USING VIABLE SALMONID POPULATION (VSP) MODELING TO HELP PRIORITIZE ACTIONS AT WILLAMETTE BASIN DAMS.

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Viable salmonid population (VSP) models provide a framework for investigating how specific management actions have population-level impacts. Stage-specific life cycle models provide outputs that are rolled up into VSP scores to rank alternative actions. We have developed life cycle models to evaluate a range of operational and structural actions at dams to improve survival, productivity, and diversity of spring Chinook salmon in the McKenzie, North and South Santiam, and Middle Fork rivers. We have completed models for 4 spring Chinook and 2 steelhead populations, and we will present results for these populations. In addition, we will discuss: the results of an expert opinion process to estimate parameters controlling survival and life-history diversity in reservoirs; a new approach to translate model output into VSP scores for abundance and productivity; responses to the ISAB review, including the development of new calibration routines to more rigorously use available data; and a new project to use habitat assessments to estimate juvenile capacity above and below dams.