



United States Department of the Interior
Fish and Wildlife Service

Arizona Ecological Services Field Office
2321 W. Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
(602) 640-2720 Fax (602) 640-2730



In Reply Refer To:

AESO/SE
2-21-93-F-167

April 3, 1997



MEMORANDUM

TO: Regional Director, Bureau of Reclamation, Salt Lake City, Utah (Attn: C. Karas)

FROM: Field Supervisor

SUBJECT: Review of Sufficient Progress in Implementation of the Elements of the Reasonable and Prudent Alternative from the December 21, 1994, Biological Opinion on the Operations of Glen Canyon Dam

This is in response to your November 27, 1996, and subsequent March 13, 1997, letters to the Fish and Wildlife Service which concluded that the Bureau of Reclamation has made sufficient progress on the implementation of the December 1994 Biological Opinion. Your November 27 letter also asked for our written view of this conclusion. The Biological Opinion requested an annual meeting to coordinate reasonable and prudent alternative activities. One of the goals of the meetings was to provide the Service an opportunity to determine whether sufficient progress is being made in accomplishing activities set forth to remove jeopardy to the listed species impacted by the operation of Glen Canyon Dam. An evaluation of sufficient progress is difficult to measure and subjective without established milestones or a schedule. Although varying amounts of progress towards completion of the elements of the reasonable and prudent alternatives have occurred, the Service is pleased with the direction of the implementation. We address each element of the reasonable and prudent alternative as described in your letter. We respectfully offer the descriptions of lack of sufficient progress in certain elements as a means to re-focus activities for the next year.

1- Adaptive Management Program

The Record of Decision on the Glen Canyon Dam Environmental Impact Statement was signed on October 9, 1996. The signing of the ROD formally adopted the preferred alternative including the Adaptive Management Program. The Adaptive Management Plan includes an Adaptive Management Work Group to facilitate the AMP. The Charter which establishes a Federal Advisory Committee for the Adaptive Management Work Group was signed by the Secretary of the Interior on January 15, 1997. These time consuming steps were necessary procedures for the implementation of the Adaptive Management Program. The Service is pleased that the process is continuing and looks forward to participation in the Adaptive Management Work Group.

1A - A Program of Experimental Flows

Your November 27 letter correctly states that the Reasonable and Prudent Alternative recommended experimental flows to include high steady flows in the spring, which may include habitat building and habitat maintenance flows. The December 1994 Biological Opinion called for a program of experimental flows to include high steady flows in the spring and low steady flows in summer and fall.

The purpose of the beach/habitat building flow as described in the Final Environmental Assessment and Finding of No Significant Impact include "...rebuilding eroded sandbars, reforming backwater habitats for native fish and mimicking the natural processes that create a dynamic Grand Canyon ecosystem." Further it states "This test is needed to scientifically verify the predictions stated in the final EIS on Glen Canyon Dam operations. That is, to test the hypothesis that the dynamic nature of fluvial landforms and aquatic and terrestrial habitats can be restored by short-duration releases substantially greater than powerplant capacity." Although the Service supported the beach/habitat maintenance flow as a means of reforming backwater channel habitats which could be used by native fishes, the dismissal of the low steady flows in summer and fall indicates only partial progress toward meeting the intent of this element of the RPA. Your November 27 letter concludes the same (Page 2, first paragraph) referring to the delays associated with the signing of the Record of Decision, which as stated earlier, implemented the Adaptive Management Program and would coordinate experimental flows.

Since the ROD had not been signed before the time designated to conduct the beach/habitat building flow, a separate Environmental Assessment and section 7 pursuant to the Endangered Species Act were conducted. The Service believes that low steady flows in the summer and fall could have been included with the beach/habitat building flow or undergone separate environmental compliance. At a minimum, low steady flows could have been designed for possible implementation following the high flows.

The December 1994 Biological Opinion stated that design of the experimental flows was to begin as soon as possible and be completed by October 1996. The Biological Opinion stated that "Unless the Service determines information provided seriously questions the validity of experimental designs developed or contribution of the resulting data to remove jeopardy to the federally-listed aquatic fauna of the Grand Canyon, experimental flows will be initiated in April 1997." The Service is not aware of progress towards designing a program of experimental flows which will include high steady flows in the spring and low steady flows in the summer and fall. Your November 27 letter states that the Grand Canyon Research and Monitoring Center has conducted multiple meetings to formulate research needs.

The December 1994 Biological Opinion also states that "If sufficient progress and good faith effort is occurring towards initiating experimental flows, implementation of experimental flows may occur later in 1997." Your November 27 letter states that due to high water releases predicted for Glen Canyon Dam, implementation of the preferred alternative is to be implemented over the experimental flows. As high water releases are also expected for the next

year or two, experimental flows must be delayed until suitable water conditions are met. This delay may provide an excellent opportunity to design the experimental flows.

