Nevada Irrigation District

Hemphill Diversion Fish Passage Project
50% Design Review Meeting Summary
February 1, 2022
Comments and Responses

Topic: Review and Discuss the Hemphill Diversion Fish Passage Project
50% DRAFT Design Report

Date and Time: February 1, 2022, 10:00 A.M.

Location: Via Zoom

Purpose:

The intent of the February 1, 2022 meeting was to discuss the 50% Design Report and receive comments and feedback from the public and the permitting agencies before moving forward in the Design phase.

Attendees:

Nevada Irrigation District – Tonia Tabucchi Herrera, Doug Roderick

McMillen Jacobs - Jon Burgi

ECORP - Dave Thomas, Courtney Owens

California Department Fish and Wildlife - Patrick Moeszinger, Beth Lawson

Dept Water Resources – Matt Meyers

NOAA – Jean Castillo, Ellen McBride

Friends of Auburn Ravine – James Haufler

Turkey Creek Golf Course – Chris Wilson, Jeff Wilson

Members of the Public – Russell Berry, B. McCraley, Alan Kilgore; Bryce Cruey, Lawrence Gonzi, Gary Mapa, Paul Vose, Ra'iatea Lohe, Eric Byer, Robert Hane

Jon Burgi from McMillen Jacobs Associates provided an overview of the Hemphill Diversion Structure Fish Passage 50% Design Report. Dave Thomas from ECORP provided an update on the Permitting Process. The following questions and comments were received, and the responses that were provided:

Q: James Haufler - Asked about the potential danger for high flows to scour out some or all of the roughened rock ramp?

R: Jon Burgi – Part of our analysis, we used a two-dimensional model where we looked at the velocities, and shear stresses on the rocks to make sure the system functions under low flows and to make sure it doesn't wash away under high flows. We're looking into whether we can build this with big rocks or if we'll need to anchor them with grout. We will be very clear in our specifications to the contractor.

Q: James Haufler – What type of anchoring technology is being considered?

R: Jon Burgi – The analysis shows that if we put D50 rocks of 2 feet in diameter, they wouldn't move, and anchoring would not be necessary. If we needed to anchor, it would likely be grouting some rocks together in the bottom layers.

Q: James Haufler – Asked about the sheet pile barrier at the level of the existing sill, if there would be a notch where the low flow channel starts? Is the low flow channel constructed, or is it just a low place in the surrounding rock?

R: Jon Burgi – That is correct; there would be a notch where the low flow channel starts. The low flow channel will be constructed. The contractor will be given specifications as to the placement and size of the rock to create that channel.

Q: James Haufler – What will prevent a plunge pool from developing downstream of the sheet pile?

R: Jon Burgi – There is no drop-off behind the sheet pile. The rocks will come up to the top of the back of the sheet pile. There will also be rocks in front of the sheet pile to help the transition.

Q: James Haufler – In the first part of the canal, where it leaves the cone screen and heads to the culvert, you were saying that is the point of restriction crossing under the golf course. What will be the changes to that? Will it be lowered all the way across, and what will the new slope be?

R: Jon Burgi – We will be lowering the canal approximately one foot to extend down to Station 300, just past the existing gauge station.

Q: James Haufler – Commented that there is a blind corner on Virginia Town Road, and it would be wise to have traffic controls in place when construction equipment is in use.

R: Jon Burgi – There are a couple of different access routes. The contractor will define the means and methods, but we'll make it a point to make sure they're doing traffic controls.

Q: James Haufler – Is the idea of concrete weirs in steps going down from the sill, like the Lincoln Gauging Station, still being considered? Is there a cost or timeline downside?

R: Jon Burgi – That is a possible alternative; it's just a different way of doing the same thing this design does. The downside for the timeline would be creating all of the concrete weirs, which would take longer and cost more than what this design will do.

Q: James Haufler – There was a previous discussion about designing the sheet pile wall at the upper end so it would allow for a passage of lamprey, maybe rounded and not vertical.

R: Jon Burgi – Having the rocks come right up to the sheet pile wall will address that, but we'll take a look and see if there is something we can do at the top of the sheet pile that will help.

Q: Chris Wilson – Asked for clarification regarding replacing the previously proposed horizontal fish screen with a cone screen and if that will change the footprint much?

R: Jon Burgi – It will actually reduce the footprint.

Q: Jim Haufler – Does the design take flows of 600 cfs into account for durability so there will be good fish passage and water delivery year after year?

R: Jon Burgi – 600 cfs is in the span of what we looked at in worst-case scenarios. Once we have a hydraulic model we know works for getting water into the canal and the 100-year flow, we'll go through each different flow rate to see what's happening and how the system responds.

Q: Lawrence Gonzi – Are there any provisions for monitoring the number of fish that will be going through the dam and using the new ladder? Volunteers are standing by.

R: Jon Burgi – There is nothing built into the system. We will depend on volunteers like the Friends of Auburn Ravine and CDFW and continue to do fish counts to see where fish are and how they're using the system.

R: Tonia Tabucchi Herrera – It's good to hear that volunteers will help monitor the fish count. It is a requirement of the Wildlife Commission Grant to have some metrics to see that the project succeeds in terms of the fish