

Fish Passage Plan (FPP) Change Request Form

Change Form # & Title: 15BON011 – Split Flows
Date Submitted: July 9, 2015
Project: BON
Requester Name, Agency: Gary Fredricks, NOAA Fisheries
Final Action: APPROVED – [August 13, 2015](#)

FPP Section: BON 2.1.2.1. Project Operation – General – Powerhouse Unit Priority.

Justification for Change: The following change is suggested to allow real-time adjustments to unit operations in the case where crowding is occurring in the Washington Shore adult ladder. This change should take effect as soon as FPOM approves the language.

The high fall Chinook passage levels the past couple of years have required more flexibility in splitting powerhouse flows to alleviate crowding conditions in the Washington Shore ladder. Under these conditions, splitting flows evenly makes sense; however, this flexibility does not come without a fisheries-related cost. There are still juvenile salmon migrating in the river and split flows worsen tailrace egress conditions at the priority powerhouse and move more fish into poor tailrace conditions at the non-priority powerhouse. Therefore, the project should use the flow shift judiciously and only as needed based on observations of adult passage conditions. This is the reason for inserting the “while PH2 is still the priority” reminder in the new language.

Proposed Change:

2.1.2.1. Unit Priority during Split Flows. Before August 31, if adult and jack salmonid counts equal or exceed 30,000 fish/day, Project Fisheries will initiate coordination with the Fish Passage Operations & Maintenance (FPOM) team to discuss options for splitting flow between powerhouses to balance attraction flow and adult passage among the project’s fishways. After August 31, when adult and jack salmonid counts equal or exceed 25,000 fish/day, the Project will operate two (or more) priority turbines at PH1 in an attempt to balance adult passage between both powerhouses (assuming no PH1 units are already operating). While PH2 is still priority, project fisheries, at their discretion, may shift additional unit flow up to half the combined powerhouse flow, to PH1 as necessary to alleviate adult fishway crowding. This operation will continue until adult and jack salmonid counts fall below 20,000 fish.

2.1.2.1.a. See section 5.1. for unit priority order during split flows, and section 5.2. for unit operating ranges at PH1 and PH2. Turbine units at PH1 should be operated at the mid or upper 1% range whenever possible during split flow operations.

2.1.2.1.b. Turbine units at PH2 should be operated at the mid to lower 1% range whenever possible during split flow operations.

2.1.2.1.c. Split flow operations during summer spill may only occur if flow is > 120 kfs.

Comments from others:

9-Jul-2015 FPOM: Fredricks presented a NOAA memo requesting these changes. Hausmann confirmed Project Fisheries is fine with the changes. Bettin recommended deleting sections 2.1.2.1.a-b regarding unit 1% operations since these criteria are outdated and inconsistent with Section 5.2.1 that was added last year and revised this year. There was also discussion regarding 2.1.2.1.c. which is also likely outdated and does not reflect the current summer spill operation. VanDyke expressed concern about removing juvenile protections. [*NOTE: All three sections a-c were added in 2010 via change form [10BON003](#) when summer spill was 75 kcfs day/ TDG cap night.*]

Record of Final Action: 8/13/15 APPROVED at FPOM.