# Fish Passage Plan (FPP) Change Form

**Change Form # & Title**: 23LGS001 – Early JBS Start

**Date Submitted**: 17-OCT-2022

**Project**: Little Goose Dam

**Requester Name, Agency**: Chuck Barnes, USACE NWW

**Final Action:**

**FPP SectionS**: Chapter 8 – Little Goose Dam - Table LGS-1, 2.3.1. Juvenile Facilities – Winter Maintenance Period, 2.3.2. Juvenile Facilities – Fish Passage Season, 2.3.2.2. Forebay Area and Intakes (iv), 2.3.2.3. ESBSs and VBSs (i & vii), 2.3.2.4. Collection Channel (v), 3.2. Maintenance – Juvenile Fish Facilities (3.2.1.2.). Also related sections in Appendix J (SMP Protocols), per Change Form [23AppJ001](https://pweb.crohms.org/tmt/documents/fpp/2023/changes/).

**Justification for Change**: In accordance with court orders to provide PIT tag monitoring, USACE began implementing early operation of the juvenile bypass systems (JBS) to better understand juvenile emigration patterns in 2018. Early operation of the JBS has been conducted for the month of March at all NWW Projects at least one season, with Lower Granite and McNary dams two seasons. As shown in the “March Early Start NWW Projects Summary 2018-2022”, data suggests that juvenile fish emigration begins during the latter part of March.

This proposal would implement operation for the JBS at all NWW Snake River Projects approximately 1-week earlier, enabling more efficient planning and coordination for other maintenance and the annual navigation lock outage.

**Proposed Change**: *Edits to existing FPP text in “track changes”*

* + 1. **Juvenile Facilities - Winter Maintenance Period (3rd week of December – March 24).**
		2. **Juvenile Facilities – Fish Passage Season (March 25 – third week of December).**

Operate according to criteria below March 25–October 31 for juvenile bypass, collection, and transport, and November 1 until Monday of the 3rd week of December for adult fallbacks. Also operate according to criteria in the *Corps of Engineers Juvenile Fish Transportation Plan* in **Appendix B**. The transportation program may be revised in accordance with the ESA Section 10 permit and NOAA Fisheries Biological Opinion.

* + - 1. **Forebay Area and Intakes.**
1. Log drawdown differentials in bulkhead slots at least once per week March 25–June 30 and once every two weeks (biweekly) for the remainder of the operating season.
	* + 1. **ESBSs and VBSs.**
2. Install ESBSs with flow vanes attached to screen in all operating turbine units by March 24.
3. Operate ESBSs with flow vanes attached to screen.

**vii.** Log VBS head differentials at least once per week March 24–June 30 (more frequently if required) and once every two weeks (biweekly) for the remainder of the operating season. When a head differential of 1.5' is reached, operate the respective turbine unit at a reduced loading (≤ 110 MW) to minimize loading on the VBS and potential fish impingement until the VBS can be cleaned. Clean VBSs as soon as possible after a 1.5' head differential is reached.

* + - 1. **Collection Channel.**
1. Backflush orifices at least once per day and more frequently if required. During periods of high fish and debris passage, March 25 through July 31, inspect and backflushorifices three times per 24 hours or more frequently as determined by the Project Biologist to keep orifices clean. If debris is causing continual orifice plugging problems in a particular turbine unit gatewell, restrict the respective turbine unit to the lower end of the 1% turbine efficiency range to minimize orifice plugging problems. Little Goose does not currently have an automatic backflush system in operation.

**3.2. Maintenance – Juvenile Fish Facilities**

* + - 1. Long-term maintenance or modifications that require facilities out of service for extended periods are conducted during winter maintenance period, beginning on Monday of the third week of December through March 24.

**Comments**:

10-NOV-2022 FPOM Meeting:

Hesse - early starts were during cold years. The proposed date is right on the edge of when salmonids show up. Lamprey have been observed earlier. Need to collect data for successful translocation. Likes the standardization of a date but prefers mid-March and discussion about lamprey.

Peery - lamprey were not part of this decision. Can deviate for research if want to get data on lamprey.

Swank - concerned about not observing changes in timing, esp with climate change.

Bettin - screen will start going in earlier to meet the date (by March 25).

Conder - this is a good operation for fish and can still talk about earlier start and data collection.

Peery - a consistent schedule allows time for project to do winter maintenance and plan more efficiently.

Hesse - is this standardization ending the effort to look at early start on a rotating basis?

Peery - yes, that is the intent. Having it rotate to a different project/start date each year is very difficult to schedule/budget for. What are other dates folks are willing to consider?

St. John - nav maintenance is typically already scheduled and contracted. Screen install also requires the cranes so can’t do both at the same time. Also, RSW pit-detection will happen in March during overshoot spill, so there will be some data collected.

Morrill - only have one year at LGS. Thought the plan was to get two years.

Van Dyke - there was a set schedule when this first came up that has been changed every year.

Hesse - overshoot spill isn’t enough to get sufficient data to monitor early movement of juveniles.

Peery - requested folks to send in their comments and we will keep this on the agenda for more discussion.

8-DEC-2022 FPOM Meeting:

Conder - co-managers are not willing to give up the early start operations for value of data gathering. Willing to start a week earlier as proposed by the change forms but still want to rotate an earlier start as done previously.

Peery - what are you looking for? What is the value? What is the co-managers’ plan? Need to look at the data and make a decision rather than a perpetual data gathering exercise.

Conder - would like to get a range of flow years to compare. Understands it shouldn’t be done in perpetuity. No plan yet as to which projects and when.

Ebel - will draft a written response with what they want to see and why. Still haven’t had a flow year similar to what was the impetus for this operation. Also difficult to interpret when it’s rotated around. Will get the response/plan to Peery ASAP.

Peery - early start has a big impact on nav lock outage so need as much forewarning as possible.

Van Dyke - there is an FPC memo from OCT 2017 that provides justification. Other documents too with lots of information.

Morrill - there is quite a bit of information and data already out there that will be helpful for them to consider in making a recommendation.

**Record of Final Action**: