

Glen Canyon Dam Adaptive Management Work Group
Agenda Item Information
August 29-30, 2007

Agenda Item

Humpback Chub Conservation and Recovery Work Updates

Action Requested

√ Information item only; we will answer questions but no action is requested.

Presenters

Sam Spiller (Co-Chair, AMWG Ad Hoc Group for HBC Policy and Associated Implementation Concerns and FWS Lead Grand Canyon HBC Recovery Implementation Plan), Lower Colorado River Coordinator, U.S. Fish and Wildlife Service

Glen Knowles (Chair, TWG Ad Hoc Group for HBC Comprehensive Plan Development) Fish and Wildlife Biologist, U.S. Fish and Wildlife Service

Previous Action Taken

√ By AMWG:

AMWG approved the following two motions in March 2005:

Motion: The AMWG also directs the creation of a humpback chub implementation plan Ad Hoc Group. This Ad Hoc Group will:

1. Determine which actions identified in the humpback chub comprehensive plan can be accomplished under the AMP.
2. Explore the various options for completing actions that do not fall under the authorities of the AMP.

(Co-Chairs: Sam Spiller, Nikolai Ramsey, Randy Seaholm)

Motion: The AMWG directs the TWG to further develop the humpback chub comprehensive plan, as follows:

1. Describe linkages, sequences, and feedback loops among projects.
2. Identify priorities and a timeline for completion of each action within the comprehensive plan.
3. Spell out specific steps and criteria for any actions that would be needed if a crisis occurs (e.g., severe population decline).
4. Continue to include active participation by GCMRC staff and any additional expertise.
5. Incorporate comments from the Science Advisors. The TWG will include a response to comments document in their final draft.

(Chair: Glen Knowles)

AMWG approved the following motion in March 2006:

In recognition of the significance of Humpback chub conservation to the GCD AMP, AMWG directs the establishment of an AMWG ad hoc committee to work with the DOI Policy Group, to make a recommendation to AMWG at its August 2006 meeting on what actions AMWG should take with regard to the implementation of a program whose goal is recovery of the HBC under the Endangered Species Act, with geographic scope and other details to be included in the recommendation.

AMWG unanimously approved the following motion (drafted by the Humpback Chub Recovery Consultation Ad Hoc Group (Chaired by Sam Spiller with Co-leads Rod Kuharich and Larry Stevens) in December 2006:

Because the lack of a recovery program for the humpback chub is impeding the progress of the GCDAMP, AMWG recommends that the Secretary of the Interior charge the Fish and Wildlife Service to lead the development

Humpback Chub Conservation and Recovery Work Updates

of a Lower Colorado River fish recovery implementation program (LCRRIP) to include the humpback chub in Marble and Grand Canyons by the end of 2008.

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 May 21, 2007, Deputy Interior Secretary Lynn Scarlett responded to AMWG's December 2006 recommendation with regard to the Lower Colorado River fish recovery implementation program (RIP); detailed above under "Previous Action Taken". That memorandum is attached.

Deputy Secretary Scarlett's memo instructs the Fish and Wildlife Service (FWS) to take the lead in developing a RIP for the humpback chub population in Grand Canyon. The memo notes that consideration of similar efforts for other endangered Colorado River fish may be warranted after the humpback chub effort has been established.

The memo explains that a RIP is necessary because recovery of humpback chub exceeds the limited authority and role of the Glen Canyon Dam Adaptive Management Program (AMP). The RIP will not displace the AMP or the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) but rather complement efforts of these programs in areas beyond their scope or authority. FWS is to provide feedback to the AMWG on a timeline, scope, and development of an outreach program to potential involved stakeholders, including the AMP, LCR MSCP, and DOI Policy Group, and to identify any information needs for the RIP that should be addressed through the Long-Term Experimental Program (LTEP) EIS process.

On June 11, Sam Spiller, Tom Czapla, Jennifer Fowler-Propst, Pam Sponholtz, and Glen Knowles initiated this process. A draft proposal for response to the Deputy Secretary is being reviewed. FWS is also developing information needs for the RIP that could be addressed through the LTEP EIS.

The report at the AMWG meeting will include a progress report from the TWG Ad Hoc Group, chaired by Glen Knowles of the U.S. Fish and Wildlife Service, tasked with revising the Humpback Chub Comprehensive Plan. The TWG Ad Hoc is currently revising the comprehensive plan in response to a review by the AMP science advisors completed in July 2007. When the final draft comprehensive plan is completed and reviewed by the TWG, the AMWG's Ad Hoc Group for HBC Policy and Associated Implementation Concerns will make a recommendation to the AMWG with regard to which parts of that plan should be part of the AMP and which should not (support recovery). The Grand Canyon HBC Recovery Implementation Plan will address these elements that are not part of the AMP.

Humpback Chub Actions Update



Glen Knowles and Sam Spiller USFWS
AMWG Meeting, Flagstaff, Arizona
August 30, 2007



Humpback Chub Comprehensive Plan Update



March 2005 AMWG Motion: The AMWG directs the TWG to further develop the humpback chub comprehensive plan, as follows:

1. Describe linkages, sequences, and feedback loops among projects.
2. Identify priorities and a timeline for completion of each action within the comprehensive plan.
3. Spell out specific steps and criteria for any actions that would be needed if a crisis occurs (e.g., severe population decline).
4. Continue to include active participation by GCMRC staff and any additional expertise.
5. **Incorporate comments from the Science Advisors. The TWG will include a response to comments document in their final draft.**

Motion: The AMWG directs the creation of a humpback chub implementation plan Ad Hoc Group. This Ad Hoc Group will:

1. Determine which actions identified in the humpback chub comprehensive plan can be accomplished under the AMP.
2. Explore the various options for completing actions that do not fall under the authorities of the AMP.

