APPENDIX A: LITTLE GOOSE

Little Goose Dam[1]

1 Special Project Operations.

1.1 Spill. Spill for fish passage will be provided during the outmigration season 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 Navigation. Short term adjustments in spill patterns, spill discharge rates and/or turbine operations may be required for navigational safety. This includes both commercial tows and fish barges.

1.3 Doble Tests. Transformer bank T1 and turbine units 1, 2, 3, and 4 will be taken out of service for Doble testing in 2010. The outage is tentatively scheduled for 2 - 6 August 2010. This work will require a total powerhouse outage, and 100% spill (except for station service) for up to 4 hours. By then, all clearance tags should be hung, and the line could be re-energized allowing generation availability of Units 5 and 6. Turbine unit 1% efficiency operations and turbine priorities will continue to follow fish passage plan requirements during these tests. Another total plant outage will be required on the last day of testing to remove clearance tags and restore T1 bank.

1.4 Little Goose Dam – Primary Dewaterer Repairs. The primary dewaterer is to undergo modification and repairs in conjunction with work on the bypass flume. This work is to be completed by March 1. Should inclement weather or other construction issues be encountered, completion may be delayed further into March.

1.5 Steady State Model Validation Testing. Western Electricity Coordinating Council requires steady state model validation testing on a periodic basis to ensure the generating equipment will meet real and reactive power ratings. All units will be tested on a 1-2 year cycle. Test will involve running the unit out of fish priority sequence and outside the 1% criteria. Testing can take place at any time except from 1 April to 31 August due to fish considerations. Tests will preferably be conducted just after unit annual maintenance, but may happen at other times. Tests will last for a standard of 30 minutes at maximum load with additional time to run the unit along the maximum real/reactive power curve to the minimum settings. Total test time is anticipated to be 90 minutes or less. Test durations will be minimized to the extent possible and will only be run for the purpose of completing the required model validation testing.

[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.

1.6 Precise Level Surveys. Dam safety has scheduled the performance of Precise Level surveys at Little Goose Lock and Dam, in the February/March/April 2010 time frame. This requires the contracted surveyors to have a direct line of sight across the top of the embankment and roadway deck of the powerhouse, spillway, non-overflow sections, and Navigation lock and that the brass cap survey markers do not have anything set over the top of them.

1.7 Bridge Inspections. Bridges as appurtenance structures to the dam are inspected every two years based on the Federal DOT Bridge Inspection Program. Those Bridges include the spillway road way deck Bridges, and the Navigation lock downstream pedestrian Bridge and the upstream upper and downstream lower bascule bridges. Inspections require using a boat to inspection under the bridge in the spillway forebay or the use of a snooper truck from the road way deck. No underwater inspection of piers will be accomplished. Inspection of the spillway bridges will be attempted to be accomplished before the spill season.

1.8 Transient Model Validation (Exciter Step Response) Little Goose. Western Electricity Coordinating Council requires model validation testing on a five year minimum cycle to ensure the generating equipment responds to as planned to system requirements and disturbances. Unit tests will be accomplished on all 6 units at Little Goose. Testing will involve running the test unit out of fish priority sequence and outside the 1% criteria. Testing will take place at some time from October 1 to April 1 or at night during September; each unit will be run for approximately 1 hour with 30 minutes outside the 1% criteria. Test durations will be minimized to the extent possible.

1.9 Model Validation (Governor Step response) Western Electricity Coordinating Council (WECC) requires a Governor response calibration to ensure the generating equipment responds as planned to system requirements and disturbances. Unit calibrations will be accomplished on all six units at Lower Granite. Calibration will involve running each unit in the manual GDACS mode and stepping the MW set point by 5 MW through the 1% range. To accomplish this, at least two other units will need to be operating in automatic to ensure a steady plant output while stepping through the operating range. This may result in operating units out of the sequence of the fish season priorities when calibrating units 4-6 if there is not sufficient water to operate four units. Each unit's calibration is expected to take approximately 1 day. Calibration will take place between March 29 and April 16.

2. Studies.

2.1 Bull Trout PIT Tag Study. Incidental bull trout passing through the Little Goose Juvenile Fish Facility will be collected and held for PIT tag insertion, then released through the Little Goose primary bypass outfall. Project duration begins and ends with scheduled juvenile fish facility operations. No special turbine or spill operations will be necessary. Study continues in 2010.