

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

Agenda Item

Non-Native Fish Control Environmental Assessment Update

Action Requested

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

Presenter

Glen Knowles, Chief, Adaptive Management Group, Bureau of Reclamation

Previous Action Taken

N/A

Relevant Science

- ✓ The following describes the relevant research or monitoring on this subject:
- Grand Canyon Monitoring and Research Center, 2008, USGS workshop on scientific aspects of a long-term experimental plan for Glen Canyon Dam, April 10–11, 2007, Flagstaff, Arizona: U.S. Geological Survey Open-File Report 2008–1153, 79 p.
 - Hilwig, K.D., Andersen, M.E., Coggins, L.E., Jr., 2009, Nonnative fish management plan for Grand Canyon—a comprehensive approach to management and research of nonnative fish species: U.S. Geological Survey Planning Document, 79 p.
 - Korman, J., Kaplinski, M., and Melis, T.S., 2010, Effects of high-flow experiments from Glen Canyon Dam on abundance, growth, and survival rates of early life stages of rainbow trout in the Lees Ferry reach of the Colorado River: U.S. Geological Survey Open-File Report 2010–1034, 31 p.

Background Information

The Bureau of Reclamation (Reclamation) began the process to develop an Environmental Assessment (EA) for nonnative fish control in March 2010, when it was determined that, due to tribal concerns over the taking of life in a sacred place, mechanical removal of nonnative fishes in FY 2010 would be cancelled. Reclamation began development of the Nonnative Fish Control EA and reinitiated consultation with the U.S. Fish and Wildlife Service on cancelling mechanical removal. Since that time, Reclamation has invited the AMP federal agencies (Bureau of Indian Affairs, National Park Service, U.S. Fish and Wildlife Service, and U.S. Geological Survey), the Arizona Game and Fish Department (AGFD), and the AMP Tribes (Hopi Tribe, Hualapai Tribe, Navajo Nation, Southern Paiute Consortium, and the Pueblo of Zuni) to be cooperating agencies in the development of both the HFE Protocol and Nonnative Fish Control EAs. All of the Federal agencies and AGFD have indicated they will participate as cooperating agencies for both EAs, but none of the tribes have yet committed. Memorandums of understanding have been prepared for

Non-Native Fish Control EA Update, continued

each of the cooperating agencies and sent to them for signatures and identification of points of contact.

In development of the EA, Reclamation has conducted a Nonnative Fish Control Work Shop (March 29-30, 2010) and a July 12, 2010, Cooperating Agencies Conference Call to discuss purpose and need, as well as elements of potential alternatives for the two EAs. Reclamation also served on a panel entitled “Non-native Fish Removal in the Grand Canyon: Cultural Considerations and Fish Management” at the July 29, 2010, Native American Fish and Wildlife Society Southwest Region 2010 Conference in Scottsdale, Arizona, to discuss the issues surrounding the use of mechanical removal to control nonnative fish species and the cultural concerns of AMP Tribes over this practice. A meeting is now in the planning stages to specifically meet with the AMP Tribes to discuss potential nonnative fish control alternatives and get input from the tribes in August 2010. Reclamation has also met with each of the AMP Tribes to conduct government-to-government consultation on the EA, and is planning additional meetings for this purpose. Reclamation continues to work with the cooperating agencies to develop the EA and expects to provide the EA for public review by the end of October.

