

Peabody Trout Creek Reservoir Project
Proposed Study Plan
(FERC Project No. P-14446)
(URS Project No 22242691)
Water Quality and Aquatics Studies Subset Conference Call
March 13, 2013, 8:30 a.m. – 10:00 a.m.

Call Participants (Listed Alphabetically by First Name)

- Becky Anthony, Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD)
- Bill Chace, Creek Ranch
- Billy Atkinson, Colorado Parks and Wildlife (CPW)
- Christine Hawley, Hydros Consulting (Hydros)
- Danielle Domson, CPW
- David Merritt, URS Corporation (URS)
- Don Conklin, GEI Consultants (GEI)
- Heather Thompson, Ecological Resource Consultants (ERC)
- Jacob Davidson, CPW
- Jean Marie Boyer, Hydros
- Jody Glennon, URS
- Joe Hassell, Federal Energy Regulatory Commission (FERC), Engineer
- John Hranac, CDPHE WQCD
- Matt Buhyoff, FERC, Aquatics Specialist
- Patty Gelatt, U.S. Fish and Wildlife Service (USFWS)
- Shana Murray, FERC, Project Coordinator

Call Notes

Introduction

David Merritt/URS opened the call. The purpose of the call was to discuss additional details pertaining to the water quality and aquatics studies in follow-up to the Proposed Study Plan meeting for the Peabody Trout Creek Reservoir (PTCR) Project (Project) that was held on February 12, 2013, in Denver, Colorado. Mr. Merritt then turned the call stage to Matt Buhyoff/FERC.

Endangered Fish Species

Mr. Buhyoff had spoken with Patty Gelatt/USFWS and Ms. Gelatt indicated the USFWS' biggest concern with the Project was the escapement of non-native fish from the proposed reservoir. Ms. Gelatt indicated PTCR needs to ensure a mechanism is in place in its Project design to deter and address fish escapement, such mechanism be chemical, physical, or biological. Ms. Gelatt stressed fish escapement is something that needs to be addressed in more than just PTCR's reservoir management plan that will be developed in the future. Ms. Gelatt requested that PTCR consider nearby existing reservoirs and the problems being experienced at those reservoirs from the introduction of non-native fish and their escapement.

Mr. Buhyoff encouraged Ms. Gelatt to review Section 3.11, Fish Entrainment Study, and the other aquatic studies in the Proposed Study Plan to ensure the USFWS agreed with the proposed methodology for those studies and doesn't have any concerns. Mr. Buhyoff also reminded Ms. Gelatt that the comment period on the Proposed Study Plan ends April 18, 2013.

Mr. Buhyoff asked Ms. Gelatt to confirm that she felt the proposed resource study would provide enough information for a Biological Opinion to be prepared. Ms. Gelatt indicated "yes" and that the study covered sufficient critical habitat reaches; she stressed the study should consider all pathways for fish escapement and that addressing mitigation for non-native fish escapement at the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) development stage could be too late, stating it should be considered early in Project design.

Billy Atkinson/CPW indicated CPW would like to see a mitigation plan developed for the escapement of non-native fish from the reservoir. Mr. Atkinson stated the proximity of the reservoir would lend itself to the easy introduction of non-native species.

Bill Chace/Creek Ranch requested that PTCR consider developing a public education program, utilizing existing resources in Hayden and Steamboat, Colorado that contain species of fish that stakeholders want in the reservoir.

Ms. Gelatt inquired about the status of the Project design. Mr. Merritt communicated the Project was in the preliminary conceptual design phase. Mr. Buhyoff confirmed that final Project design would not be submitted until PTCR filed its final license application and that if FERC issues a permit for the proposed Project, conditions for reservoir operations would be specified as a condition of that permit.

FERC and Corps Processes

Joe Hassell/FERC expressed concern over PTCR following the sequential FERC process for this Project rather than concurrently pursuing the Corps' Section 404 process. Mr. Hassell indicated a Project proponent cannot dredge and fill a location if an alternate location exists that would be less environmentally damaging. Mr. Hassell encouraged PTCR to consider its Purpose and Need statement and clarify it. Mr. Hassell also encouraged PTCR to follow parallel FERC and Corps' processes, also filing a Section 404 Permit application.

Study Progress Reports

Joe Hassell/FERC reminded PTCR that FERC's regulations require applicants to file periodic progress reports for their studies. Jody Glennon/URS confirmed PTCR's understanding of this and indicated PTCR planned to submit its first progress report on September 5, 2013, as specified in FERC's March 5, 2013 Order Issuing PTCR a Preliminary License.

Mr. Hassell indicated he felt the studies contained in the Proposed Study Plan lacked emphasis on periodic progress reports. Mr. Hassell requested that outputs and resulting data from the studies not be filed as needed but as information is available, and indicated PTCR should involve the USFWS, CPW, the Corps, FERC, and other relevant agencies in the review of data pertaining to model run results to assist with Project design considerations.

