Notice of Availability of the draft EIS was published in *the Federal Register* on September 10, 2004. The 60-day review and comment period for the draft EIS ended on November 15, 2004.

During the public comment period, five public hearings were held to receive oral comments on the draft EIS: Moab, Utah, October 12, 2004; Salt Lake City, Utah, October 13, 2004; Rock Springs, Wyoming, October 19, 2004; Dutch John, Utah, October 20, 2004; and Vernal, Utah, October 21, 2004. All written and oral comments received during the comment period were considered in preparing the final EIS.

The final EIS, like the draft EIS, has been mailed to over 600 agencies, organizations, and individuals on the mailing list and notice of its availability has been published in the *Federal Register*. It is also available on the Flaming Gorge EIS Web page.

All comments received on the draft EIS were carefully reviewed and considered in preparing the final EIS. Where appropriate, revisions were made to the document in response to specific comments. The comments and responses together with the final EIS will be considered in determining whether or not to implement the proposed action.

This volume contains a scanned copy of each comment letter, followed by the corresponding responses to that letter.

FEDERAL AGENCIES

- 1. United States Environmental Protection Agency**
- 2. U.S. Fish and Wildlife Service**
- 3. National Park Service**
- 4. Western Area Power Administration**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18TH STREET - SUITE 300

DENVER, CO 80202-2466

<http://www.epa.gov/region08>

NOV 12 2004

Ref: 8EPR-N

Peter Crookston
Flaming Gorge EIS Manager
PRO-774
Bureau of Reclamation
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

Re: Operation of Flaming Gorge Dam, Draft
Environmental Impact Statement, CEQ# 040434

Dear Mr. Crookston:

The Environmental Protection Agency (EPA)-Region 8 has reviewed the Draft Environmental Impact Statement (DEIS) for the Operation of Flaming Gorge Dam. The EPA reviews DEIS documents in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major federal agency action. EPA's comments include rating the environmental impacts of the alternatives and the adequacy of information in NEPA documents.

The EPA supports the Purpose and Need and proposed management activities in the DEIS and its Action Alternative. The U.S. Bureau of Reclamation (Reclamation) is to incorporate management direction in operations of the Flaming Gorge Dam that affect peak flows, durations, water temperatures, and base flows. New operations criteria are recommended to conserve, protect, and promote the recovery of the populations and designated critical habitat for endangered fish species: bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. Revised dam operations are designed to reduce or eliminate some adverse effects from dam operations and facilities in the Green River below Flaming Gorge Dam to the confluence with the Colorado River.

EPA notes that Reclamation consulted with the U.S. Fish and Wildlife Service to address concerns regarding the Action Alternative's compliance with the Endangered Species Act and Reclamation's Section 7 responsibilities to conserve and recover the listed fish species and other affected fish and wildlife such as the Southwestern Willow Flycatcher and Ute Ladies'-Tresses, and to resolve their Jeopardy Biological Opinion for the endangered fishes.

1a Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts, the Action / Preferred Alternative will be rated "EC-2" (Environmental Concerns - Inadequate Information). A copy of EPA's rating criteria is enclosed. Our rating is based on management direction in the Preferred Alternative that has the potential to adversely affect other wildlife and their habitats and the uncertainties surrounding both the impacts of the proposed management actions and the adaptive management changes that may be



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necessitated in the future. The consideration of No Action and only one alternative – the Action Alternative – is driven by the project purpose and the elimination of other alternatives from complete study. Other alternatives were not studied further, reportedly because of water consumption and diversions from the Green River and because of Reclamation’s interpretation of the Colorado River Storage Project and other legislation that continues authorized dam purposes. Alternatives that were eliminated include Modified Run of the River and Removing Flaming Gorge Dam. EPA is concerned that only one alternative was fully considered to meet the Purpose and Need, not meeting CEQ’s intent to assess all reasonable alternatives [CEQ’s “40 Most Asked Questions” #1, 40 CFR 18026]. A limited range of alternatives disallows understanding the overall environmental, social, and other effects of other alternatives, particularly the Modified Run of the River, and does not fully satisfy NEPA requirements to fully analyze all reasonable alternatives [40 CFR 1502.14]. NEPA regulation 40 CFR 1514(c) requires that a lead agency, “Include reasonable alternatives not within the jurisdiction of the lead agency.” While EPA accepts the unreasonableness of dam removal in this case, the Modified Run of the River alternative and perhaps additional alternatives that strengthen spring pulses and lower summer flows could have been considered for “... sharply defining the issues and providing a clear choice among options by the decisionmaker and the public” [40 CFR 1514]. The EC-2 rating is based on the limited range of alternatives and the lack of information of their potential effects on the listed fish species and other fish and wildlife species.

