LIVING RIVERS

August 13, 2003

Mr. Michael Gabaldon
Deputy Director of Operations
U.S. Bureau of Reclamation
Department of Interior
1849 'C' Street, NW
Washington, DC 20240

Re: Concerns regarding Glen Canyon Dam Adaptive Management Program

Dear Mr. Gabaldon,

The consistent message emanating from the Glen Canyon Dam Adaptive Management Program (AMP) is that it is failing in achieve its principal objective, the protection and recovery of endangered Humpback Chub (HBC). While the AMP and independent scientists debate how low HBC numbers are, all agree that they have declined considerably since the process began seven years ago. Living Rivers recognizes that AMP efforts are underway in an attempt to remedy this situation, but is very concerned that such efforts are not sufficiently comprehensive, nor do they justify hasty and inappropriate management practices.

Furthermore, Living Rivers believes that more than sufficient "new information" now exists to warrant the immediate undertaking of an entirely new, or supplemental, Environmental Impact Statement (EIS). Additionally, such new information also warrants an EIS be prepared for the planned Temperature Control Device (TCD) or the potential installation of generations on the dam's bypass tubes.

1. Emphasis on HBC numbers insufficient to address recovery needs

The AMP and Grand Canyon Monitoring and Research Center (GCMRC) focuses undue emphasis on yet conclusive approaches of counting of fish, and little to no resources on understanding their physical condition, nor the biological parameters necessary for their recovery. After nearly seven years of operation, all GCMRC has learned is that HBC populations are declining, but cannot determine by how much. The present estimate has an one hundred percent level of variability of 2,000 to 4,000 fish. Why has GCMRC yet to develop a mechanism to provided reliable fish counts, nor can the scientists within the AMP agree on whether the present counts constitute a crisis as far as the near extirpation of HBC in Grand Canyon?

The AMP's priority should not just be numbers of fish, but knowing their physical condition and what biological parameters must exist for preservation, and, as necessary, recovery. In 2000, Meretsky, et. al., published findings that indicated a possible decline in HBC condition since 1978. If true, such a trend would indicate that factors other than predation are effecting the HBC, and that undue emphasis on predation, as is presently occurring, won't address this problem. So far all reports and analysis by the AMP have focused on HBC numbers, and not their relative condition or health. While some of this

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data has been collected, there has not yet been any ongoing analysis of HBC condition factors as was recommended by Meretsky. Why?

Additionally, GCMRC has not developed sufficient information on HBC biological parameters. Such understanding is critical for making effective management decisions for the HBC future in Grand Canyon. At minimum, GCMRC should be investigating feeding habits, water quality, and recruitment and migration patterns for all periods of the HBC's lifespan. As the Little Colorado River presently represents the sole refuge for HBC in Grand Canyon, immediate emphasis should be placed on understanding the biological parameters to be persevered in this tributary to ensure this critical habitat is not disrupted.

Lastly, GCMRC must determine the population level, and changes in biological parameters, that would trigger a cessation of handling HBCs so as to avoid placing undue stress on the remaining population.

2. Inappropriate emphasis and approach to alien fish suppression

Scientist's are in agreement that predation by alien fish on HBC is limiting their recruitment, and thus suppression of these predators is warranted. While Living Rivers concurs, we find GCMRC's management choices are over-emphasizing this aspect of the problem, potentially to the detriment of the HBC recovery effort, and the scientific integrity of the AMP process.

First, the non-native fish suppression flows from Glen Canyon Dam represent a significant departure from the spirit of the EIS and the Record of Decision (ROD). While the flow levels themselves are within the ROD, they are being used in an attempt to affect non-native fish, not to directly affect native fish as was contemplated in the EIS. Any departure from the river's natural hydrograph is bound to have negative effects ecosystem-wide, not just the HBC. However, because the AMP has not sufficiently addressed the biological parameters for the HBC, it is not yet qualified to determine if, and to what extent, these alien fish suppression flows are impacting HBC recovery. It is also unclear if these flows have demonstrated any formidable change in trout populations. Plans to repeat these flows in 2004 are not prudent. Also, how could these increases in daily flows compliment a Beach/Habitat Building Flow planned for January if triggers are met? They seem at odds with each other.

