Weber Hydroelectric Project Relicensing
Fish Passage Work Group
Draft Conference Call Notes
June 2, 2016

Call Participants
Eve Davies, PacifiCorp
Jesse Waldrip, Kleinschmidt Associates
Ben Gaddis, Gaddis Consulting
Paul Burnett, Trout Unlimited
George Weekley, U.S. Fish and Wildlife Service
Paul Badame, Utah Division of Wildlife Resources
Frank Shier, PacifiCorp
Paul Chase, U.S. Forest Service
Bill Damery, Utah Division of Water Quality
Kari Lundeen, Utah Division of Water Quality
Stewart Edwards, PacifiCorp

Action Items from the June 2, 2016 Conference Call	
All	• Email Waldrip with any specific thoughts on fish trap design—cc: Davies Shrier and Hugentobler.
Shrier and Burnett	• Work together on fish trap design specifications.

Decisions Made During This Call

- Proceed with Kleinschmidt's proposed design change to the traditional vertical slot fishway. The fishway will be designed for a certain flow, with the remainder going over the ice chute, and with fixes to existing structures made as discussed.

Davies opened the call with introductions. She said Kleinschmidt ran into engineering challenges while working on design of the chosen fish passage alternative. She said the purpose of the call is to discuss proposed modifications to address these issues. She said she considers the modifications to be minor, but wanted to discuss them with the Fisheries Work Group (FWG) before proceeding.

Waldrip asked whether everyone received the traditional vertical slot drawing distributed by email prior to the call. He noted this design is different than the serpentine vertical slot presented at the May 4 meeting and looks similar to the pool and weir design presented at the meeting. This new drawing is the traditional vertical slot, the chosen alternative, which is known to work with the fishes of concern for this project.

Waldrip said slot width determines how much flow is passed. The amount of flow determines what size the pools are. He said when he went through and started laying out the proposed fish passage design in more detail with a 9-inch drop per pool, 18-inch slot width can pass flows needed. But after putting in a gate at the upstream end and looking at hydraulics, it was determined that a pretty significant change in depth would be required to get flows needed. This was not feasible.

Options were brainstormed, he said. If we can't get the range of flow we need, for 34 cfs (lower end), we considered using the existing abandoned fishway instead of doing what was discussed at our last FWG meeting. The entrance to the old fishway is high and dry, he said. Water comes out and isn't passable to fish. If water was passed there, it could serve as an attraction flow at 0-16 cfs plus.

Gaddis said it appeared there was no way to do this without supplemental attraction flows. Edwards said this is compliance flow, not supplemental flow. Gaddis said so the fishway is being designed for one flow, while finding a place for the other flow to go. Davies said PacifiCorp is also concerned about adding screens and would not screen compliance flow. She said 20 cfs would go through the new fish ladder with the remaining flow being directed through the old fish ladder (ice chute).

Thompson asked if there would be any work required to the existing fish ladder. Davies said it would be maintained as is. Thompson said it looks like the concrete is on its last legs. Edwards said if it is structurally unsound we will fix it. Davies said we will look at it, and see how it works with this design. Edwards said if it needs to be fixed, we will fix it. Thompson noted that it dumps in above the pool. Davies said that is correct. Thompson said he hopes it doesn't cause confusion in fish. Edwards said we will make sure it cascades above. Waldrip said when we get into detailed design, the option of putting in new concrete to raise it and make it harder for fish to get up is a possibility.

Weekley said he doesn't see many downsides. He noted a piece of rebar sticking out of the old structure as a possible impaling hazard. Edwards said PacifiCorp will clean it up. Shrier said a little more cleanup is needed on the wall as well.

Burnett said he had no questions. He said most fish ladders have some kind of bypass to allow for variability. For example, one at the mouth of the Weber is 10 cfs, and fish can find it even at large flows. He said he is good with the proposed design.

Badame said he is also good with the design. He said he agrees with Thompson and Burnett's concerns, if bypass flows surpass fishway flows it may confuse fish, but he said he is not very worried about it. Davies said she thinks fish will only find one place to go.

Thompson asked where the fish trap would be in this design. Davies said at the fish exit. Waldrip noted this is not currently in the drawing. He said he would make the exit pool longer to accommodate it. Thompson said he would like to know the size of the trap. He said he thinks 20 cfs is still a good size. He would like to know the size of the trap with 20 cfs.

Davies said there will be more detailed drawings for next (July 13) meeting. Waldrip asked what size trap Thompson would like to see. He said the pool would be 9-10 feet long, 6-8 feet wide, and 3-5 feet deep. Thompson said that sounded like a good size.

Burnett said it might be good to have a trap that could be bypassed and could be dewatered somewhat. This would allow for efficient removal of fish. Shrier said he had envisioned a trap that could be lifted out. Davies said that Shrier has a lot of experience with fish traps. She said the FWG can work on this during our next session. Davies suggested that meanwhile Shrier and Burnett work on it together. Gaddis said if anyone had specific thoughts on the fish trap, email Waldrip, copying Davies, Shreir, and Hugentobler.

Gaddis asked remaining call participants for their thoughts on the proposed design change.

Chase said his concerns had been covered by Paul Thompson; Damery and Lundeen said they had no questions.

Davies said she talked to Reimherr the day before this call, and he asked that we make time to talk about how we will know, in terms of monitoring, whether fish are using the new passage structure. Davies said the fish trap will provide that information. Shrier said there will also be an antenna in place.

Gaddis asked for agreement on the design modification: The fishway will be designed for a certain flow, with the remainder going over the ice chute, and with fixes addressed as discussed. No objections were raised.

Waldrip said, so we are all on same page? He said Edwards had shown him drawings of the fishway at St. Charles. They discussed measurements of 9-10 inches of drop per pool and somewhere in the range of 10-12 inches per slot. Depth of pool varies, but targeting 20 cfs. He said that's the direction we are headed. Waldrip noted this is not what's shown on the current drawing. Slot width is smaller than is shown.

Davies said she likes the smaller footprint. There will be less concrete and less cost. It will be a smaller structure, with less impact to parking and the recreation area. As long as it can pass the fish of concern, she said she would rather have a smaller footprint. Gaddis noted that at the last meeting, smaller footprint was viewed positively. Weekley said he would be hesitant to go below 20 cfs out of concern it would wash out attractant flows. Davies agreed.

Waldrip asked if call participants were ok moving forward without seeing another sketch or perhaps a table with relevant information. Davies said it would be nice to add a table with the next series of drawings. Waldrip said we left the last meeting saying we wanted traditional vertical slot, but now the design is smaller. He asked if anyone wanted to see more drawings before proceeding. No one requested drawings.

Davies asked if there were any additional questions.

Thompson said Shrier brought up an antenna. Thompson said the antenna may be 6 feet wide. He would suggest building in an area for that, in the bottom of the fishway, sitting level. This would be preferable to retrofitting a place or trying to place bolts in new concrete. Weekley said a retrofit could modify the amount of flow, potentially taking PacifiCorp out of compliance.

Waldrip asked where the antenna slots should be. Bottom and top? Thompson said he will think about it. Waldrip said it is not a big deal to add them top and bottom. He said he will include antenna slots on the drawings.

Gaddis asked if anyone had anything else. Davies said no. Gaddis said next scheduled meeting is July 13, 9 a.m., and will probably be a half-day meeting. He said as Waldrip moves forward with design, we may have an additional call if needed.