We note that the Action Alternative appears to be the Environmentally Preferred Alternative between the two alternatives and we concur with Reclamation in its selection as the Preferred Alternative for the two alternatives considered.

Thank you again for the additional protections that are proposed for conservation and recovery of the endangered fishes and their critical habitats. Brad Crowder of my staff coordinated EPA’s comments and can be reached at (303) 312-6396. If you wish to discuss our comments, please feel free to call me at (303) 312-6004 to arrange a meeting.

Sincerely,



Larry Svoboda, Director
NEPA Program
Office of Ecosystem Protection
and Remediation

Enclosure

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment February, 1987.

**1. UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY**

1a

Comment noted.

1b

Reclamation acknowledges that a full range of reasonable alternatives is desirable. However, despite considerable

effort to develop additional alternatives that meet the purpose and need of the environmental impact statement, additional viable action alternatives could not be identified. Please see section 2.2 of the EIS.



United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FW6/ES
04-1419

November 23, 2004

Memorandum

To: Mr. Peter Crookston, Flaming Gorge EIS Manager, PRO-774, Bureau of Reclamation, Provo Area Office, 302 East 1860 South, Provo, Utah 84606-7317

From: Field Supervisor, Fish and Wildlife Service, Ecological Services Field Office, West Valley City, Utah

Subject: Fish and Wildlife Service Comments on Operation of Flaming Gorge Dam Draft Environmental Impact Statement

The U.S. Fish and Wildlife Service (Service) has reviewed the Operation of Flaming Gorge Dam Draft Environmental Impact Statement (DEIS). We are providing the following comments to assist you in preparing a final Environmental Impact Statement.

General Comments:

We appreciate Reclamation's efforts to move forward toward implementing this important measure for recovery of the endangered Colorado River fish species. We also appreciate the close collaboration and communication during evaluation of effects and preparation of this document. Reclamation has done a very thorough analysis especially when one considers the broad spectrum of resource issues and the geographical scope of the proposed action.

We note that in addition to the benefits that re-operation will have on native endangered fish species, the Action Alternative action is expected to:

- allow Flaming Gorge Reservoir elevations to fluctuate less between seasons as well as generally be higher thereby benefiting kokanee egg incubation;
- allow for warmer releases immediately after spring releases which should allow for a quicker recovery of the aquatic food base and also increase species richness;
- provide a new base flow prescription which will benefit resident native fish by increasing stable backwater habitat, increasing the aquatic food base during summer and fall, and provide more stable overwintering habitat for young-of-year native fish in certain reaches of the Green River;
- increase water temperatures thereby benefiting native fish through an overall increase in productivity and increased growth rates;

- reduce the potential for hybridization between native sucker and nonnative white sucker with the proposed temperature recommendations;
- increase overwinter survival of trout by reducing flow fluctuations through the winter; and
- increase the amount of available spawning substrate for fall spawning trout by increasing summer and fall base flows during average to wet years.

2a The DEIS communicates some uncertainty as to how Reclamation will operate to meet Muth et al. 2000 and perhaps some question as to Reclamation's level of commitment to use of the spillway to meet the same. That said, we do agree with the basic premise that the true test of these recommendations will be over the long term, which we feel is consistent with both the structure and intent of Muth et al. 2000. The Service will work closely with Reclamation and other stakeholders in the implementation of these flow and temperature recommendations.

Reclamation's proposal to implement Muth et al. 2000 with an adaptive management approach presents a logical mechanism to deal with the uncertainties associated with the Action Alternative. The Service looks forward to working with Reclamation, the Recovery Program and others to see this through. Throughout the text Reclamation repeatedly references the Recovery Program to serve as the science body and the funding mechanism to address many of the uncertainties dealing with the fish community. We assume there has been communication throughout the development of the document between Reclamation and the Recovery Program Directors office and some reference to those conversations seems appropriate. Such a reference would serve to support the Environmental Commitments made near the end of the DEIS.

2b

We appreciate Reclamation's commitment to document the implementation process in an administrative record and we feel that that document will serve a critical role in the Service's long term evaluation of the proposed action from a Section 7 (ESA) perspective. As the Recovery Program has been identified to serve as the science body in charge of the adaptive management process as it relates to the fish community, the administrative record should be made available to them on an annual basis. We suggest that Reclamation make the administrative record available to the Recovery Program consistent with the Recovery Program's Annual Reporting cycle. More specifically we request that the administrative record include:

2c

1. A summary of the river basin forecasting that was used in deciding the appropriate pre-runoff hydrologic category.
2. A summary of other criteria (Yampa River hydrology, reservoir elevation, other authorized purposes, past operations, etc.) used in the development of the annual spring runoff / baseflow operations plan including the ultimate spring and baseflow targets.
3. An accounting of reservoir operations (flow and temperature).
4. The administrative record should be a living document updated each year while maintaining an historical accounting of past operations (all years post-Record of Decision).

