

Spill Plan Agreement
Federal Columbia River Power System – NMFS Biological Opinion

Lower Granite: No change in the base spill operation as defined in the 1998 Supplemental Biological Opinion, except that the 2000 operation has already been modified for the purposes of the prototype surface collector evaluation. That evaluation, which requires a fixed spill level of 20% for 24 hours per day, will continue as planned in 2000. Beyond the requirements of that evaluation, spill should revert to the base operation.

Little Goose: No change in the base spill operation as defined in the 1998 Supplemental Biological Opinion.

Lower Monumental: Implement 24 hour spill to the dissolved gas cap (currently 40 kcfs). This is a new base operation that replaces the base operation defined in the 1998 Supplemental Biological Opinion.

Ice Harbor: No change in the base spill operation as defined in the 1998 Supplemental Biological Opinion.

McNary: No change in the base spill operation as defined in the 1998 Supplemental Biological Opinion.

John Day*: No change in base spill operation as defined in the 1998 Supplemental Biological Opinion. Continue daytime spill study by varying spill between 0 and 30% in three day blocks. Days of 30% spill are to correspond to days of 75 kcfs day spill at Bonneville Dam. The study should address effects of 0 vs. 30% daytime spill on delay and survival of juvenile migrants and delay of adults. The study operation should continue throughout the spring and summer migration periods in 2000 and 2001.

The Dalles*: Reduce spill from 64% to 40% for 24 hours each day. This is a new base operation that replaces the base operation defined in the 1998 Supplemental Biological Opinion. Implement planned project survival studies in 2000 and 2001.

Bonneville*: No change in base spill operation as defined in the 1998 Supplemental Biological Opinion. Initiate daytime study with increased spill, varying between 75 kcfs and the dissolved gas cap (ranges between 120 and 150 kcfs) in three day blocks. Days of gas cap spill are to correspond to days of 0 daytime spill at John Day Dam. The study should address effects of increased daytime spill on adult fallback and the delay and survival of juvenile migrants. The study operation should continue throughout the spring and summer seasons in 2000 and 2001.

* The passage and survival studies described above at John Day, The Dalles and Bonneville dams are intended to test potential means of reducing forebay residence time and increasing juvenile fish project survivals in the future (though it is understood that a direct measure of survival differences from changes of this type is unlikely given the practical limits of study design). Further modifications to spill operations suggested by the studies for 2002 and beyond may be limited pending transmission system improvements that are expected to come on line by 2005. In the interim, BPA will seek opportunities to address limiting

factors to facilitate further changes in spill operations at the earliest possible date, though these opportunities are likely limited.