

## **Fishery Science Questions Surrounding the Proposed Klickitat Hatchery Program - Monitoring Information on Native Species Recovery, Harvest Goals, and Hatchery/Wild Interactions**

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**ABSTRACT:** With proposed changes and upgrades to the anadromous salmonid hatchery program in the Klickitat River subbasin, a variety of public comments and questions have been received under the Environmental Impact Statement process. This presentation summarizes some of the key fishery-science related comments along with scientific monitoring and research information that is being used by YN/YKFP, BPA, and cooperating agencies to respond to these comments and to develop plans for reforming of the hatchery program. The proposal is an effort to reduce effects on native stocks while maintaining certain harvest levels. Many comments referred to an expansion of the hatchery program or increased juvenile fish release numbers. The overall release numbers would in fact be reduced under the proposal, and release locations for some stocks (coho and fall Chinook) would be moved downstream to a lower river location (under full funding and implementation of the proposed program) to reduce interactions between hatchery and wild juveniles. Some comments referred to the potential risk of collecting wild spring Chinook or wild steelhead as broodstock when these populations are depressed or threatened. While this is recognized as a risk for spring Chinook, there is also substantial risk currently due to the existing hatchery spring Chinook stock. Spring Chinook broodstock collections would generally be less than 25% of the run size, and wild broodstock would be used in an effort to rebuild the depressed population. For steelhead, the current proposal is for a segregated program which does not use wild broodstock. Other comments address the threat of genetic introgression (interbreeding) between spring Chinook and hatchery fall Chinook and between hatchery and wild steelhead. For Chinook, a recent study has identified past summer Chinook releases as the likely cause of observed introgression, and the likelihood of introgression is low with currently-stocked Upriver Bright fall Chinook due to differences in spawn timing and locations. For steelhead, a previous study indicated a low level of introgression, and differences in spawn timing between hatchery and wild steelhead (evidenced by preliminary radio telemetry results) suggest the risk is low. Monitoring will continue on many of these important factors in the future.