Specific Comments:

- 2d Page 28, 2.5.1. Safe Operations of Flaming Gorge Dam. Please provide more basis for operating to assure that 99% of the foreseeable forecast errors are successfully routed through Flaming Gorge Dam in the future. Is this how the reservoir has been operated in the past? How does this compare with other Reclamation or ACOE facilities? Please consider the relative capacity of the outlet works at Flaming Gorge and other facilities in this discussion.
- 2e Page 43, 2.6.6.2. The document states that “under the Action Alternative, Ute ladies’-tresses could be lost in Reach 1”. This is a more extreme conclusion than in the Biological Assessment. We recommend that you review all sections in the DEIS and the BA for consistency in prediction and explanation of potential effects.
- 2f Page 157, 4.7.1.2. Aquatic Food Base - This section states for both the No Action and Action Alternatives that the proposed action will not affect the aquatic food base in the reservoir. While this may indeed be the case, the document should include at least a brief rationale for this determination.
- 2g Page 157, 4.7.1.4. Terrestrial and Avian Animals – As mentioned above, the document should include at least a brief rationale for the determination that neither the Action nor the No Action alternative will affect land-based animals or birds.
- 2h Page 188, 4.7.8.6.3. Mexican Spotted Owl – A rationale for your “no effect” determination for Mexican spotted owl should be included here. You have included a rationale for other Federally listed species.
- 2i Page 243, 4.19.5. Please consider the comments of the Recovery Program’ biology committee and other interested parties to Western’s presentation of a Floodplain White Paper, which served as the basis for this section in the DEIS. Based on that discussion and subsequent follow-up commentary it is the Service’s opinion that this uncertainty has been given a disproportionate amount of attention in the DEIS. We assume that the Recovery Program is comfortable with the Environmental Commitments they have been tasked with (bulleted items pg 247), and some reference to the Recovery Program’s acknowledgment seems appropriate.
- 2k Page 246. The discussion on this page implies that floodplain inundation is the only or primary purpose of the high flows and their duration. Perhaps it should be pointed out here that sediment movement and deposition and vegetation establishment and maintenance are also part of the purpose of high flows.
- 2l Page 247, 4.19.6. We recommend that Reclamation include an environmental commitment to address riparian/vegetation uncertainties through a monitoring and study program. This section describes several important topics for study.

Sections 4.20 Addressing Uncertainties through Adaptive Management

2m We recommend that this section include a discussion recognizing the opportunity to monitor riparian vegetation and geomorphology as part of the adaptive management process, particularly as they may affect Ute ladies'-tresses, with a focus on Reach 1. Reclamation has already been gathering baseline information. The Action Alternative provides an excellent opportunity to gain a better understanding of the interdependence of flow regime, fluvial land forms, and riparian vegetation. A monitoring program designed to learn from the Action Alternative flows will provide a venue for recommending and evaluating flow adaptations that achieve vegetation as well as native fish recovery goals. Additionally, this will allow proactive management for Ute ladies'-tresses conservation and invasive plant species control.

Section 4.21. As per our comments above, we recommend that the following be added to Section 4.21 as Environmental Commitments:

- 2n • Reclamation, in coordination with the Fish and Wildlife Service, National Park Service, and other knowledgeable scientists, will continue to monitor riparian vegetation and geomorphology to gain a better understanding of the interdependence of flow regime, fluvial land forms, and riparian vegetation. A monitoring program designed to learn from the Action Alternative flows will provide a venue for recommending and evaluating flow adaptations that achieve vegetation as well as native fish recovery goals.
- 2o • Reclamation, in coordination with the Fish and Wildlife Service, National Park Service, and other knowledgeable scientists, will develop and implement a monitoring plan for Ute ladies'-tresses populations for determination of possible effects from the Action Alternative. This monitoring plan would be designed to assist understanding of Ute ladies'-tresses establishment, response to habitat change (including hydrologic, geomorphic, and vegetation change) and management of habitat. If monitoring or research indicates that conservation measures are necessary or desirable, Reclamation will pledge support and work with other interested parties to ensure their implementation. Recommendations for releases to assist riparian vegetation health and Ute ladies'-tresses conservation will be forwarded to the Flaming Gorge Working Group for consideration.

