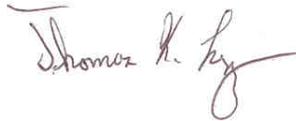


## **SYSTEM OPERATIONAL REQUEST: #2008-4**

*The following State, Federal, and Tribal Salmon Managers have participated in the preparation and support this SOR: NOAA National Marine Fisheries Service, Oregon Department of Fish and Wildlife, the Shoshone-Bannock Tribes, the Columbia River Inter-Tribal Fish Commission, and the Nez Perce Tribe.*

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**FROM:** Tom Lorz, Vice Chairperson, Salmon Managers

**DATE:** May 27, 2008

**SUBJECT:** Bonneville Dam Juvenile Bypass System

**SPECIFICATIONS:** Reinstall at least one set of STS in one turbine unit

To expedite resumption of screen bypass operations at Bonneville Dam, we recommend the COE reinstall at least one submersible traveling screen (STS) set in one turbine unit to gauge the debris level and effectiveness of implementing more aggressive cleaning. To aid in the operation of the bypass system greater effort is needed to clean vertical barrier screens (VBS) and the following techniques should be employed during the process. We define the more aggressive VBS cleaning as one where the second VBS does not need to be installed while cleaning the first VBS.

- 1) Prior to redeploying the STS, clean the gatewell without use of the 2nd screen and attempt to remove as much debris in the gatewell as possible.
- 2) If debris is still a significant issue once the STSs are redeployed, proceed with more aggressive VBS cleaning on a trial basis: clean once without the second VBS and then monitor to see if the system can be maintained using the standard debris removal procedure.

3) When using the aggressive cleaning technique prior to removal of the VBS, reduce turbine loading as low as possible for approximately 1.5 hours to reduce the number of fish being guided as well as give the fish in the gatewell as much of an opportunity to egress as possible.

4) Cross check with smolt monitoring to determine if debris issues continue to affect smolt condition. Since flows appear to be dropping, turbine loading could be reduced while keeping the bypass system operating. Smolt monitoring on Friday indicated that with lower turbine loading, smolt descaling decreased dramatically. This is especially important given the number of juvenile salmon passing the Lower Snake projects over the past week. These fish will arrive shortly at Bonneville, and turbine survival for steelhead is considered poor through the turbine units (e.g. 0.8785 as used in the COMPASS modeling). All protective efforts and actions should be implemented to assure that this peak of the Snake River as well as Upper and Middle Columbia juvenile salmon runs are provided safe passage through Bonneville Dam.