Living Rivers is also concerned with the lack of independent review, and competitive bidding associated with contracts being let for monitoring the results of these experimental flows. When the AMP began seven years ago, it took pride in the independence afforded in the competitive bidding process for its science programs. Now, the vast majority of this work is being moved in house to GCMRC staff. When consultants are being used, as in the case of monitoring for these experimental flows, they are awarded without any competitive bid. This appears particularly suspicious in this case, since a contract was awarded to ECO PLAN Associates, which has been under

contract with the Western Area Power Administration (WAPA). As these experimental flows would benefit WAPA and its customers by affording greater flexibility in power generation ramping, and that a variety of other consultants with greater experience in this area were not considered by GCMRC, AMP's appointment of ECO PLAN Associates has the strong appearance of industry bias.

Problems with the lack of independent oversight also appear to be surfacing with the mechanical fish removal program. The recent proposal to alter this program has been prematurely developed and submitted to the AMP without sound justification. The experiment has yet to demonstrate any impact on HBC recruitment, nor that in-migration is indeed not occurring in the target zone. Independent review of such proposals as recommended by the National Research Council should be standard procedure for such modifications to AMP activities to avoid such potential missteps in future.

A more appropriate and economically sustainable plan for non-native fish removal would be to study the reintroduction of natural predators. The management objectives of the AMP are to reintroduce presently extirpated species, such as the Colorado Pikeminnow or River Otter. Both aquatic predators species would gladly feed on the non-native fish, and likely not harm the native fish population.

The AMP could petition the US Fish Wildlife Service for an experimental release of the endangered Pikeminnow, despite the fact that it is unlikely that the Pikeminnow can reproduce in the present ecosystem. Thermal modification of the river could also provide the needed habitat for recruitment of these native predators. This scenario would provide sustainable control of alien fishes in Grand Canyon while providing for the recovery of two native fish.

There has been resistance to studying River Otter reintroduction due to inconclusive evidence regarding which sub-species dominated Grand Canyon habitat. However, it is clear that the increased interest and assumed need to increase predation of alien fish, particularly trout, amplifies the call for a reintroduction plan. Such nature-based proposals to mimic and rebuild the natural system should be the focus of the AMP, not short-term efforts to modify inconclusive experiments.

3. Need for a Supplemental Environmental Impact Statement

The assumed environmental baseline associated with the Glen Canyon Dam EIS, and the launching of the AMP has little bearing on reality. Options allowed under the ROD have been attempted and have proven to be ineffective, leading to continued impairment to all significant downstream resources since the ROD was implemented. This is now placing the AMP in uncharted territory, as evidenced by the implementation of trout suppression flow not contemplated by the EIS or the ROD. Furthermore, the continued drought conditions are effecting reservoir levels, and soon, water temperature and dam operations in a manner not evaluated in the EIS. The AMP

is effectively operating without a net, and must advise the Secretary of the Interior to call for a supplemental EIS to guide and inform its future programs.

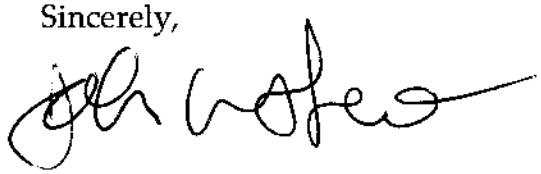
The most significant changes are in HBC populations and sediment budgets. While the AMP has yet to agree on how bad the current HBC count is, there is no doubt that the population is in significant decline since the program began. Furthermore, there has been no movement on establishing a second population in the mainstem Colorado. Beach building efforts under the ROD have not worked in a sustained manner. The number and size of beaches in the Grand Canyon have experienced a significant decline since the AMP was put into place. Not only has this negatively effected the Canyons recreational experience, but has also impacted the river corridor's cultural resources which are now prone to erosion.

Anticipated upstream impacts associated with reduced elevations of Glen Canyon Reservoir (i.e. increased temperatures, modified nutrient dynamics, etc.) will have significant effects on the downstream resources in the Grand Canyon. As the drought situation persists, these effects will become most pronounced once reservoir levels fall below the elevation of the penstocks.

The key to reinitiating compliance with the National Environmental Policy Act, through a supplemental EIS, is if new data or impacts are recognized. Clearly in the case of Glen Canyon Dam and Grand Canyon National Park, significant new data (biological and sediment) indicate that the ecosystem needs to be reevaluated and assessed. The fact that new data on the HBC, sediment deposits, cultural resources, water quality, and reservoir levels show that decisions made on the original data from the Glen Canyon Environmental Studies is now in need of reassessment.

Thank you for your attention to these matters, and we look forward to your reply.

Sincerely,



John Weisheit
Conservation Director