If you need further discussion or information, please contact Larry Crist, Assistant Field Supervisor, or Lucy Jordan, Fish and Wildlife Biologist, at the letterhead address of (801) 975-3330 ext. 126 or 143 respectively, or email: larry_crist@fws.gov, or lucy_jordan@fws.gov.



2. U.S. FISH AND WILDLIFE SERVICE

2a

The *Flow and Temperature Recommendations for Endangered Fishes in the Green River Downstream of Flaming Gorge Dam* (2000 Flow and Temperature Recommendations) acknowledge variability, risk, and uncertainty regarding the flow recommendations. Reclamation seeks to meet all of the requirements placed upon the reservoir and dam and seeks to balance the benefits among all authorized purposes of the facility.

Under the Action Alternative, the frequency of spillway use could increase to about 15 days per year in 7 percent (%) of all years. Spillway use of 1 to 10 days is expected in nearly 17 % of all years. With increased spillway use, there is greater opportunity for degradation of concrete in the spillway tunnel. Should damage to the spillway become excessive, repairs would be made or use of the spillway would be limited to when hydrologically necessary.

More frequent use of the spillway also raises the concern of more frequent entrainment of nonnative reservoir fishes. Reclamation does not intend to use the spillway unless releases need to exceed 8,600 cubic feet per second (cfs) (unless use of the spillway is required for dam safety reasons).

As stated in section 2.5.3.2, second paragraph, Reclamation would annually coordinate the decision whether to use the bypass tubes or spillway to meet particular flow targets. That same section, and other sections in the EIS, note uncertainties associated with use of the spillway that will have to be monitored and addressed through adaptive management.

2b

Additional text was added to section 1.4.4 of the EIS.

2c

Comment incorporated in section 2.3.2 and 2.5.3 in the EIS.

2d

Flood routing studies are performed for all Reclamation reservoirs. The level of acceptable risk, i.e., forecast error exceedance percentage, will vary at each facility depending on engineering considerations of the structure and downstream populations at risk. Such a determination is based on engineering judgment. Safe operation of Flaming Gorge Dam provides enough storage buffer in the reservoir to maintain a release hydrograph that includes full capacity powerplant and bypass releases as well as spillway use when an unexpected error in the forecast occurs. Since the high inflow seasons of 1983 and 1984, operation of Flaming Gorge Dam has moved to a more conservative operation. Spillway releases of high volume are a dam safety risk that Reclamation is not willing to accept on a frequent basis. That is, an acceptable risk would be spillway releases of high volume approximately once every 100 years.

Reclamation is unaware of available forecast error exceedance data to make comparisons with other Reclamation or U.S. Army Corps of Engineers facilities.

2e

Section 2.6.6.2 is a brief summary of effects to all threatened and endangered species. In this section it is necessary to state the facts succinctly which may give the impression of being a more extreme position than in the lengthy description appropriate for the biological

assessment and chapter 4 of the EIS. See section 4.7.8.2 for details of effects to Ute ladies'-tresses.

2f

Text in sections 4.7.1.2.1 and 4.7.1.2.2 of the EIS has been clarified.

2g

This section of the EIS was written to disclose environmental consequences of the No Action and Action Alternatives affecting terrestrial and avian animals existing on or near Flaming Gorge Reservoir. Text has been added to section 4.7.1.4 to clarify and support the conclusion.

2h

This section of the EIS was written to disclose environmental consequences of the No Action and Action Alternatives affecting threatened or endangered species existing within the area affected by the project. The ability of these owls to reach and exploit water or water related food or habitats would not be hampered under either alternative. Text has been added to section 4.7.8.6.3 to clarify and support the conclusion.

2i

The text has been clarified in section 4.19.5.

2j

The Upper Colorado River Endangered Fish Recovery Program (Recovery Program) has concurred with the following language in the environmental

commitments in the EIS and conservation measures in the Flaming Gorge Biological Opinion: "The adaptive management process would rely on ongoing or added Recovery Program activities for monitoring and studies to test the outcomes of modifying the flows and release temperatures from Flaming Gorge Dam."

2k

Discussion in the EIS has been clarified in section 4.19.5.

2l-2n

Effects to riparian vegetation will, at a minimum, result in no measurable change from the No Action Alternative or will result in a positive response. Therefore, Reclamation does not believe that effects to vegetation, other than those specifically identified, warrant an environmental commitment in this National Environmental Policy Act (NEPA) document. We have funded numerous studies addressing the relationship of river regulation and riparian ecosystems, and we will likely continue studies that overlap with the effects of the proposed action.

2o

Reclamation has added language to section 4.21 which clarifies Reclamation's commitment to monitor for potential effects to Ute ladies'-tresses.