PHABSIM

Matt Buhyoff/FERC confirmed GEI had one PHABSIM site and wondered if that was sufficient. Don Conklin/GEI communicated GEI could easily add more transects and/or add a new PHABSIM site

following a spring visit to determine if there was in fact similar habitat along the entire survey area or if other habitat areas in downstream sections of Trout Creek existed that warranted additional sites. Billy Atkinson/CPW committed to identifying a CPW staff member to go out with Mr. Conklin this spring to assess this.

Mr. Buhyoff asked if the hydrology model for the PHABSIM was being cross-referenced with gage data. Heather Thompson/ERC responded that the gage is not currently on line and that based on discussions ERC has had with Twentymile staff, it is expected to be by the end of April 2013. Currently, there is not a lot of flow data available in the basin. Mr. Buhyoff requested confirmation that modeling would be done with and without the Project on-line. Ms. Thompson confirmed that.

Joe Hassell/FERC inquired about the suitability curves and requested that PTCR provide results of habitat time series for consideration in the water quantity model. Ms. Thompson indicated due to lack of available flow data, the Colorado Decision Support System (CDSS) model was used for the information reported in the Pre-Application Document (PAD). David Merritt/URS also confirmed that once the operations model is developed it can be run for different operation scenarios and that the operations model does not have to be complete for fieldwork to begin. Ms. Thompson also clarified that the model for the PAD was ran based on PTCR's current proposed operating rules; that is, how PTCR anticipates operating the reservoir. The model can be refined based on model results and the assumptions on flows for Trout Creek will be verified.

Billy Atkinson/CPW indicated he had heard from a lot of the landowners in the area expressing concern about the impacts downstream from the removal of bedload and increase in stress. Mr. Atkinson asked Ms. Thompson how the sediment sampling would be performed. Ms. Thompson explained that cross-sections would be taken on representative points to determine changes in sediment transport capacity and that sediment sampling would be done. Jody Glennon/URS explained that Troy Thompson/ERC had made several changes to Section 3.3, Channel Morphology, in the Revised Proposed Study Plan to expand the Proposed Methodology discussion regarding sampling. Mr. Atkinson and Mr. Buhyoff indicated they were very interested in seeing those updates and making sure that study would answer the landowner's question, "What's going to happen to my stream?"

Benthic Macroinvertebrate Sampling

Don Conklin/GEI opened this discussion and confirmed for CPW that no information on bugs exists for the lower portion of the study area. Mr. Conklin suggested that a few downstream sites be added to one of his studies to address CPW's concerns about this.

John Hranac/CDPHE requested that PTCR add more sites downstream to support the MMI work for impairment that CDPHE is required to consider.

Mr. Conklin indicated he would add a few sites and work to co-locate those sampling sites with those for the Longitudinal Fish Habitat Utilization Study.

Longitudinal Fish Habitat Utilization Study

Don Conklin/GEI explained that he had consulted with Billy Atkinson/CPW for this study and that he believed they were in agreement that sampling should occur twice in the spring and twice in the fall of 2013; sites should be in the lower section of Trout Creek, depending on landowner access; that access will be needed to private property in lower sections of the stream and that access could dictate the location of sampling sites; and that a concurrent search for migration barriers could be conducted in

assessing migration of different species during the course of this study. Mr. Atkinson confirmed this.

Mr. Conklin also indicated that he knew of at least one diversion (that goes into an irrigation ditch) at Swayback Ranch. Mr. Atkinson confirmed that and said old and new beaver dams would have to be considered and that crews would have to walk the channel to get a better feel for what is out there now.

Bill Chace/Creek Ranch indicated Paul Russell with Yampa River Outfitters has good on-site knowledge and that he was confident Mr. Russell would support GEI's and CPW's efforts.

Jean Marie Boyer/Hydros indicated the Stream and Water Quality Reservoir Modeling Study requires cross-sectional data and that she and Mr. Conklin and the other resource specialists for the studies should coordinate on that data. David Merritt/URS confirmed that coordination would take place.

Whirling Disease Study

Don Conklin/GEI indicated his team would like to take fish samples in the Creek Ranch area. Bill Chace/Creek Ranch communicated he would assist Mr. Conklin and PTCR in getting access and that he would like to be present and even help record and provide physical assistance with this study. Mr. Chace indicated he would require some advance notice of the timing of the sampling to assist with access. Mr. Chace also noted that Creek Ranch residents were amicable to any studies being conducted on their property that could help support/further the PTCR Project.

Matt Buhyoff/FERC reminded call participants that study methodologies should be very specific and very clear; legally defensible. If/when FERC approves PTCR's Proposed Study Plan, FERC is essentially approving the study methodologies.

