

**Change Request Number: 11LGS006**

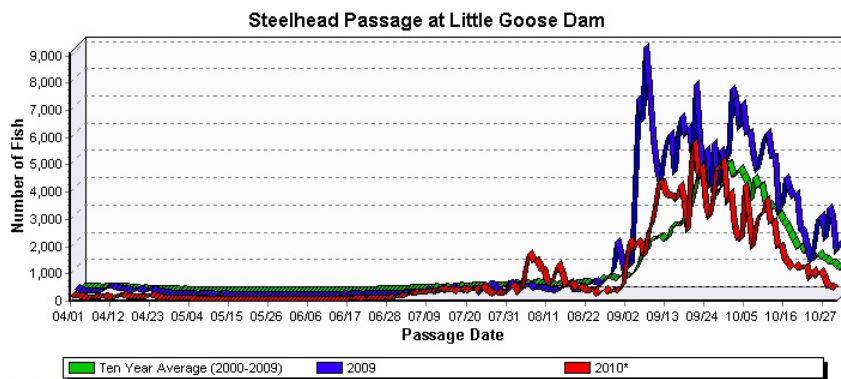
**Date:** December 15<sup>th</sup>, 2010

**Proposed by:** David Benner, FPC

**Location of Change-** LGS 4.3

**Proposed Change: 4.3. Turbine Unit Maintenance.** The project turbine unit maintenance schedule will be reviewed annually by project and Operations Division biologists for fish impacts. If possible, maintenance of priority units will be scheduled for non-fish passage periods, or when there are low numbers of fish passing the project. Each turbine unit requires annual maintenance that may take from several days to two weeks. Annual maintenance of all turbine units is normally scheduled during the mid-July to late November time frame. The maintenance of priority units for adult passage is normally conducted in November or December, but can be conducted in mid-August. Impacts to, to minimize impacts on-migrating adults should be minimized. Turbine units may occasionally require overhauls to repair major problems with the turbine or generator. Overhauls may take over one year to accomplish. Turbine units, governors, exciters, and control systems require periodic maintenance, calibration, and testing which may take them outside of the one percent best efficiency range. This work will be scheduled in compliance with BPA load shaping guidelines (**Appendix C**) to minimize impacts on juvenile fish. Transformers are Doble tested every 3 years. Testing may need to be more frequent if there is a known problem with a transformer. These tests normally take 2 to 3 workdays. To conduct the testing, the transmission lines have to be disconnected from the transformers and normal generation stopped. One turbine unit will operate in a speed-no-load condition to provide project power and operation of fish passage facilities. Spill may be provided to meet minimum required project discharges during the testing hours. The Doble tests are normally scheduled for the August or early September time period to minimize impacts on adult and juvenile fish passage. If doble testing impacts priority units for adult fish passage, adult passage timing should be considered. Impacts to migrating adults should be minimized.

**Reason for Change:** The following plot shows adult steelhead passage in 2009, 2010, and the 10yr average. From this plot, the early September time period does not appear to be a good time to be doble testing if it means stopping generation from priority units.



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**Comments from others:**

USFWS- support

**Record of Final Action: approved 21 January 2011.**