United States Department of the Interior

NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
12795 West Alameda Parkway
PO Box 25287
Denver, Colorado 80225-0287



NOV 15 2004

Memorandum

N1621(IMR-RSR)

To: Flaming Gorge Environmental Impact Statement Manager, PRO-774
U.S. Bureau of Reclamation, Provo Area Office

From: Director, Intermountain Region
National Park Service, Intermountain Region

Subject: National Park Service Comments on *Operation of Flaming Gorge Dam Draft Environmental Impact Statement*

We are writing to provide you with National Park Service (NPS) comments on the *Operation of Flaming Gorge Dam Draft Environmental Impact Statement (DEIS)*. As you know the NPS is a member of the Upper Colorado River Endangered Fishes Recovery Program (Recovery Program) and has been a cooperating agency throughout the development of the DEIS. We strongly support the re-operation of Flaming Gorge Dam to assist in the recovery of the Colorado pikeminnow, razorback sucker, humpback chub and bonytail and we believe that the Action Alternative has the potential to achieve this purpose if implemented correctly. In addition, we wish to express our appreciation for the professional relationship we have been able to establish with Bureau of Reclamation staff in working to address the potential effects of re-operation on the diverse river-dependent resources that are managed by NPS.

3a NPS staff from the Intermountain Region, Dinosaur National Monument and the Water Resources Division submitted extensive comments on the administrative draft of the EIS released in December 2003. While the current draft of the EIS is greatly improved and some of our suggestions have been incorporated, some of our comments on the earlier draft have not been specifically addressed. We have included our continuing comments of priority concern from that administrative draft in this comment memorandum. We believe that addressing these comments is important to ensure that re-operation of Flaming Gorge Dam occurs in a manner that maximizes the benefits to the endangered fishes while providing adequate protection for river dependent resources in Dinosaur National Monument and Canyonlands National Park. For your convenience we are including our earlier comments as an attachment to this letter. It is our hope that we can continue to work with you so these

comments can be addressed in the future through the adaptive management process and that the flow recommendations as described in the Action Alternative can be implemented as soon as possible.

We are including additional recommendations that are of particular importance to the NPS and which we believe can be addressed with minimal effort. These recommendations constitute the remainder of this letter:

1. Colorado River Basin Project Act of 1968

- 3b a. We applaud the recognition of the Colorado River Basin Project Act of 1968 (Act) as one of the laws governing the operation of Flaming Gorge Dam as well as the recognition that “*improving conditions for fish and wildlife*” is among the purposes authorized by the Act. We look forward to working with BOR in implementing the Action Alternative in a manner that benefits native, non-endangered fish and wildlife species while contributing to recovery of the 4 endangered fishes.
- 3c b. We are generally pleased with the language describing the technical working group (TWG) and recognize that the US Fish and Wildlife Service and BOR have ESA responsibilities that necessitate their participation as team members. However, we question the rationale for identifying the Western Area Power Authority (Western), alone among the other interested agencies and organizations, as a member of the TWG. This suggests that Western has a special status and that power generation has priority over other authorized purposes. In fact, as noted in the DEIS, both the Colorado River Storage Project Act and the Colorado River Basin Project Act indicate that power generation is to occur “as an incident of other authorized purposes”.
We propose this issue be addressed in one of the following ways:
- i. *Eliminate the specific reference to Western as a member of the TWG.*
 - ii. *List the other agencies and organizations that are potential participants in the TWG as well as Western.*
 - iii. *Provide the rationale for identifying Western alone among the interested agencies and organizations as a TWG member.*

2. Floodplain uncertainties:

- 3d We are concerned about the addition of section 4.19.5 which addresses floodplain uncertainties. This section suggests a possible future change to certain specific flow recommendations. The suggested change is touted as beneficial to razorback sucker in Reach 2. The section also lists a number of uncertainties about floodplain inundation, razorback sucker larval entrainment, and timing and duration of peak flows that need to be resolved through scientific study. We support scientific study to resolve these uncertainties; however, the evidence that this change would provide greater benefits to razorback sucker than the existing flow recommendations should be definitive before that change is adopted. We also point out that the suggested change would reduce the frequency of meeting the flow targets in Reach 1. We suggest some additional language for the section 4.19.5:

