Title:
Homing and Spawning Site Selection of Hatchery and Wild Spring Chinook

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Summary of Presentation:
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 conducted a comprehensive carcass and redd survey of the entire upper Yakima sub-basin in Fall 2002; sampling and mapping the location of over 2100 carcasses and mapping over 2800 redds. Overall, hatchery-reared and wild fish had similar distributions within the watershed with most spawning occurring above the Cle Elum hatchery. However, the percentage of hatchery and wild fish in the Cle Elum and Teanaway Rivers differed considerably. Preliminary data indicated that hatchery fish released from the three acclimation facilities had distinct spawner distributions. Approximately 50% of fish from the Jack Creek release group were recovered in the Teanaway River suggesting a tendency to home to the release site. Similarly, most fish released from the upriver Easton acclimation site were recovered in the upper watershed while fish released from the Clark Flat site tended to be lower. Interestingly, however, a large percentage of fish released from the Jack Creek and Clark Flat facility were recovered upstream from the confluence of the Cle Elum River.