There have been no efforts to develop/design experimental low steady flows by Reclamation or the Grand Canyon Monitoring and Research Center. However, we understand that the SWCA Integration Workshop held on February 27 and 28 discussed the issue. It is our understanding that the researchers expressed a consensus that experimental steady low flows were needed to better understand the potential for edge/backwater warming, system productivity, response of non-native fish, and to assess the relative effect of warmed water from a multi-level intake structure.

We believe further discussion should occur between our two agencies on when the experimental flows might occur. Although the ROD states that beach/habitat building flows will occur during high water years, the Service believes this does not preclude any experimental high steady flows in the spring and low steady flows in the summer and fall. The Service's Biological Opinion requested that these experimental flows occur during low water years because the beach/habitat building flows were scheduled for low water years during the Draft Environmental Impact Statement. Your November 27 letter states that the experimental flows are not occurring in 1997 because it is not a 8.23 million acre feet water year. If Reclamation intends to implement the experimental flows as stated in the Biological Opinion, the Service believes that Reclamation needs to commit to a minimum of conducting habitat maintenance flows (33,200 cfs) during a low water year.

1B - Selective Withdrawal Program for Lake Powell

Your November 27 letter states that a report will be completed in 1997. It would seem that a judgment on the progress of this element would best be deferred until we received the document. It is our understanding that a temperature control workshop was completed. An environmental assessment is scheduled to begin in FY 98, and Reclamation has assigned Dave Trueman to coordinate these activities. We are pleased with Reclamation's perseverance to this process and look forward to receiving the mentioned report.

1C - Determine responses of native fish to various temperature regimes and river flows (future research program)

Your November 27 letter states that contracts for certain fish studies have been renewed and that future research and long-term monitoring will be conducted through the Center. In order to fulfill this requirement, the Center should specifically outline the studies. If the research and long-term monitoring programs include evaluating temperature and flows similar to the program of experimental flows recommended in item 1A, the Service would agree that sufficient progress is being made.

2 - Protect humpback chub population and habitat in LCR by being instrumental in developing of a management plan.

Your November 27 letter states that a draft document will be submitted to the Service for comments. It would seem that a judgment on the progress of this element would best be deferred until we received the document.

3 - Sponsor razorback sucker workshop

The Service appreciates that the razorback workshop has been completed. One of the goals of the workshop was to develop a management plan for the species in Grand Canyon. Your November 27 letter states that the Service should now recommend a course of action and develop a Memorandum of Understanding. The Service questions if the recommendations that resulted from the workshop constitute a "management plan" which would facilitate the Service in developing a course of action. We would appreciate your interpretation of the whether the workshop results comprise a "management plan."

4 - Establish a second spawning population of humpback chub

Information collected on tributaries, backwater habitats, aquatic food base, and other aspects during Glen Canyon Studies and Interim Flow monitoring will be useful for this work item. Other than the collection of this baseline information, the Service does not believe significant progress has been made towards the implementation of this element of the Reasonable and Prudent alternative.

Other work related to endangered species

The biological assessment to evaluate the effects of the preferred alternative on the southwestern willow flycatcher was expected to be sent to the Service by the end of January. As of this date, we have not received that document. As a reminder, in the consultation between Reclamation and the Service on the beach/habitat building flows, the Service issued the following reasonable and prudent measures necessary to minimize take for the southwestern willow flycatcher. "Initiate formal consultation for the southwestern willow flycatcher on the preferred alternative to the FEIS before January 31, 1997, including in the biological assessment data from the test flow final reports due December 31, 1996."

The November 1994 Biological Opinion required that the Kanab ambersnail population and habitat be quantified. The opinion also required that the habitat in Grand Canyon be surveyed before and after any flow greater than 25,000 cubic feet per second (cfs). The Service is appreciative of the population and habitat evaluations completed by the interagency effort of the Glen Canyon Environmental Studies Office, Arizona Game and Fish Department, the Service and others. Our two agencies do not have a process for implementing the necessary habitat evaluations during flows greater than 25,000 cfs. In the past we have successfully relied on the readiness and availability of the GCES staff, and the ongoing monitoring associated with the

beach/habitat maintenance flows. Now that the beach/habitat maintenance flow monitoring is completed, and a 1997 and subsequent long term monitoring has not been finalized for this species, the Service is not clear on how this element will be completed.

The Service appreciates your continued coordination and assistance. If you have any questions or if we can be of further assistance, please contact Debra Bills or Ted Cordery.



Sam F. Spiller

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM:AZ)(AES)
Director, Arizona Game and Fish Department, Phoenix, AZ
Superintendent, Grand Canyon National Park, Grand Canyon, AZ
Chief, Biological Support Branch, Bureau of Reclamation, Salt Lake City, UT
(Attn: UC 770)

Director, Biological Services Program Manager, Grand Canyon Research and Monitoring
Center, Flagstaff, AZ
Project Coordinator, Arizona Fisheries Resources Office, Flagstaff, AZ