

Bonneville Adult Fish Facility Improvements

FFDRWG Update

April 4, 2013

There were three main areas that the Bonneville Adult Fish Facility Improvements project covered, as listed below. General update is that construction is complete, testing began and indicated some areas of concern, that are being addressed as detailed below:

Velocities in the exit channel:

Revisions to the weirs, with addition of porosity plates have been completed. Testing indicates only a 10% reduction in velocities, not the major reduction hoped for.

The limited reduction is likely caused by an eddy from below the gating that is feeding the jet as water is flowing over the concrete ledge. We are putting solid plating over an area of the grating to starve the jet and stop this from happening, in hopes of reducing the velocities at the exit of the brail pool. Based on the results of the AFF meeting on Tuesday a baffle across the width of the channel will also be installed. This will force flows to dip before the brail pool exit.

In working through this and taking measurements, we have determined that the velocities in the exit channel at the previously proposed brail pool exit are even higher than those at the current exit, therefore other than a slight distance gain from the grizzly, there would be little gain in that relocation.

Observation Boxes:

2 observation boxes have been constructed and installed in the AFF. There is concern about the location of the box nearest the stairs. It appears that there is just not enough room in this area to support all the research that is going on, plus house two observation boxes. If this location will not work, the box will be removed for this season and either a new location will be determined, or the current location will be used (when less research is ongoing), or this second box becomes a spare. There is only so much real estate available in this location.

Some minor issues have been noted with the observations boxes

- Weight and stiffness of the elephants trunk provided
- Square to Round transition attachment to the observation box
- Additional tilt mechanism

These issues are being addressed and will be functional prior to the start of the RM&E activities this spring.

Fish Bypass Pipes:

The two fish bypass pipes have been relocated to discharge outside the building. The location and slope provides for a 1-2" drop from invert of the pipe to the water surface in the exit channel.