# Fish Passage Plan (FPP) Change Form

**Change Form # & Title**: 21LWG006 – Clarify RSW Criteria and Spill Rate

**Date Submitted**: 2 September 2021

**Project**: Lower Granite Dam

**Requester Name, Agency**: Lisa Wright, Corps

**Final Action:**

**FPP Section**:

Chapter 9 LWG, section 2.3.2.6. RSW Operating Criteria.

**Justification for Change**:

Currently the FPP calls for operating the Lower Granite RSW through August 31 and closing the RSW “*if river flow is too low to maintain RSW spill and minimum generation requirements*”. In 2021, there was confusion as to whether this meant the RSW should stay closed for the rest of the season or re-opened as flows allowed.

This Change Form adds a sentence to clarify that the intent is to keep the RSW open to maintain PIT-tag detection whenever flows are high enough, as approved in Change Form [21LWG004](https://pweb.crohms.org/tmt/documents/fpp/2021/changes/21LWG004_RSW-August-Operation.docx).

Also, this Change Form adds RSW spill rates over the normal forebay operating range of elevations. The hourly project data report is being updated in September 2021 to calculate RSW spill based on the forebay. Therefore, by the time the RSW is operated for fall spill in October 2021, the hourly data website will report the RSW spill rate based on the current observed forebay elevation.

**Proposed Change**: *(see following pages for edits to existing FPP in track changes)*

**Comments**:

**Record of Final Action**:

Proposed Change:

**2.3.2.6. Removable Spillway Weir (RSW).**

Lower Granite Dam has one removable spillway weir (RSW) in spillbay 1 that provides a surface route for fish passage. The RSW can be opened and closed from the control room.

The spill rate through the RSW is a function of the forebay elevation – as the pool elevation increases, more water is spilled over the RSW:

|  |  |
| --- | --- |
| **LWG Forebay Elevation (ft)** | **RSW Spill Rate (kcfs)** |
| 733 ft | 5.6 kcfs |
| 734 ft | 6.6 kcfs |
| 735 ft | 7.6 kcfs |
| 736 ft | 8.8 kcfs |
| 737 ft | 10.0 kcfs |
| 738 ft | 11.4 kcfs |

The RSW will be raised and operational during spill for juvenile fish passage, April 3–August 31 (**Appendix E**) and during spill for adult steelhead (**section 2.2.2**):

Raise the spill gate to where it does not touch flow passing down the RSW (at least nine stops) and distribute spill according to patterns in **Table LWG-7**.

If river flow is too low to maintain RSW spill and minimum generation requirements, close the RSW and spill the remaining outflow according to “No RSW” patterns in **Table LWG-8**. Re-open the RSW if flows increase sufficiently to support both RSW spill and minimum generation. The intent is to keep the RSW open to maintain PIT-tag detection to the extent possible as flows allow.

During high flow, if the Northwest River Forecast Center (NWRFC) inflow forecast for Lower Granite[[1]](#footnote-1) is above 200 kcfs, coordinate with RCC and CENWW-OD-T to initiate aggressive forebay debris removal so that RSW operation will not be impeded. If inflow exceeds 260 kcfs, the upstream river gauge flow is increasing, and the NWRFC inflow forecast is above 300 kcfs, stow the RSW (complete rotation to the landing pad).

1. NWRFC inflow forecast for Lower Granite Dam: [www.nwrfc.noaa.gov/river/station/flowplot/flowplot.cgi?LGDW1](file:///C%3A%5CUsers%5CG0PDWLSW%5CDocuments%5CFish%20Passage%20Plans%5CFPP17%5CFPP17_Sections_Final%5Cwww.nwrfc.noaa.gov%5Criver%5Cstation%5Cflowplot%5Cflowplot.cgi%3FLGDW1) [↑](#footnote-ref-1)