- 3e a. We have had verbal assurance from the authors of this section that instantaneous peak flow targets would still be met under the suggested revisions but this is not clear from the text. *Specify that instantaneous peak flow targets will still be met if further study indicates peak flow durations might be revised.*
- 3f b. The premise behind the flow and temperature recommendations (FTRs) is that inter- and intra-annual variability are key to restoration of the river ecosystem as recognized in the DEIS on pg 241: ‘The recommendations are based on a model that the ecological integrity of river ecosystems is linked to their dynamic character (Stanford et al. 1996, Poff 1997) and that restoring a more natural flow and thermal regimes is a key element in rehabilitating an impaired river ecosystem. The evidence that razorback sucker would benefit more from the suggested tradeoff in magnitude and duration of flows above 13,000 or 18,600 than from the overall rehabilitation of an impaired system should be definitive before the flow recommendations are changed. *This should be explicit in the “uncertainties” section.*
- 3g c. The floodplain white paper from which this section was adapted (Hayse et al. 2004 *draft*) has been revised to reflect the inaccurate assumption in the Valdez floodplain model that razorback sucker larvae are not likely to be available for entrainment at distances greater than 52 miles, due to attenuation in numbers of larvae as they drift downstream. This inaccuracy was identified by two peer reviewers who cited works showing CPE of larvae near the additional floodplain area more than 52 miles downstream is not negligible, but in fact is between 50% and 100% of CPE near Jensen. In addition, the only floodplain area where wild razorback sucker larvae have been shown to be successfully entrained and survived was in Old Charlie Wash, located 60 miles below the spawning bar (Modde and Bestgen comments on the floodplain whitepaper, and citations therein). *The “uncertainties” section should be updated to reflect this information.*
- 3h d. This section suggests that the main benefit of this change would be to razorback sucker, while the corollary benefit would be to power production. We submit that the certain benefit of this suggested change is to power production, while the corollary benefit might be to the endangered fish, in ways that we don’t fully understand. *This should be explicit in the “uncertainties” section.*
3. The importance of control, management and monitoring of the invasive species Tamarisk, and the links to endangered fish habitat and ecosystem health.
- 3i a. Tamarisk is classified as an invasive species and is regulated under **Executive Order 13112, February 3, 1999--Invasive Species** (published in the Federal Register/Vol. 64, No. 25, pp. 6183-6186.) The executive order clearly articulates responsibilities of federal agencies, including the Department of the Interior. Among these responsibilities are control, management, and monitoring of invasive species. *The EIS should provide for these responsibilities, or at a minimum contain references to the Executive Order, and to monitoring, control and management activities if defined elsewhere.*

3

- b. In addition to federal responsibilities for managing invasive species, tamarisk is widely recognized as contributing to the degradation of riverine ecosystems and thus may directly or indirectly affect endangered fish habitat. In Dinosaur NM it has contributed to channel narrowing in the Green River, and is advancing upstream into the Yampa River from the confluence towards one of the two known Colorado pikeminnow spawning sites in the Green River system. The spread of tamarisk could directly or indirectly affect fish habitat by altering channel morphology. Direct effects include burying cobble bars used for spawning by native fish under sediment and vegetation; indirect effects may include changes in the quantity and diversity of the aquatic food base due to channel narrowing and simplification. The links between tamarisk invasion and riverine fish habitat are not completely understood; however, a species which contributes to the degradation of riverine ecosystems is likely to contribute to the degradation of fish habitat. The DEIS recognizes in the uncertainties section that the action alternative may increase the spread of the invasive species tamarisk. *This uncertainty coupled with federal responsibilities to control invasive species strongly suggest the Environmental Commitments section should include a monitoring plan for tamarisk, and commitments to work with the NPS and other interested parties to control this invasive species.*
- 3j

4. Uncertainties about nonnative fish.

- The DEIS recognizes that the increased risk of entrainment at the Reservoir spillway and elevated temperatures of releases, could lead to the proliferation of nonnative species in Reach 1, particularly smallmouth bass. Smallmouth bass numbers are increasing in the Green River upstream from the Yampa River confluence, particularly in recent years, presumably in response to the drought and concomitant warm temperatures. While we believe that the implemented FTRs will be beneficial overall to the endangered fishes, we also believe that the potential negative effects, including enhancement of smallmouth bass populations should be carefully monitored, and control in Reach 1 implemented if necessary. *A commitment to monitoring and control, if it is determined to be necessary, should be added to Environmental commitment #3, which deals with operating the selective withdrawal structure.*
- 3k

5. Determining how target flows are met

- The DEIS states that target flows will be delivered on average, and that target flows “will be provided over the long run.” Over what period of time will it be determined that flow target are being met? In particular, for targets that are specified for 1 of 2 average years, or 1 of 4 average years, how long is the long run? If the duration peak flow targets are not met for 3 average years running, must they be met in the 4th average year? *Please clarify this in the text.*
- 3l

6. Ability to meet flow recommendations:

The DEIS suggests that it may become more difficult to meet the FTRs as depletions on Green River tributaries increase over time (4.19.1, paragraph 3). While we

3m

recognize relationship between tributary and mainstem flow, it is our understanding as a long time supporter of the Recovery Program that the re-operation of Flaming Gorge Dam is the reasonable and prudent alternative (RPA) for tributary depletions. Thus, in our view, it is the responsibility of BOR to ensure that the flow recommendations are met regardless of these depletions. We note that compensating for reduced tributary inflow may entail greater impacts to the other authorized purpose of the projects; however, we believe that failure to do so would impede efforts to recover the threatened endangered fishes and, in all likelihood trigger the re-initiation of consultation on a number of projects and facilities.