RECLAMATION

Managing Water in the West

Nonnative Fish Control Environmental Assessment

Glen Knowles
Bureau of Reclamation

August 25, 2010
GCDAMP AMWG Meeting
Phoenix, Arizona



U.S. Department of the Interior
Bureau of Reclamation

<i>Administrative History</i>		<i>Place (if meeting)</i>
30-Jun-09	Zuni letter requesting consultation	
10-Jul-09	Zuni dissenting report on FY2010 and 2011 workplans	Phoenix, AZ
15-Sep-09	AS-WS meeting with Zuni Governor and Tribal Council	Zuni, NM
12-Jan-10	Informal meeting with DAS-WS and Zuni council members	
13-Jan-10	DOI GCDAMP information meeting with multiple tribes	Phoenix, AZ
19-Feb-10	Zuni letter requesting consultation	
4-Mar-10	BOR, et al. with Hopi, Leigh Kuwanwisiwma, Mike Yeatts	Flagstaff, AZ
6-Mar-10	BOR et al. with Hualapai Council	Peach Springs, AZ
6-Mar-10	Reinitiate ESA section 7 consultation	
15-Mar-10	BOR et al. with Havasupai Council	Supai, AZ
18-Mar-10	BOR with Kaibab Paiute Council	Pipe Springs, AZ
24-Mar-10	BOR with Zuni Tribal Council	Zuni, NM
29-30-Mar-10	Nonnative Control Work Shop	Phoenix, AZ
22-Apr-10	BOR et al. with Hopi CRATT	Kykotsmovi, AZ
3-Jun-10	Zuni Meeting with Governor	Zuni, NM
9-Jun-10	BOR et al., with Navajo HPD	Window Rock, AZ
15-Jun-10	BOR letter to Zuni governor on otolith work	
12-Jun-10	Hopi letter requesting revised signature page for MOU	
16-17-Jun-10	Cooperating Agency Workshop	Salt Lake City, UT
12-Jul-10	Cooperating Agency Conference Call	
5-Aug-10	AS-WS Meeting with Zuni Governor and Tribal Council	Zuni, NM

RECLAMATION

Nonnative Fish Control EA

Possible Treatments

1. **Low Flows to Strand Eggs and Alevins**
2. Mechanical or Chemical Destruction of Eggs and Alevins
3. **Increase Daily Down-Ramp to Strand Age-0 Trout**
4. **High Flow, Low Flow to Strand Age-0 Trout**
5. Mechanical Removal of Young Trout near Lees Ferry
6. Mechanical Removal of Trout from LCR Reach
7. **Fish Weir to Remove Brown Trout from Bright Angel Creek**

Possible Mitigating Measures

- **Public information and educational materials describing project effects**
- **Crews working in the park units would use minimal impact techniques for camping and work**
- **Beneficial use of fish removed:**
 - **Translocated live to other waters for sport fishing**
 - **Human consumption**
 - **Allowed to remain in the river, retained by ecosystem**
 - **Ground and used as fertilizer**
 - **Used to feed captive wildlife or wildlife in rehabilitation centers (Keepers of the Wild, Adobe Mountain)**
- **AGFD proposed angling regulations changes:**
 - **Change size limit from 12 to 14 inches**
 - **Change unlimited harvest from 22 Mile to Navajo Bridge**

Other Options Considered

Humpback Chub Hatchery Option

- Supplemental hatchery based program to maintain the desired population level for the humpback chub
- Likely does not meet purpose/need
- Does not enhance survival of wild humpback chub
- Hatchery augmentation may reduce long-term genetic viability
 - *Consider hatchery grow-out with FWS oversight*

Removal of Trout by Anglers

- Change fishing regulations and restrictions
- Increased bag limit of trout to reduce the trout populations
- Not consistent with current Arizona State Game Commission proposed management
- Anglers likely opposed
- Little effect on the age 0 fish
 - *Consider fishing river trips, possibly with tribes*

Other Options Considered cont.

Use of Devices to Kill Fish or Impede Movement

- Use devices that can kill or fish (shock wave) or impede their movement (electric fence)
- Potential public safety risks
- Never tested in large system like the Colorado River in Grand Canyon
 - *Consider Chicago Canal Electric Fence*

Next Steps

Cooperating Agency Call	8/29/2010
Develop alternatives	
Send final need statement	
and alternatives to Cooperating Agencies & Tribes	9/3/2010
Conference call on alternatives	9/10/2010
Response from Cooperating Agencies on alternatives	9/17/2010
Draft EA	
Sent to Cooperating Agencies and Tribes	10/8/2010
Response from Cooperating Agencies	10/22/2010
Incorporate CA comments / resolve differences	11/8/2010
Send final to FWS	11/8/2010
Public Notice	
Release EA	11/8/2010
Release final decision	3/23/2011
FWS Review and issuance of BO	3/23/2011