Homing patterns and spawning site selection of Yakima River spring Chinook salmon

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A number of conservation and supplementation hatchery programs, including the YKFP hatchery, are utilizing satellite acclimation facilities to "seed" or repopulate underutilized rivers or streams. The effectiveness of offsite releases from satellite facilities for ensuring successful imprinting, minimizing straying and contributing to salmon recovery has not been demonstrated. The overall goal of our project is to describe the spatial and temporal patterns of homing and spawning by wild and hatchery-reared spring chinook salmon released from acclimation facilities as part of the YKFP supplementation program. In collaboration with Yakama Nation biologists, we have conducted a comprehensive carcass and redd survey for spring Chinook salmon in the entire upper Yakima sub-basin from 2002-2008. In general, we have observed that hatchery-reared and wild fish had similar distributions within the watershed but the site of rearing and release significantly affects the distribution of adult spawning within the sub-basin. In 2008, we recovered 308 natural origin and 1012 hatchery carcasses. Analysis of the spatial distribution of hatchery and wild spawners in 2008 is incomplete but will be described during this presentation.