2016 PSMFC Steelhead Symposium

Presenter: Doug Hatch

Title: Steelhead Kelt Reconditioning and Reproductive Success Studies in the Columbia River Basin

Abstract: All populations of anadromous Oncorhynchus mykiss (steelhead) in the Columbia River Basin are listed as either threatened or endangered under the Endangered Species Act. Populations of wild steelhead have declined dramatically from historical levels in the Columbia and Snake rivers.  This stock status necessitates novel approaches to rebuilding and restoring steelhead populations.  Toward this end, a research program was launched to investigate exploitation of iteroparity to help recover steelhead populations.   This presentation will introduce studies we have conducted to investigate baseline iteroparity rates, steelhead kelt stock composition, kelt collection processes, downstream and spawning migrations of kelts, artificial kelt reconditioning fish culture methods including diets and disease treatments, reproductive development in reconditioned kelts using blood hormone levels, kelt homing fidelity, and reproductive success of reconditioned and maiden steelhead in hatchery and natural settings.  Based on results to date, the efficacy of management approaches to increasing repeat spawner rates will be evaluated, including transport, short term reconditioning, and long term reconditioning.