

Bonneville Dam¹

1. Special Project Operations.

RCC will coordinate needed changes with the projects and authorize operations in teletype regulations.

1.1. Spill. Spill for fish passage will be provided during the spring and summer outmigration seasons in accordance with spill specifications in Appendix E and as coordinated through TMT. Alternative spill patterns to control dissolved gas levels or change fish passage conditions will be coordinated through the FPOM.

1.2. Spillway Erosion Monitoring. The Bonneville spillway ogees, pier noses, and stilling basin are badly eroded. The Corps has been monitoring the extent of this erosion through mid and post fish spill operation season surveys. In 2011, a mid season (approximately mid to late June) survey will be conducted. The survey will take approximately one-half day and require a full spillway outage. A post season survey will also be conducted. The survey will require shutting down adult attraction spill (bays 1 and 18) 1 bay at a time for a 2-hour period. The post season survey will be scheduled for late October / early November to minimize impacts on adult passage and provide enough time to use survey information for planning. FPOM and TMT will be coordinated with to determine the best timing for both surveys.

2. Studies.

2.1. BiOp Performance Standard Compliance Test. In 2011, PNNL will conduct the first year of a two year study to assess compliance with the BiOp Juvenile Salmon Performance Standard. This test will utilize acoustic telemetry to estimate dam passage survival for yearling and subyearling Chinook salmon and juvenile steelhead. Hydrophones will be deployed on the upstream face of the dam to monitor all major routes of passage available to juvenile salmon. In addition, hydrophones will be deployed in the forebays of the spillway and first and second powerhouse. Autonomous receivers will be deployed in both the Forebay and tailrace each approximately two kilometers from the dam.

2.2 Adult Kelt Passage Test at B1 Sluiceway and B2CC. Starting in Mid to late March 2011 researchers will be releasing balloon tagged adult surrogate fish through both the B1 sluiceway and the B2CC. At this time the B1 sluiceway will be opened in early March for normal operations. The B2CC will need to be opened for approximately 2 days in March for adult fish releases and recovery. During B2CC testing the B1 Sluiceway will be closed. This study is in support of a decision on safe kelt passage operations each spring and this data will be used to finalize spring sluiceway operations at Bonneville Dam for outyears.

¹ The purpose of this section is to notify regional interests of planned activities that will or may affect fish passage. Further coordination may occur as needed.

2.3. Lamprey Passage Evaluations. From early June to the end of August, up to 900 adult Pacific lamprey will be captured and tagged with half-duplex PIT tags and released below the dam to evaluate efficacy of Cascades Island fishway entrance modifications, picket lead modifications at the Washington Shore Fish Ladder count station, and overall passage, including use of the Lamprey Passage Systems (LPSs). Access to antennas and receivers for downloading and maintenance will be needed from March through October. LPS and half-duplex PIT antennas will be operational no later than the middle of May and run until at least October 1. Any new antenna or receiver installations will be completed during the 2010-2011 IWW period.

To evaluate the use of JSATS acoustic telemetry tags in adult Pacific lamprey studies and to determine the fate of adult lamprey in the FCRPS, up to 90 adult Pacific lamprey will be captured and tagged with a JSATS and half-duplex PIT tag. Up to 60 of these JSATS-tagged fish will be released in the Bonneville Dam forebay and mobile tracked by boat through the reservoir reaches, tributary mouths, and tailraces of upstream dams. Up to 30 will be released for tracking in the Bonneville Dam tailrace.

In addition, a DIDSON or similar acoustic imaging device will be used to evaluate fine-scale passage behavior of Pacific lamprey at the Washington Shore Fish Ladder - North Downstream Entrance and (if possible) the Cascades Island Fish Ladder entrance. As with other lamprey study objectives, operation of the DIDSON will occur throughout the adult lamprey passage season (early June – October).

2.4. Adult Salmon Studies Evaluations. No adult salmon passage studies are planned for the 2011 adult passage season, so there are no adult salmon collection needs at the Adult Fish Facility (AFF). Any new radiotelemetry antenna or receiver installations or maintenance will be completed during the 2010-2011 IWW period.

2.5. Sea Lion Predation. Beginning when the first sea lions return to Bonneville Dam until the last sea lion leaves, usually mid-November until June 1 (modifications to this date coordinated through FPOM), exclusion gates will be installed at all downstream slots of all entrances and barriers will be installed at B2 FOGs. In addition, NMFS-approved sea lion harassment activities will occur from land and water during sea lion season. The Fisheries Field Unit (FFU) will monitor sea lion predation and evaluate sea lion deterrent efforts from the powerhouse decks and the spillway public parking lot from early January through May 31.

2.6. Summary. All dates shown are approximate and could be advanced or delayed by a week(s) depending on various factors such as river flows, contractor schedules, equipment failures, etc. Some evaluations may not proceed. Therefore, a final description of studies and outages being conducted will be coordinated with the region through AFEP (FFDRWG and SRWG), prior to April 1. All significant special operation requests or schedule changes will be coordinated with the fisheries agencies and tribes through the appropriate regional forum with the action agencies making the final decision.