



CENTER FOR BIOLOGICAL DIVERSITY

BECAUSE LIFE IS GOOD.

November 8, 2005

Mr. Rick Gold
U.S. Bureau of Reclamation Upper Colorado Regional Director

Mr. Bob Johnson
U.S. Bureau of Reclamation Lower Colorado Regional Director

Mr. John W. Keys, III
U.S. Bureau of Reclamation Commissioner

Mr. Steve Spangle
U.S. Fish and Wildlife Service Arizona Field Office Supervisor

Southwest Regional Director
U.S. Fish and Wildlife Service Albuquerque

Mr. Dale Hall
U.S. Fish and Wildlife Service Director

Ms. Gale Norton
U.S. Department of the Interior Secretary

Dear Ms. Norton, Messrs. Gold, Johnson, Keys, Spangle and Hall, and Regional Director;

RE: Notice of Intent to Sue U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and U.S. Department of Interior regarding Glen Canyon Dam's destruction of Grand Canyon aquatic habitat. This destruction is resulting in increasing jeopardy to Humpback Chub (*Gila cypha*) and preclusion of recovery for Razorback Sucker (*Xyrauchen texanus*), Colorado Pikeminnow (*Ptychocheilus lucius*), and Bonytail (*Gila elegans*).

The December 21, 1994, Final Biological Opinion on the Operation of Glen Canyon Dam (2-21-93-F-167) codifies a Reasonable and Prudent Alternative "to prevent jeopardy to the endangered fish of Grand Canyon" resulting from Bureau of Reclamation's Glen Canyon Dam operational scheme. The scheme is the "Adaptive Management" of the "Modified Low Fluctuating Flow Alternative" (MLFF) of Bureau of Reclamation's "Final Environmental Impact Statement on the Operation of Glen Canyon Dam."

New information reveals effects of “Adaptive Management” and the MLFF operational scheme are harming Humpback Chub, its Critical Habitat and the Grand Canyon in a manner and extent not previously considered. New information documents your (1) failure to conserve Endangered Species and their Critical Habitat and (2) your taking of Endangered Species and destruction of Critical Habitat. Please immediately reinitiate formal consultation to begin movement towards the remedy of this historic blunder. New information reveals your preclusion of recovery for Razorback Sucker, Colorado Pikeminnow, and Bonytail.

Bureau of Reclamation’s Glen Canyon Dam “Adaptive Management” and MLFF operations are a failure. Proof of this failure is summarily documented in U.S. Geological Survey’s October 26, 2005, release of “The state of the Colorado River ecosystem in Grand Canyon.”¹

The report states:

“Today, three of the eight native fish species have been eliminated from the Colorado River in Glen and Grand Canyons (roundtail chub (*Gila robusta*), bonytail chub (*Gila elegans*), and Colorado pikeminnow)...” (p. 35)

“Overall, about 15%–20% of the adult humpback chub are dying each year. If this mortality rate and the dramatically reduced recruitment rate of young chub experienced since the early 1990s remain unchanged, there will be a decline in the adult population of humpback chub from the present 3,000–5,000 fish to a level of 1,500–2,000 adult fish over the next 10–15 yr.” (p. 45)

“...the flow regime [MLFF] has not reversed the decline in recruitment and adult abundance...Approximately 15%–20% of the adult humpback chub population is dying each year. These fish are most likely being replaced, albeit at a lower rate, predominately by young humpback chub that have spent the first 3 to 4 yr of their lives in the Little Colorado River. In other words, the MLFF alternative had either a negative effect or no effect at all, but it has not had a measurable beneficial effect on humpback chub...” (p. 47)

“...the authors of the preceding chapters presented evidence that dam operations during the last 10 yr under the preferred alternative of the MLFF have not restored fine-sediment resources or native fish populations in Grand Canyon, both of which are resources of significant importance to the program...” (p. 208)

“The Grand Canyon population of the federally endangered humpback chub (*Gila cypha*) has declined during the past decade under MLFF operations. Only eight native fish species were historically found in Grand Canyon. Six of these were desert species endemic (not found elsewhere) to