Please call the NPS point of contact for the DEIS, John Wullschleger, at (970) 225-3572 if you have any questions. We look forward to the finalization of this environmental impact statement.


Stephen P. Martin

Attachments

cc:

Regional Director, U.S. Bureau of Reclamation, Upper Colorado Office w/c attachments

Area Manager, U.S. Bureau of Reclamation, Provo Area Office w/c attachments

Program Director, Upper Colorado River Endangered Fish Recovery Program w/c attachments

Superintendents, Colorado River Basin Parks w/c attachments

Chief, NPS-NRPC-WRD w/c attachments

Memorandum: NPS to U.S. BOR Subject: National Park Service Comments on *Operation of Flaming Gorge Dam Draft Environmental Impact Statement*

Attachment:

List of Citations

- Bestgen, K. R. 2004. Comments to authors on Floodplain white paper by Hayse et al.
- Hayse, J.W., K.E. LaGory, and G.L. Burton. 2004. Consideration of site specific floodplain inundation thresholds in Implementing Peak Flow Magnitude and Duration Recommendations in the Middle Green River, Utah. Draft Report to Western Area Power Administration. Argonne National Laboratory, Argonne, Ill.
- Modde, T. 2004. Comments to authors on Floodplain white paper by Hayse et al.
- Poff, N. L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegard, B.D. Richter, R.E. Sparks, and J.C. Stromberg. 1997. *The Natural Flow Regime: A Paradigm for River Conservation and Restoration* in *BioScience*, vol 47. pp. 769-784.
- Stanford, J.A., J.V. Ward, W.J. Liss, C.A. Frissell, R.N. Williams, J.A. Lichatowich, and C.C. Coutant, 1996. A General Protocol for Restoration of Regulated Rivers in *Regulated Rivers: Research & Management*, vol. 12, pp. 391-414.
- Valdez, R.A. 2003. Floodplain model to estimate Nursery Habitat to Recover Razorback Sucker. Excel model for Upper Colorado River Basin Endangered Fish Recovery Program.

3. NATIONAL PARK SERVICE

3a

The comments and responses submitted during the cooperating agency review of the draft EIS are available upon request.

3b

Comment noted.

3c

Reclamation and Western are Endangered Species Act (ESA) co-consultants with the U.S. Fish and Wildlife Service for Section 7 consultations. Thus, all three parties are appropriately identified as members of the Technical Working Group. As stated in section 2.5.3 of the EIS, the technical working group will be open to all qualified individuals who choose to participate.

3d

The 2000 Flow and Temperature Recommendations report anticipates adaptive management testing of flow regimes. It is expected that over time, refinements to the targets will be possible based on increased information and knowledge. Text has been added to section 4.19 in the EIS for clarification.

3e-3h

The EIS states Reclamation's intent to implement all of the 2000 Flow and Temperature Recommendations as described in the Action Alternative. Section 4.19 explains the uncertainties associated with implementing the Action Alternative, including in section 4.19.5 those uncertainties associated with flood plain inundation. Both the EIS and the 2000 Flow and Temperature Recommendations acknowledge that over time, as additional information becomes available, refinements to the flow and temperature recommendations may prove to be warranted if data suggests that tradeoffs between peak flow magnitude

and duration provide greater benefits to endangered fish. Reclamation believes that if such refinements are proposed at some as yet unknown point in the future, based upon information developed through adaptive management or through ongoing Recovery Program research, there will be ample opportunity to obtain appropriate review and input from all Recovery Program participants as well as the interested public. The text has been clarified in section 4.19.5.

3i-3j

Our analysis in the EIS, based on best available information, is that the predicted effects of the Action Alternative on tamarisk do not reach the level of significance such that a program of monitoring and mitigation is warranted. See sections 4.7.5 and 4.19.6 of the EIS where this is discussed.

3k

The EIS states that Reclamation will rely on Recovery Program nonnative monitoring and control efforts. See fish response to flow and temperature modifications in section 4.19.4 of the EIS.

