



United States Department of the Interior
FISH AND WILDLIFE SERVICE

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April 1, 2009

In Reply Refer To
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Memorandum

To: Larry Walkoviak, Director, Upper Colorado Region, Bureau of Reclamation (Reclamation)

Heather Patno, Chair, Flaming Gorge Technical Working Group, Bureau of Reclamation

From: Larry Crist, Field Supervisor, Utah Field Office, U.S. Fish and Wildlife Service (Service)

Subject: 2009 Green River Spring and Base Flows to Assist in Recovery of the Endangered Fishes

This provides the Service's current assertions regarding 2009 spring and base flows in Reach 2 of the Green River for discussion by the Flaming Gorge Technical Working Group (FGTWG) on April 7 in development of recommendations for Flaming Gorge Dam operations. The Service's intent is to work with other FGTWG members in recommending flows that assist in recovery of the endangered fishes while consistent with the 2005 biological opinion (BO) and 2006 record of decision (ROD). The following is subject to forecasted and/or real-time April–July hydrologic conditions in the upper Green River drainage, with recognition that trade-offs between and within spring and base flows should be considered and used to adjust operations as deemed appropriate.

First, the Service supports the Upper Colorado River Endangered Fish Recovery Program's (Recovery Program) February 26, 2009, request for a spring-runoff research flow. Providing a flow regime that adequately connects the Stirrup floodplain wetland with the Green River is crucial to the assessment of emigration rates of stocked razorback suckers. Knowledge gained from that assessment will further the understanding of the function of such floodplain wetlands in establishing self-sustaining razorback sucker populations.

Second, the Service proposes the following average base-flow magnitudes per hydrologic category, with reference to recommendations of Muth et al. (2002).

| April–July Forecast: Flaming Gorge Inflow/ Hydrologic Category | Muth et al. (2000) Average Base-Flow Magnitudes (cfs), Reach 2 | Service’s Proposed Average Base-Flow Magnitudes (cfs), Reach 2 |
|---|---|---|
| Dry | 900–1,100 | 1,060–1,100 |
| Moderately Dry | 1,100–1,500 | 1,420 to \geq 1,500 |
| Average | 1,500–2,400 | 2,220 to \geq 2,400 |
| Moderately Wet | 2,400–2,800 | 2,720 to \geq 2,800 |

This base-flow proposal is based on the Service’s basic understanding of preliminary results from 2008 Recovery Program studies, which suggest that the higher flows (spring and base) in Reaches 1 and 2 of the Green River negatively affected nonnative fish species (particularly smallmouth bass) and provided benefits to the endangered fishes. The proposed base flows would facilitate the conduct of similar Recovery Program studies in 2009. The Service requests that representatives of the Recovery Program Director’s Office participate in the April 7 FGTWG discussions as an information source.

In addition and in accordance with the BO and ROD, the Service supports Reclamation’s release of water of an appropriate temperature to meet thermal targets in both upper Lodore Canyon and in Echo Park. Experience gained in 2008 and previous years indicates that the base flows proposed above will not likely compromise Reclamation’s ability to meet these temperature targets to an appreciable extent.

We recognize and appreciate Reclamation’s ongoing efforts to recover the endangered fishes of the Colorado River system, if you have any questions or concerns please contact Paul Abate or Larry Crist at 801-975-3330.

