# Fish Passage Plan (FPP) Change Form

**Change Form # & Title**: 21AppJ002 – LMN Condition Monitoring *(previously 21AppB001)*

**Date Submitted**: 21 April 2021

**Project**: Lower Monumental JFF (Appendix J)

**Requester Name, Agency**: Trevor Conder, NOAA Fisheries

**Final Action: APPROVED**

**FPP Section**: Appendix J – Smolt Facility Protocols.

**Justification for Change**: *NOTE: this change form was originally submitted for Appendix B (Transport) in 21AppB001. Van Dyke recommended moving these criteria to a stand-alone condition sampling section, rather than in the Transport appendix. Since that time, a new section for the Snake projects has been added to Appendix J (Smolt Facility Protocols), so LMN condition sampling criteria will be moved there.*

NOAA requires that the Action Agencies monitor and document the condition (e.g., descaling and injury) of smolts at all dams with JBS systems, identify potential problems, and evaluate solutions. At Lower Monumental Dam, the FPP does not stipulate the level of monitoring necessary for the entire year to achieve the condition monitoring goals, since the Smolt Monitoring Program index sampling has been sufficient. Regional fish managers are reviewing and considering removing the SMP program from Lower Monumental Dam. In addition, transport operations are planned to pause on June 21 and resume on August 1.

With the potential to remove the SMP sampling, and pause transport, it is necessary to develop minimum condition monitoring criteria in the FPP for Lower Monumental Dam. The condition monitoring program is intended to monitor the condition of smolts and to identify and correct problems within the bypass system. The condition monitoring program is not intended to estimate the size, timing, or condition of the population of fish arriving at any particular project. Further, condition monitoring is not conducted to sample fish for other purposes, and separate take permits are necessary if additional fish will need to be sampled for other research purposes. The sample number, frequency, and holding time of smolts should be managed in a way that balances the needs of the program with the potential impact to the resource. For condition monitoring purposes, more frequent sampling (e.g., every other day) may be necessary when debris loads are high, and the potential for debris blockages in the bypass are more likely. Conversely, periods of low debris probability with higher temperatures should consider lower sampling frequency (e.g., two days per week) to reduce handling impacts to the resource.

**Proposed Change**: *See following pages.*

**Comments**: email from Erick Van Dyke, OR: “I would recommend this change form move to a stand-alone condition sampling section that provides guidance that fit the justification section.”

**Record of Final Action**: Per Van Dyke’s recommendation, moved from Appendix B (Transport) to Appendix J (Smolt Facility Protocols). APPROVED.

Appendix J – Smolt Monitoring Facility Protocols

Separated LMN into its own section and added Condition Sampling (moved from Appendix B).

1. LOWER MONUMENTAL dam JUVENILE FISH FACILITIES

Agencies conducting research in the Lower Monumental (LMN) Juvenile Fish Facilities (JFF) will implement the following protocols as precautionary measures to avoid or minimize delayed fish mortality resulting from stress during handling. The Fish Passage Operations & Maintenance (FPOM) workgroup coordinated these protocols with fish agencies and tribes.

* 1. LMN Condition Sampling
     1. Condition sampling will occur at the Lower Monumental JFF as described below:
        + 1. Condition sampling will begin April 1 to monitor fish descaling and other fish condition parameters and to ensure sampling systems are operating correctly. Condition samples will be taken if fish are being sampled for barge loading purposes; the following criteria will apply when barge loading samples are not taken for any reason.
          2. From April 1 through April 14, condition sampling will occur at least twice per week, with no more than three days between samples.
          3. From April 15 through July 31, condition sampling will occur every other day.
          4. From August 1 through September 30, condition sampling will occur at least twice per week with no more than three days between samples.
          5. The sample goal should be 100 fish of the predominant salmonid species.
          6. When not sampling, the facility will return to primary (full-flow) bypass.
          7. Sampling frequency may be increased if injuries are observed or suspected (e.g., during high debris conditions).
          8. Full 24-hour samples may be taken to determine species composition to inform a decision on starting transport at this project.
          9. Fish condition reporting will follow the standardized SMP protocol and sent to FPC within 12 hours of sampling.

5.2. LMN JFF Sampling at Water Temperature > 68.0F

**5.2.1.** An instantaneous sample/holding temperature of 68.0°F or greater taken within the JFF between 0630 and 0700 hours will trigger the following changes in sampling after a project biologist notifies SMP biologists:

**5.2.1.a.** If transportation is not occurring, daily index sampling will be reduced to every-other-day index/condition monitoring. Daily sampling may resume up to 3 days prior to beginning juvenile fish transport to estimate loading densities.

**5.2.1.b.** If transportation is occurring, daily index sampling will continue but sample rates will be reduced to target approximately 100 fish per day.

**5.2.1.c.** Monitoring for gas bubble trauma (GBT) will continue (where/when applicable).

**5.2.2.** Normal index sampling may resume when the instantaneous sample/holding temperature taken within the juvenile fish facility between 0630 and 0700 is ≤ 67.5°F.

**5.2.3.** If there is a research need to sample at temperatures > 68.0°F, the Corps District POC will initiate coordination with FPOM.

**5.2.4.** If the SMP or project biologists suspect a bypass system problem during a high temperature sampling period, additional sample collection may occur. Project or District biologists will notify FPOM as soon as possible and provide updates as they attempt to resolve the problem.

1. LITTLE GOOSE AND LOWER GRANITE JUVENILE FISH FACILITIES

Agencies conducting research in the Little Goose (LGS) and Lower Granite (LWG) Juvenile Fish Facilities (JFF) will implement the following protocols as precautionary measures to avoid or minimize delayed fish mortality resulting from stress during handling. The Fish Passage Operations & Maintenance (FPOM) workgroup coordinated these protocols with fish agencies and tribes.

* 1. LGS and LWG JFF Sampling at Water Temperature > 68.0F
     1. An instantaneous sample/holding temperature of 68.0°F or greater taken within the JFF between 0630 and 0700 hours will trigger the following changes in sampling after a project biologist notifies SMP biologists:
        1. If transportation is not occurring, daily index sampling will be reduced to every-other-day index/condition monitoring. Daily sampling may resume up to 3 days prior to beginning juvenile fish transport to estimate loading densities.
        2. If transportation is occurring, daily index sampling will continue but sample rates will be reduced to target approximately 100 fish per day.
        3. Monitoring for gas bubble trauma (GBT) will continue (where/when applicable).
     2. Normal index sampling may resume when the instantaneous sample/holding temperature taken within the juvenile fish facility between 0630 and 0700 is ≤ 67.5°F.
     3. If there is a research need to sample at temperatures > 68.0°F, the Corps District POC will initiate coordination with FPOM.
     4. If the SMP or project biologists suspect a bypass system problem during a high temperature sampling period, additional sample collection may occur. Project or District biologists will notify FPOM as soon as possible and provide updates as they attempt to resolve the problem.