Water Quality Model

Joe Hassell/FERC requested that PTCR describe the locations that the temperature data would be obtained. Jean Marie Boyer/Hydros indicated PTCR had proposed a total of seven locations with 15-minute to hourly readings and that this information had been added to the Revised Proposed Study Plan. Mr. Hassell encouraged PTCR to start data collection now; Matt Buhyoff/FERC interjected and said that any study that begins now, prior to the Commission's Official Determination on the Proposed Study Plan (due June 17, 2013) would be doing so at PTCR's risk. Mr. Buhyoff indicated that risk was much lower now that the Proposed Study Plan Meeting had been held and various subset conference calls with federal and state agencies had taken place, but even so, any action taken prior to the Commission's Official Determination were at PTCR's own risk.

Mr. Hassell indicated it was good that PTCR had expanded the write-up for the water quality model and that it would also be nice if PTCR would include a map of the study sites in the Revised Proposed Study Plan.

Call Closeout

David Merritt/URS Corporation thanked everyone for their participation on the call and reminded call

participants that updates requested on the call would be reflected in the Revised Proposed Study Plan that would be available on March 15, 2013.

Call Summary and Resulting Actions

In summary, the water quality and aquatics studies subset conference call followed the general “call direction” that was circulated with the call reminder on March 12, 2013, with the updates discussed on the call shown in bold red font below.

Is an additional PHABSIM fish habitat modeling site needed?

- ***One site was established in 2011 downstream of Fish Creek.***
 - *There are no major tributary inputs in lower Trout Creek that would increase flow and warrant an additional site.*
 - *The existing site is in a meandering section of stream.*
 - *Observations indicate that much of Trout Creek down to the Yampa River has similar meandering habitat that would be represented by the existing site.*
 - *There may be some sections with steeper gradient that could provide different habitat characteristics.*
 - *If substantial sections of Trout Creek have different habitat that is not represented by the existing site, then another site may be needed.*
- ***Proposed Solution: A joint site visit with GEI, CPW, and any other interested persons will take place in late March/early April 2013 to evaluate habitat and determine if additional sites are needed.***

Do any of the four ESA-listed fish species utilize habitat in Trout Creek?

- ***The four threatened and endangered species are not found upstream of Hayden on the Yampa River, more than 10 miles downstream of the confluence with Trout Creek.***
 - *The four species would not occur in Trout Creek or the Yampa River near Trout Creek.*
 - *Evaluation of Project effects on the four species and their habitat is already included in the Proposed Study Plan.*
- ***Proposed Solution: No change to the Proposed Study Plan.***

Is additional benthic macroinvertebrate sampling warranted in 2013?

- ***Sampling was conducted at five sites in 2011.***
 - *Four sites were sampled by GEI in 2011 near the reservoir site.*
 - *The most downstream site was downstream of Fish Creek, upstream approximately 4 miles from the Yampa River.*
 - *CDPHE sampled one site several miles upstream of the Yampa River.*
 - *CPW and local landowners are concerned that there may be changes to macroinvertebrates as a result of the Project.*
 - *Additional sampling at downstream sites would provide data for comparison in the future to assess effects.*

- **Proposed Solution: Two or three downstream sampling sites will be added in 2013 that are co-located with the longitudinal fish sampling sites and sampling will take place in early fall, prior to October 1, to meet MMI assumptions.**

The details of the longitudinal fish habitat utilization study need to be finalized.

- **When and where should sampling be conducted to get meaningful data?**
 - Sampling by GEI in 2011 and by others in previous years was concentrated near the reservoir site and upstream.
 - There is little or no data at sites on the private property downstream of the reservoir site to the Yampa River.
 - There are several species that could make spawning migrations from the Yampa River upstream into Trout Creek.
 - The spawning runs would be in spring for species such as bluehead and flannelmouth suckers and rainbow trout.
 - The spawning runs would be in fall for species such as mountain whitefish and brown trout.
 - Each species may be in Trout Creek for a short period of time.
 - Sampling in spring and fall may have to be conducted more than once to detect a species.
 - There may be barriers to migration in Trout Creek.
 - The current Sampling Plan calls for sampling three times...spring, summer, and fall.
- **Proposed Solution: Sample four times, twice in the spring and twice in the fall in the lower section of Trout Creek, and perform a concurrent search for migration barriers.**

The details of the whirling disease study need to be finalized.

- **Whirling disease in Trout Creek has a complicated pattern.**
 - The interaction of trout species distribution, water temperatures, effects of Sherriff Reservoir, and Tubifex worm lineage creates a complex pattern of whirling disease in Trout Creek.
 - Trout Creek Reservoir could change this pattern.
 - Rainbow trout are most susceptible to whirling disease.
 - There are few or no rainbow trout currently in Trout Creek near the reservoir site.
 - Sampling for rainbow trout to assess current infectivity needs to be upstream where rainbow trout commonly occur.
- **Proposed Solution: Sample two sites near Creek Ranch or upstream.**