# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 20AppG001 – Adult Trap Water Supply

**Date Submitted**: 20 December 2019

**Project**: Lower Granite Dam

**Requester Name, Agency**: Chris Peery, USACE NWW OD-T

**Final Action:**

**FPP Section**: Appendix G – Adult Trap Protocols, section 3. Lower Granite Dam

**Justification for Change**: Part of the new JFF facility was a water line which was to become the primary supply to the adult trap because it was thought it would provide a cooler source of water. However, during an emergency close of the JFF primary bypass structure (e.g. a debris clog or computer malfunction), all water to the facility would be shut off which would result in loss of water to the adult trap in about 15 minutes. This would place any fish in the trap at risk and so it was decided the JFF supply could not be the primary water supply to the trap, although it can be a backup water supply.

**Proposed Change**: *[see below with edits to existing FPP in track changes]*

3.3. Trapping Protocols (Mar 1–Dec 15) – Ladder Water Temperatures < 70°F

**3.3.2.** During lengthy periods of non-use (two days or more), the facility shall be dewatered or the water supply will be shut down. The trap should be operated with water supply from the adult fishway (diffuser-14) rather than from the juvenile bypass system because of risk of dewatering the adult trap in the event of an emergency close of the JFF primary bypass structure . If freezing weather may cause damage during such a non-use period, the facility will be dewatered.

**Comments**:

1/23/2020 FPOM FPP Meeting:

Conder asked if this would result in warmer water in the summer compared to the past couple years since the new bypass system was completed.

Peery responded that the project hasn’t yet been able to use the bypass as the primary water supply due to issues the project had to work through with modifications and testing of the new system. So the adult fishway has been the primary source up to this point. Now that the modifications and testing are complete, the plan was to switch to JFF water this year since it may be cooler. However, the issue has now come up with the emergency closure of the JFF, which would dewater the adult trap.

Setter added that an emergency closure of the JFF would dewater the adult trap in about 20 minutes, which is likely before an operator could get to the valve and switch to another source. She confirmed that JFF water can be cooler than water from the fishway cooling pump system, which is why it was originally preferred.

Lorz asked to have this conversation added to the next NWW FFDRWG on 30-JAN.

1/30/2020 NWW FFDRWG Meeting:

Jon Renholds provided more information. During summer months, the water supply in the LWG adult trap can get too warm for fish. The Primary Bypass was identified as a potential source for cooler water to the trap. However, the project has indicated that in an emergency, this bypass system could be dewatered and the valve to switch away from this source is not automated. Consequently, fish could be stranded before an operator could get to the valve (~20 min) and switch to other sources. The project recommends this be considered a secondary source of cooling water.

Conder asked if there’s a way to automate the system so that it switches over in the event of an emergency. Setter responded that the engineers haven’t determined a way to automate, so that an emergency shutoff would result in dewatering and fish stranded in about 15-20 minutes.

Conder asked what the temperature difference would be between the two different sources. Laughery responded that more data need to be collected to see if there is a difference. Lorz thought there is likely a difference so we need to think about a remedy. Renholds responded there can be further evaluation of engineering an automated switch. Laughery added that the spray bar could be shut off to allow colder water into the trap, but we need more data before deciding if that would be helpful. Lorz and Conder prefer not to turn off the spray bar.

ACTION (Renholds and Laughery): 1) collect data to determine temperature difference between the two sources; 2) evaluate potential for automating or another engineering solution.

PENDING MORE DISCUSSION AT FEBRUARY FPOM.

**Record of Final Action**: