# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 18BON003 – Diffuser Cleaning

**Date Submitted**: April 13, 2018

**Project**: Bonneville Dam

**Requester Name, Agency**: Andrew Derugin, USACE BON

**Final Action:** **APPROVED 5/24/18**

**FPP Section**: BON section 4.3.1.3 – Adult Facilities Routine Maintenance

**Justification for Change**: During winter maintenance, diffuser pits have been found to be clogged with mud, clamshells, sticks, and other debris. This is especially prevalent in upstream diffusers that seldom open under normal conditions. When the pits fill with debris, water flow becomes inconsistent and damage to equipment can occur (blown diffuser gratings, stuck valves). We would like to make sure that this operation happens regularly in order to keep diffusers in the best operating condition possible.

**Proposed Changes**: Add new section “e” to 4.3.1.3 (in track changes to existing section):

**4.3.1.3. Diffuser Gratings**: Diffuser chambers for adding auxiliary water to fish ladders and collection channels are covered by gratings attached by several different methods. Diffuser gratings are normally checked during the winter maintenance period to make sure they are in place. These inspections are done by either dewatering the fish passage way and physically inspecting the diffuser gratings, or by using other methods to inspect the gratings. Diffuser gratings may come loose during the fish passage season.

* + - * 1. Daily inspections of fish ladders and collection systems should include looking for any flow changes that may indicate problems with diffuser gratings.
        2. If a diffuser grating is known to or suspected of having moved, creating an opening into a diffuser chamber, efforts must immediately be taken to correct the situation and minimize impacts on adult fish in the fishway.
        3. If possible, a video inspection should be made ASAP to determine the extent of the problem. If diffusers gratings are found to be missing or displaced, creating openings into the diffuser chambers, a method of repair shall be developed and coordinated with the fish agencies and tribes through the established FPOM coordination procedure.
        4. Repairs shall be made as quickly as possible unless coordinated differently.
        5. Clean debris from diffuser pits using a rolling operation. Diffusers are opened for a period of ~5 minutes, one at a time, starting with the furthest diffuser upstream to allow debris in the pits to be flushed down the ladder.This should be done at A-branch, B-branch, Cascades Island, and any other diffuser deemed necessary by Project Fisheries. This should be done in November before the start of winter maintenance, and in summer during the same time as ROV inspections in order to minimize impacts on fish passage.

**Comments**:

**Record of Final Action**: Approved at FPOM May 24, 2018