

Glen Canyon Dam Adaptive Management Work Group
Agenda Item Information
August 24-25, 2010

Agenda Item

Lees Ferry Trout Fishery Ad Hoc Group Update

Action Requested

√ Information item. No action requested.

Presenters

This item will be presented as informational write-up only with no presentation. However, time will be set aside for questions with regard to this item as well as other informational write-ups.

Previous Action Taken

- √ Other:
The Bureau of Reclamation (Reclamation) executed an experimental high flow test of approximately 41,500 cfs for 60 hours beginning March 4, 2008. Prior to that test, on February 29, 2008, Reclamation completed an Environmental Assessment (EA) for the proposed action. The EA describes Mitigation Measures that were to be conducted, including Reclamation's agreement to "... work with the [Fish and Wildlife Service], [National Park Service], and [Arizona Game and Fish Department] to propose measures within the GCDAMP [Glen Canyon Dam Adaptive Management Program] dedicated to improving communication between management agencies and the angling guides, dependent local businesses, and the public. These proposed measures include creation of an ad hoc group within the GCDAMP to facilitate discussion among trout fishing guides and anglers, Marble Canyon business owners, recreational rafting companies, and other interested parties regarding proposed experimental actions affecting these resources . . ." The final EA and the FONSI, along with public comments received and other pertinent documents, can be found at <http://www.usbr.gov/uc/envdocs/ea/gc/2008hfe/index.html>.
- √ By AMWG:
At its May 2008 meeting, AMWG passed the following motion by consensus:
That the AMWG form a "Lees Ferry Trout Fishery Ad Hoc Group" to make a recommendation to the AMWG by its next meeting on the following two Environmental Assessment (EA) mitigation commitment items:
1. How the AMWG, consistent with the EA, might facilitate discussion among trout fishing guides and anglers, Marble Canyon business owners, recreational rafting companies, and other interested parties regarding proposed experimental actions affecting these resources, to include a projected schedule for meetings, cost-effective location, and whether Federal and State agencies should serve as support to the work of this ad hoc group, and
 2. Whether and how AMWG should be involved in updating the Lees Ferry Trout Management Plan, including whether the AMP should sponsor workshops that could be

used to help develop the specific aspects of the management plan, and including an assessment of work, projected schedule, and cost-effective locations.

Relevant Science

- √ The following describes the relevant research or monitoring on this subject:
See the SCORE report at <http://www.gcmrc.gov/products/score/2005/score.htm>.

Background Information

On April 16, 2010 the Arizona Game and Fish Department (AZGFD) led a meeting at Marble Canyon in support of Reclamation's mitigation commitment on the February 2008 High Flow Experiment EA (see above under "Previous Action Taken – Other"). It was well attended by trout fishing interests as well as Grand Canyon Monitoring and Research Center (GCMRC), Reclamation, Glen Canyon National Recreation Area (National Park Service), Western Area Power Administration, the AMWG/TWG representative for the Federation of Fly Fishers, and the U.S. Fish and Wildlife Service (FWS).

This Marble Canyon Meeting reviewed the previous recommendation of the Marble Canyon fishing interests that pertained to sustaining the Lees Ferry trout fishery that was developed during the February 20, 2009 gathering. The following recommendation was offered to the AMWG at their April 29-30, 2009 meeting regarding future high-flow protocols:

High flow tests should be conducted as early in late winter as possible and no later than end of February. They should occur before the spring and summer growing season to avoid prolonged effects to the aquatic foodbase; and before late February or early March to reduce impact on commercial businesses (angler/visitor trip cancellations). Perhaps early in February is the optimum time to have High Flow Tests to avoid negative economic consequences.

The Arizona Game and Fish participants provided the following overview to the attendees:

- The Lees Ferry rainbow trout whirling disease samples again failed to detect evidence of whirling disease in 2009. The population is sampled for testing annually for whirling disease, and yielded a positive detection in samples collected in 2007. Disease testing for fish collected during fall sampling will continue in the future.
- Sampling during November 2009 suggested high survival rates for the 2009 cohort (fish born during the spring of 2009), similar to survival observed in 2008. Relative condition of fish during 2009 was comparable to the poor condition observed during 2002-2006 when relatively low numbers of redds were observed.
- The strength (size) of the 2008 cohort was expected. Spawning-sized fish in 2007 had the highest (best) condition observed since the early 1990's. Lower densities of fish result in better fish growth and condition, and this was especially notable in 2007. The strength of the 2009 cohort was somewhat surprising, but may be related to positive effects of the spring 2008 High Flow Experiment on the aquatic foodbase available to trout.
- Data from 2008 suggests that the combination of a spring High Flow Experiment and fall steady flows resulted in an excellent environment for young rainbow trout survival. Compensatory survival mechanisms (food, space) that have controlled young trout survival

in the past have typically occurred during late summer and early fall months. With fall steady flows planned through 2012, young trout may be released from compensatory mechanisms that limit their survival. In short, the population may experience the same density-dependent processes that controlled it in the late 1990's-early 2000's with increasing numbers. As a result, we would expect fish growth to again be limited, the rainbow trout population to be dominated by small fish (less than about 14 inches), and condition to be poorer than desired.

The GCMRC presented preliminary data concerning the aquatic food base. The 2008 High Flow Experiment had a strong and persistent impact on invertebrate biomass in Lees Ferry.

- This was driven by reduction in Gammarus (scuds) and P. antipodarum (New Zealand Mudsnaills) biomass. Biomass was still low 15 months after the 2008 High Flow Experiment.
- Production of midges (Chironomids) and black flies (Simulids) actually increased in the year following the 2008 High Flow Experiment.
- The amount of invertebrates in the drift actually increased after the 2008 High Flow Experiment. Invertebrates in the drift are generally more vulnerable to trout predation than invertebrates on the riverbed. Because midges and black flies are prone to drifting, the shift in the foodbase was generally positive.

Reclamation described their intention to conduct an Environmental Assessment (EA) for the development of a High Flow Experimental Protocol. Scoping for that EA had been initiated at the AMWG meeting in February and by publication of an announcement in the Federal Register.

The FWS reported that the Pueblo of Zuni as well as other Tribes were concerned about killing of trout and other nonnative fish in Little Colorado River confluence area with the mainstem of the Colorado River, an area that is sacred to them. The FWS said they had developed possible options for Reclamation to consider. FWS supports development of options or alternatives in an open forum that ensures transparency and fosters information transfer between agencies and stakeholders, especially Tribes and recreational fishing interests. They hope this approach would result in the development of options that have the support of GCDAMP stakeholders.

Fishing interests advised that they were very concerned that emphasis would shift to mechanical removal at Lee's Ferry. They were supportive of an open process that involved stakeholders. Concerning options that might remove trout from the Paria riffle downriver to Badger rapids, they advised that Navajo Nation anglers utilize the area below the Paria riffle for trout fishing.

FWS and Reclamation advised that an Environmental Assessment would likely be conducted to evaluate alternatives to mechanical removal at the LCR. The EA would help identify tools, locations, and approaches that could be used singly or in combination; and it would be available for public comment.