



STILLAGUAMISH/SNOHOMISH RIVERS

The regional implementation progress report for Stillaguamish/Snohomish was jointly authored by WDFW and the Stillaguamish and Tulalip tribes. They state that the response was coordinated at both the co-manager technical and policy levels. This region was reviewed by the HSRG in 2001.

HSRG Response and Synopsis

General Description of Region and Hatchery Programs/Issues:

The co-managers in the Stillaguamish/Snohomish region have traditionally placed a strong emphasis on natural production. The region is home to large natural stocks, and large and small hatchery programs. The Snohomish Basin has the largest naturally-producing coho population in the state of Washington. Together with Tulalip Bay, it also includes large Chinook, coho and chum harvest programs. A primary challenge here is to meet harvest goals, while rebuilding or maintaining naturally-spawning stocks. The co-managers appear to be meeting this challenge. Salmon stocks in the Stillaguamish are less productive and conservation issues dominate. Habitat protection and restoration are under way in both basins. The co-managers are managing hatcheries on the premise of improved habitat conditions.

General Overall Comment about the Co-Manager Report:

The HSRG commends the co-managers for their thorough consideration of all advice and recommendations provided by the HSRG during the regional review. It is clear that the co-managers in the Stillaguamish/Snohomish region fully understand and subscribe to the principles and concepts developed in the Hatchery Reform Project. Goals are clearly articulated, credible progress has been made (or will soon be made) to implement reforms and the infrastructure necessary to track progress and assure success over time is evolving. The comments below do not pertain to steelhead programs. As discussed elsewhere, the co-managers are reviewing the HSRG's system-wide recommendations for steelhead and will address them in a forthcoming white paper. Operational recommendations for steelhead have generally been met for all regional programs.

1. Stock goals and the role of hatcheries.

- a) Are short- and long-term management goals/premises for habitat and conservation and harvest of all regional hatchery and naturally-spawning salmonid stocks clearly stated? Have specific questions raised in the regional review been adequately addressed?**

The co-managers have reviewed the goals for all stocks in the region and confirmed the goals that formed the premise for the HSRG's recommendations. In the few instances where the stock goals have been modified (e.g., for Stillaguamish coho), the new goals are clearly articulated. All recommendations of the HSRG have been met.



- b) Is the purpose (harvest, conservation, education, etc.) of each hatchery program stated? Have specific questions raised in the regional review been adequately addressed?**

The co-managers have explicitly stated the purpose of all hatchery programs in the region. All questions raised by the HSRG have been fully addressed. Where the program purpose has changed since the original HSRG review, HSRG guidelines for the revised program have been met. An example of this is the North Fork Stillaguamish chum program, which was changed from a conservation program to an integrated education program, and reduced in size.

- c) Is the program type (integrated vs. segregated) identified and explained for each hatchery program? Have specific questions raised in the regional review been adequately addressed?**

Every hatchery program in the region is clearly identified as either integrated or segregated. The co-managers have developed a particularly creative solution for the segregated Tulalip Bay Chinook and coho programs, where the broodstock is taken from the integrated hatchery returns to the Wallace Hatchery. The HSRG applauds this initiative.

- 2. Steps taken (decisions made and actions taken) towards meeting short- and long term expectations**

- a) Has significant progress been made to achieve desired hatchery- and naturally-spawning proportions in the hatchery broodstock and on the spawning grounds for integrated and segregated programs?**

The HSRG guidelines for integration and segregation have either been met or plans are in place to meet them. The HSRG supports the co-managers' request for adequate funding to upgrade facilities and for on-going management and monitoring of stock composition on the spawning grounds and in the hatchery broodstock. Co-managers in this region have made effective use of available funds, including tribal hatchery reform funding, but permanent funding is needed to ensure that the benefits of proper integration and segregation will continue into the future. In particular, resources needed to safely collect and transport representative samples of natural-origin spawners for incorporation in hatchery broodstock must be a high priority.

- b) Have steps been taken to size programs consistent with goals for all hatchery- and naturally-spawning stocks? Have specific questions raised in the regional review been adequately addressed?**

The co-managers have reviewed and resized hatchery programs to be consistent with all stock goals. They intend to evaluate the programs on an ongoing basis through adaptive management. For example, the release of non-native Chinook stock has been suspended,



the South Fork Stillaguamish chum program has been suspended, and several programs have been reduced (fewer smolts released). In all instances, the questions raised by the HSRG have been adequately addressed. The co-managers in this region are developing goals for harvest contribution of hatchery programs explicit enough to allow them to size the programs to meet these needs.

c) Have steps been taken to better meet hatchery operational guidelines, from broodstock collection through release? Have specific questions raised in the regional review been adequately addressed?

The co-managers have addressed all recommendations, to the extent available funds have allowed. They are committed to implementing all reforms and to meeting HSRG operational guidelines. For example, all programs now employ five-by-five matrix spawning protocols, to maximize effective population size. Significant facility improvements have been made in the Stillaguamish Basin, where many of the HSRG's recommendations have been implemented. Stable funding for facilities and operations to sustain hatchery reform over time must be a high priority. For example, funds are needed to improve the handling and sorting of coho and Chinook broodstock at the Wallace Hatchery, to fully integrate those programs.

3. Steps taken to track progress toward expected outcomes

Please see general HSRG comments about managing for success. The co-managers in this region are working on developing a comprehensive monitoring plan to ensure continued success of their hatchery programs through adaptive management. This plan has the potential to serve as a model for hatchery monitoring programs state-wide.

a) Will status of major stock goals (e.g. harvest and escapement) be monitored over time?

Catch contributions and spawning escapement estimates for stocks in the region are made annually. The HSRG presumes that the evolving adaptive management plan for the region will include an assessment of the need to improve the accuracy and precision of these estimates.

b) Will contributions of each hatchery program towards its purpose be monitored over time (e.g. contributions toward harvest and escapement)?

The co-managers have made the most of their available resources in this region, however the potential need to expand spawning ground surveys and stock identification sampling programs, in particular, should be reviewed as a part of the development of a comprehensive monitoring plan for the region. Stable funding is needed for long-term monitoring of stock composition on the spawning grounds. The monitoring of hatchery contributions to harvest and natural spawning escapement is critical for tracking the success of both integrated and segregated programs.



c) Will contributions of hatchery origin fish to broodstock and natural escapement be estimated with sufficient accuracy and precision over time?

Extensive stock identification programs have been developed and implemented that meet statistical standards for precision and accuracy, using a range of marking methods to track the performance of hatchery stocks over time. As the needs associated with the implementation of new hatchery integration policies are evaluated, the need for additional marking and mark sampling will be revisited. Funds should be provided for genetic stock identification sampling and analysis for chum programs. It is likely that additional spawning surveys and biosampling will be needed in this region, as in others, in order for adequate accuracy and precision to be achieved.