January 14, 2010

Biology Committee Conference Call Summary
November 10, 2009

Biology Committee: Dave Irving, Melissa Trammell, Pete Cavalli, Krissy Wilson, and Dave Speas. (Colorado, WAPA, the water users, environmental groups and CREDA were not represented at the meeting).

Other participants: Tom Czapla and Angela Kantola

Assignments are indicated by ">" within the document.

CONVENE 2:05 p.m.

1. Discussion of remote PIT-tag array at Price-Stubb fish passage – Pete believes we need to evaluate passage, but asked if this is worth the antenna expenditure if we can gather the data with other projects in the area. Pete said he didn't really see need for two antennas. Krissy agreed. Krissy said she's a little concerned about cost, but need to verify that the passage is effective. Czapla – fish have been captured above the structure, but not necessarily verifying they used the passage (can go over dam itself at high flows). Tom Czapla said this would be funded with capital funds and he believes we could use at least parts of this equipment (multiplexer, etc., but perhaps not the antenna) somewhere else when we're done with it at Price-Stubb. Tom Czapla said he thinks it will be valuable to learn about the movement and timing of movement of these fish. Angela stressed the importance of this project to evaluate the Price-Stubb passage (at high flows, fish should be able to pass over the dam itself, thus we need the PIT-tag array to confirm they've used the actual passage). Krissy suggested asking BioMark if the antenna can be constructed in such a way that it can be disassembled for use at a different site. Tom said he's made that request and BioMark believes they can construct it in this way (e.g., bypass pipes at screen structures, for example). The group asked about ongoing maintenance, how the data will be used/reported, etc. Dave Speas agreed the two-antenna configuration would be most useful. Dave and Melissa supported the use of this kind of array in fish screen return pipes, and would like to take that a step further at some point to examine fish condition when they exit those returns. The group agreed to move forward with the 2-antenna array at ~$102K (capital funds), but asked Tom Czapla to provide further explanation of the use, maintenance and data management. >Czapla will provide that information (see below) to the Biology Committee for their information and to the Management Committee for approval via e-mail (respond by a date certain if they don't approve).

2. Next meeting – January 14, 2010, from 8 a.m. to 3:30 p.m. in Grand Junction, Colorado.

ADJOURN 2:45 p.m.

Assignment

The Biology Committee requested further explanation of the proposed installation of a PIT-tag antenna array at Price-Stubb fish passage. Their specific concerns were further explanation of the purpose, management of data and operation and maintenance of the array.

1. Purpose: The purpose of installing an antennae array at Price-Stubb fish ladder is to detect the use of the ladder by PIT-tagged fish (including all four endangered fish as well as other natives that may have PIT-tags). The capture of PIT-tagged fish above Price-Stubb does not conclude those fish used the passage structure because at high flows the fish could have moved over the dam itself, rather than using the passage. BioMark's scope of work proposed a single antenna, however, the Biology Committee suggested that antennae at both the upstream and downstream ends of the culvert would provide directional movement of the PIT-tagged fish. BioMark has estimated to install two antennae would cost an additional $18K. Another reason for installing this array is to begin moving forward with this technology with the intent of utilizing it at other locations. The antenna arrays and associated equipment will be constructed in such a way as to make them removable for use at other locations, (e.g., return/bypass structures from diversion screens).

2. Data Management/Operation and Maintenance: The Colorado River Fishery Project (U.S. Fish and Wildlife Service) will download and maintain the data and provide annual reports, probably as a part of the database management scope of work. Those reports will include species, number of individuals, and movement information (direction, time of day, and seasonal use) for fish passing through the antennae arrays. The effort will likely require 1-2 hours per week to download and run diagnostics on the equipment to measure performance; this will be done remotely by cell phone. Monthly or fewer site visits may be required to check on equipment. Debris removal is already performed under project C-5

Tom Czapla/R6/FWS/DOI
11/16/2009 04:12 PM

RE: [fws-coloriver] BC Conference Call Notes

Tom,

Here are our responses to your questions you posed your email.

- Does 50% of the BC membership constitute a quorum? It would appear so in this case.

Answer: The conference call was scheduled to accommodate all BC members that responded to an earlier email about their availability, this summary has been circulated to all BC members for their approval. All BC members on the call felt there was a need to evaluate the passage at Price-Stubb.

- Is there a measure of success? Does one fish detected using the passage constitute success? Given our experience of passage at Redlands (both before and during initial operation)

and recognizing the freedom of passage at high flow at Price-Stubb, can we not determine some measure as an objective over a defined time period?

Answer: The measure of success would be the use of the passage by the endangered fish. I would certainly think if we could detect all four endangered fish as utilizing the passage that would qualify as success. The defined time period may be when the passage is operating, i.e., when there is not enough water for them to swim over the dam, but there is in the passage. Secondarily, this provides an opportunity to detect fish without handling, i.e., electrofishing, netting, measuring, etc.

- Where do we expect to use this equipment after the Price-Stubb application?

Answer: As mention in my assignment section, one area might be bypass or return structures at screened diversions. But I think there could be utility at any area we think is highly utilized, i.e., staging and spawning areas. They could be set out as pass through or set on the bottom to determine a particular area's use by these fish.

- If fish can pass at high flows, what is the importance of the Price-Stubb passage? The answer to this should be straightforward and provide as justification for the need to install this detection system.

Answer: When passage was constructed at Price-Stubb, the dam itself was modified into a ramp, whereas before it was more of a wall in the river. The passage really comes into play when there is not enough water for them to swim over the dam, passage is provided by the ramp with the chevron-oriented pylons.

- Do we think the movement and timing of movement will be different that observed at Redlands? If so, how would this information affect recovery management decisions in the Colorado River or the operations at Highline?

Answer: Movement for Colorado pikeminnow and razorback sucker may be similar to that observed at Redlands, but we know little about the movement of humpback chub and bonytail. Recollect that when the fish ladder was first operated at the Grand Valley Project (Government Highline) there were a few humpback chub that used that ladder. Did they come from Debeque Canyon, Black Rocks or Westwater? Bonytail were stocked this year above Debeque Canyon, this project may help determine some downstream movement.

Tom.

Thomas E. Czapla, Ph.D.
Propagation & Research Coordinator
Upper Colorado River Endangered Fish
Recovery Program
U.S. Fish and Wildlife Service
Post Office Box 25486, DFC
Denver, Colorado 80225
Phone: 303-969-7322x228
Fax: 303-9697327