



## COLORADO PARKS & WILDLIFE

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April 18, 2013

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E, Room 1A  
Washington, DC 20426

### **Re: Proposed Study Plan comments for the Peabody Trout Creek Reservoir Hydroelectric Project P-14446-000**

Dear Mrs. Bose,

Thank you for the opportunity to comment on Peabody's Proposed Study Plans for the Trout Creek Reservoir Project. Below are Colorado Parks and Wildlife staff comments in regards to each of the proposed study plans.

#### 3.2 Existing Channel Conditions and Sediment Supply and 3.3 Channel Morphology Studies:

CPW recommends additional on-the-ground studies to assess existing channel conditions and sediment supply than what has been proposed. Little existing information is available regarding the effect of the proposed dam on sediment storage, and CPW feels that more baseline geomorphic data is needed to make any generalized assessment or to initiate a sediment transport model. Sediment characteristics, slopes throughout the affected areas, and some detail on width/depth ratios should also be included (Level II assessment). It is unclear how sediment transport will be adequately assessed without doing these types of on-the-ground analyses. It is also unclear whether suspended sediment and bedload will both be sampled to assess existing sediment supply. From CPW's standpoint, our concern with the dam construction is not so much about the actual "number" or "quantity" of sediment moving down the system. Rather, given the existing conditions (stream type and biological value) of the stream downstream of the proposed dam site, how sensitive is that stream reach to a reduction of bedload/sediment and what changes in stream morphology (channel substrate, channel width, pool and riffle characteristics, etc.) can we anticipate based on the reduction of sediment from the dam? Will these changes negatively influence existing biological resources?

In section 3.3.4 (*Proposed Methodology*) of the channel morphology studies, the proponents list a number of stream characteristics that they will "document" based on existing conditions, but they don't include a couple characteristics that CPW feels are critical, for example: 1) bedform spacing (pool and riffle spacing) and 2) bankfull channel widths at stable representative cross sections. Both of these are tied directly to

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the existing hydrology and will be good indicators to document the baseline conditions of the stream. If the hydrology changes dramatically after the dam is installed, one could expect channel changes in terms of bankfull width and riffle and pool spacing. It should also be noted that their proposed HEC-RAS model (which drives the results of their sediment model) is dependent on how well they're able to model Trout Creek hydrology using their current methods (Section 3.5).

### 3.5 Hydrological Modeling:

The proponent's current hydrological modeling method utilizes a statistical relationship between runoff that is in the Elk River and that in Trout Creek, which in our opinion reflects at best, a modest correlation rather than a representation of current or future hydrology in Trout Creek. CPW recommends that specific reaches above and below the dam that represent 'typical' reaches be intensively characterized pre-dam and used to accurately calibrate some of the modeling assessments being proposed.

As part of the hydrological modeling, CPW would also like to see the proponent identify what flows (timing, magnitude, and duration of flows released from the proposed dam) should be used for maintaining critical biological, ecological and geomorphic features of the stream system below the proposed dam site. Flows to consider should include minimum habitat, flushing, channel maintenance, and riparian maintenance flows.

### 3.8 Stream and Reservoir Water Quality Modeling

It is stated in section 3.8.2 (*Background and Existing Information*) that bathymetric data exists for the proposed reservoir in the format of five-foot (or finer resolution) contours in GIS, including elevation-area-volume relationships. CPW would like to see a map generated depicting this information.

### 3.9 Flow/Habitat Effects Evaluation on Existing Fishery Resources on Trout Creek and The Yampa River

In section 3.9.1 (*Goals and Objectives of Study*), CPW would like to see the addition of a plan to address how the proponent will respond to an introduction of undesired or invasive species to the proposed reservoir. CPW realizes that this could also be incorporated into the Fisheries Management Plan that will be forthcoming.

### 3.10 Fish Species and Longitudinal Habitat Utilization Study

In section 3.10.4 (*Proposed Methodology*) it is stated that at least three sites within the river reach beginning at the confluence with the Yampa River and terminating upstream at the site of the proposed dam will be sampled with qualitative methodology. CPW would like to see population estimates generated from these sampling events, versus just a presence /absence assessment. CPW is willing to discuss sampling protocols with the consultant.

### 3.14 Migratory Bird and Raptor Survey:

Under Section 3.14.1, Migratory Bird and Raptor Survey, the proponent states “Based on input from CPW regarding other wildlife species, including game animals, no additional baseline wildlife studies are proposed for the Trout Creek study area”. This statement is not correct as our Terrestrial Biologist Liza Rossi requested a survey done for northern leopard frogs to determine if there were any breeding sites for this species in the vicinity of the proposed reservoir. This recommendation is based on information from the consultant that northern leopard frogs were found within the proposed reservoir area. Below is an excerpt from an email between Liza Rossi and Jeff Dawson of URS explaining the parameters of the study CPW would like to have done:

“I am responding to your questions from our phone conversation relating to northern leopard frogs at the proposed Trout Creek reservoir site. In terms of your question regarding follow-up studies, we do think it would be helpful to determine if the site is a northern leopard frog breeding site. Follow-up surveys should be conducted in spring or early summer in order to document calling adults, egg masses, or tadpoles. In terms of your question about if we would request mitigation for loss of northern leopard frog habitat, we think that it is still early in the process to layout potential mitigation ideas, especially since we do not know if it is a breeding site or not. Therefore, I do not have an answer about what we might request for mitigation”.

Thank you again for the opportunity to comment on the proposed study plans for the Peabody Trout Creek Reservoir. For any further questions, please contact Aquatic Biologist Bill Atkinson at 970-871-2868 or District Wildlife Manager Danielle Domson at 970-846-3056. You can also contact our Land Use Specialist Jacob Davidson at 970-878-6069.

Sincerely,



Ron Velarde  
Northwest Regional Manager  
Colorado Parks and Wildlife

cc: Dean Riggs  
James M. Haskins  
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