¹ USGS 2005. Gloss, S.P., Lovich, J.E., and Melis, T.S., eds., 2005, The state of the Colorado River ecosystem in Grand Canyon: U.S. Geological Survey Circular 1282, 220 p.

the Colorado River ecosystem, making this one of the most unusual fish communities in the world (Mueller and Marsh, 2002). Of the original eight, only four remain in Grand Canyon, namely the humpback chub, the bluehead sucker (*Catostomus discobolus*), the flannelmouth sucker (*Catostomus latipinnis*), and the speckled dace (*Rhinichthys osculus*). Of these four, only the humpback chub is endangered, and its numbers have dropped dramatically in the last decade. At the same time, nonnative fish have increased in both diversity and abundance. The reasons for the decline of native fish are commonly cited to include dramatic changes in the thermal, sediment, and hydrologic regimes of the river because of the construction and operation of numerous dams in the basin, the introduction of nonnative predatory and competitive fishes, and the introduction of diseases and parasites (Mueller and Marsh, 2002)..."

Our knowledge about the cause and effect between dam operations and chub decline is incomplete; we do know, however, that the current MLFF operation has not resulted in increased survival and recruitment of humpback chub, despite the prediction of the EIS..." (p. 208)

"...it is clear that the restrictions on dam operations since 1991 have not produced the hoped-for restoration and maintenance of this endangered species (see chapter 2, this report). During the MLFF, basin hydrology has varied from drought to wet conditions and then back to drought conditions. Through these conditions, the decline of the humpback chub has continued. This trend leads to questions about whether daily, monthly, or even annual patterns of dam operation alone are relevant to native fish recruitment or whether changes in the sediment and thermal regimes of the river imposed by regulation have had the greatest influence on native fishes. Further, the issue of nonnative fishes and their potential to limit recruitment of native fish through predation and competition (although highly suspected by scientists as a significant factor) remains unresolved in Grand Canyon..." (pp. 208, 214)

"...the relatively stable habitat conditions created under the MLFF during protracted drought conditions, coupled with a coarsening of substrate in the river channel (see section below on fine sediment), appear to have greatly favored rainbow trout (*Oncorhynchus mykiss*), particularly in the Lees Ferry reach, as reflected in their increasing numbers during the last decade." (p. 214)

"Research and monitoring have conclusively demonstrated a net loss of fine sediment from the Colorado River ecosystem under the MLFF. Closure of Glen Canyon Dam eliminated about 84% of the sand that historically entered Grand Canyon..." (p. 214)

"We also know from research on coarse sediment dynamics that there has been an overall trend for the Grand Canyon reach to experience coarsening of the substrate in the river channel since completion of Glen Canyon Dam. As fine sediment is eroded because of dam operations, gravel and larger material remain. The impact of this "coarsening" of the river

substrate has two potential biological implications: first is the creation of preferred habitat for benthic invertebrates, which are an important component of the aquatic ecology of the system, and second is the creation of spawning substrate for the nonnative rainbow trout. Both of these changes move the system farther from predam conditions and potentially benefit nonnative species like trout at the expense of natives.” (p. 214)

“Research and monitoring conducted by U.S. Geological Survey scientists and their cooperators have conclusively demonstrated a net loss of sediment from the system and have documented the decline of the federally endangered humpback chub during the last decade...” (p. 218)

In 60 days, if you fail to reinitiate consultation and to remedy these violations of the Endangered Species Act, we intend to seek legal remedy on behalf of Humpback Chub, Razorback Sucker, Colorado River Pikeminnow, Bonytail, and the Grand Canyon. If you have further questions, please contact Robin Silver, M.D., Board Chair, Center for Biological Diversity, P.O. Box 39629, Phoenix, AZ 85069-9629, by mail; by phone: 602.246.4170, or by Email: rsilver@biologicaldiversity.org. Living Rivers (www.livingrivers.org) joins CBD in this effort. Living Rivers contact person is Conservation Director John Weisheit (435.259.1063).

Sincerely,

A handwritten signature in black ink, appearing to read "Robin Silver", with a stylized flourish at the end.

Robin Silver, M.D.
Board Chair