Humpback Chub

Comprehensive Plan Update



Expanding the Range of Spawning and Rearing, Increasing Survival and Recruitment, and Reducing the Threat of Catastrophic Events

- 1 Humpback Chub Genetics Management Plan
- 2 Humpback Chub Refuge Creation
- 3 Glen Canyon Dam Operations
- 4 Glen Canyon Dam Selective Withdraw Structure
- 5 Sediment Augmentation
- 6 Aquatic Food Base Monitoring and Research
- 7 Young Humpback Chub Habitat Enhancement in the Little Colorado River and other Grand Canyon Tributaries
- 8 Fate of Young Humpback Chub in the Colorado River in Grand Canyon
- 9 Nonnative Control
- 10 Effects of Scientific Work and Recreational Activities on Humpback Chub
- 11 Monitoring and Control of Humpback Chub Diseases and Parasites
- 12 Translocation of Native fishes in Grand Canyon
- 13 Monitor Humpback Chub Population Dynamics, Distribution, and Habitat
- 14 Planning Documents to Assist Conservation of Humpback Chub

Humpback Chub

Comprehensive Plan Update



Science Advisor Review:

- ❖ Provide more background on effects of the dam (baseline), and on the status of the humpback chub.
- ❖ Clarify information about population size of HBC in GC (near apparent crisis to a stable adult population of 5000 adult fish). Add confidence limits.
- ❖ Describe in relation to historical population size, percentage of historical HBC range that remains. Discuss minimum viable population size.
- ❖ Define significance and sizes of Grand Canyon hbc aggregations relative to subpopulations or locations where a certain life history stage is captured.

Humpback Chub Comprehensive Plan Update



Science Advisor Review:

- ❖ Use conceptual approach to better identify threats and indicate the magnitude and interaction of various threats.
- ❖ Expand on “threat interactions”; how has reduced population size and restricted range of HBC induced vulnerability to other threats.
- ❖ Describe or diagram how the projects are linked and add table outlining critical elements of each project. Present value of projects in addressing specific threats.

Humpback Chub Comprehensive Plan Update



Science Advisor Review:

- ❖ Plan should focus on removal of jeopardy. Consider only effects caused by the operation of the dam, and how operation can be modified to reduce adverse effects.
- ❖ Plan is only a comprehensive list of projects – should include more extensive treatment of project schedules, procedures, linkages, budgets, etc. than is provided in this plan.
- ❖ Define strategic approach for project implementation. Prioritize threats and consider developing a general risk differential assessment for cost/benefit to prioritize budgets.

Humpback Chub Comprehensive Plan Update



Next Steps:

- ❖ HBC Ad Hoc will revise plan and complete response to SA comments document for TWG review.
- ❖ AMWG Humpback chub Implementation Ad Hoc Group will review the new Comprehensive Plan and write a report of plan projects appropriateness for AMP funding (i.e. is it IN OR OUT?).
- ❖ HBCIMP will work to identify funding sources for projects that are “out”.
- ❖ These products will guide creation of a RIP.

Humpback Chub

Recovery Implementation Program



December 6, 2007 AMWG Motion

“Because the lack of a recovery program for the humpback chub is impeding the progress of the GCDAMP (Glen Canyon Dam Adaptive Management Program), (the) AMWG recommends that the Secretary of the Interior charge the FWS (Fish and Wildlife Service) to lead the development of a Lower Colorado River fish recovery implementation program (RIP), to include the humpback chub in Marble and Grand Canyons, by the end of 2008.”

Humpback Chub

Recovery Implementation Program



May 21, 2007 – Deputy Secretary Scarlett Memo

FWS shall, by September 2007:

- ❖ Provide feedback to the Glen Canyon AMWG on a timeline, scope, and development of an outreach program to potentially involved stakeholders, the Glen Canyon AMP and LCRMSCP, and report these findings back to the DOI Policy Group.
- ❖ Identify any information needs to develop the RIP that should be addressed through the Long-term Experimental Plan Environmental Impact Statement (LTEP EIS).

Humpback Chub

Recovery Implementation Program



- ❖ FWS has developed a draft proposal paper that responds to Deputy Secretary Scarlett instructions.
- ❖ The draft is being reviewed by our Regional Office with the September delivery date commitment.
- ❖ Consistent with the instructions, FWS plans to send this via a conveyance memo to our Secretary's Designee for her consideration to have AMWG review it; we will then work with the Secretary's Designee to report the findings back to the DOI Policy Group.

Humpback Chub

Recovery Implementation Program



DRAFT FWS RECOMMENDATIONS:

- ❖ The RIP would provide for continued water development, maintenance of flows for hydroelectric power generation, cultural resource needs, rafting and fishing; consistent with the Grand Canyon Protection Act and in accordance with Colorado River water laws.
- ❖ We recommend that FWS lead with willing stakeholders assisting in selection of projects and studies.
- ❖ We are developing projected timelines and cost estimates for FWS involvement.

Humpback Chub

Recovery Implementation Program



DRAFT NEEDS TO ADDRESS IN THE LTEP EIS:

- ❖ Analyzing temperature control device (TCD);
- ❖ Modeling where appropriate to support adaptive management projects, etc. for humpback chub and other native fish, coldwater and warmwater fish, diseases and parasites, and operation of a TCD;
- ❖ Need for refuges to ensure continued existence of humpback chub in the Grand Canyon ecosystem; and
- ❖ Determine importance of humpback chub aggregations in the mainstem.