3l

It is difficult to isolate a specific number of years to evaluate the percentage of targets and durations achieved because it is unknown what the natural hydrograph will be in the future. Over the long run when several different natural hydrological years have occurred, Reclamation expects to be able to determine if the percentages are in line with the 2000 Flow and Temperature Recommendations. The target flows and durations to be achieved each year are dependent on the natural hydrograph of that year and the hydrological classification of that year. For example, if, as has just occurred, there are 6 consecutive drought years, then only low targets and durations would be

achieved. In very wet years, high targets with long durations would be achieved.

3m

Implementation of reasonable and prudent alternatives (RPAs) is Reclamation's responsibility as part of the Section 7(a)(2) Endangered Species Act consultation process with the U.S. Fish and Wildlife Service; but it should be noted that ESA compliance,

like compliance with other statutes and regulations, is part of the Federal regulatory construct under which Reclamation operates Flaming Gorge Dam. Reclamation is committed to upholding its responsibilities under the ESA, as well as meeting authorized project purposes.

From: "Heather Patno" <PATNO@wapa.gov>
To: <fgeis@uc.usbr.gov>
Date: Mon, Nov 15, 2004 4:44 PM
Subject: FG EIS, WAPA Comments

Dear Mr. Crookston,

Western appreciates Reclamation's efforts to incorporate its comments as a cooperating agency. Many of Western's concerns have previously been addressed. However, some comments previously addressed remain outstanding issues for Western.

- 4a The first of these comments deals with the Cumulative Impacts section. Western's concerns were initially addressed in an email dated 7/17/2004. The Cumulative Impacts section needs to be prominently treated within the EIS. Without more prominent treatment of Cumulative Impacts in the EIS, the public and the decision maker could easily conclude that the change to the Proposed Action would have an insignificant impact to power without a full understanding of the fact that operational constraints, over time, have caused a significant reduction to the power value of Flaming Gorge Dam. It is suggested that the Cumulative Impacts section for hydropower be moved as a subsection to Section 4.4 Hydropower Generation and additional background regarding the historical (pre 1992) changes in operation be inserted. While some background information is available, it does not adequately address in a clear and understandable manner the importance of the cumulative impacts.
- 4b Additionally, regardless of the location of the Cumulative Impacts section, the language used in this section is unclear. The insistence on using the words "economic value" leaves the reader with a feeling that Flaming Gorge Dam operational constraints have increased the value of water flowing through the dam. More detailed discussion is needed to make sure the public and the decision maker understand the overall negative impact continued restrictions on operations at Flaming Gorge Dam have caused. In addressing these concerns, Table 4-30 on page 232 also needs to show the negative impact. The percentage underneath the column entitled "Comparison of Cumulative Impacts to No Action Alternative" needs to be a negative to better show the appropriate impacts to hydropower.
- 4c
- 4d The second unaddressed comment deals with correlating the economic and financial analyses. Section 4.4.3 the Financial Analysis of Power Generation discusses Western's role in marketing electrical power from the CRSP units. It does not correlate the economic analysis of changes to operational constraints in this specific instance to the financial analysis of distributing those changes to various customers. A few sentences need to be inserted discussing the fact that the economic analysis is correlated to the financial analysis through distribution to Western's customers. In this instance, the correlation between economic and financial analysis is clear, concise and straightforward and deserves some discussion at the end of the economic analysis section or beginning of the financial analysis section.

Regards,
S. Clayton Palmer

4. WESTERN AREA POWER ADMINISTRATION

4a

The Flaming Gorge EIS compares the Action Alternative with the No Action Alternative and captures the existing environment as including changes due to the construction of the dam as well as its operations prior to 1992. Changes and effects resulting from the construction of the dam and its pre-1992 operations are appropriately considered in section 4.16.2 (cumulative effects analysis) of the EIS. The placement of the cumulative effects analysis, and the overall format of the EIS, are consistent with the Council of Environmental Quality (CEQ) and Department of the Interior (Interior) regulations implementing NEPA.

4b

The term “economic value” refers to the level of monetary worth and does not have any implied meaning of direction of change. The discussion of economic

value given no biological constraints is labeled as such. The economic value for the simulation with no biological constraints is greater than the economic value for the No Action and Action Alternatives. Clarifying text was added to section 4.16.2 of the EIS.

4c

Comment incorporated into table 4-30 of the EIS.

4d

Section 4.4.3.3 presents the financial analysis results. Because the Action Alternative would not have a significant impact on the rate Colorado River Storage Project (CRSP) customers pay, it was not necessary to distribute the impact of the change in rate to the various customers.

Text was added to section 4.16.2 of the EIS to clarify.