



SKAGIT RIVER

The regional implementation progress report for Skagit was authored by WDFW. WDFW states that the response was coordinated at the co-manager technical level. Although it was not specifically reviewed and agreed to at the policy level, WDFW believes it would be consistent at that level as well. This region was reviewed by the HSRG in 2002.

HSRG Synopsis and Response

General Description of Region and Hatchery Programs/Issues:

Management in the Skagit region is primarily directed towards the needs of natural production. Portions of its headwaters are relatively pristine, with altered habitat downstream that is prone to flooding. There are only a few harvest-oriented hatchery programs in this region. Most Skagit River hatchery stocks have the primary purpose of serving as US/Canada Treaty indicator stocks, with secondary harvest and conservation goals. The Baker River programs are mitigation for two dams. Currently, the managers are also considering whether to institute a conservation program for spring Chinook in the Sauk and Suiattle rivers.

General Overall Comment about the Co-Manager Report:

The co-managers have considered all HSRG recommendations, and have taken positive action on some. They have made significant changes to the Baker River programs, under a new re-licensing agreement. The HSRG recommended that they evaluate whether surrogate indicator stocks could obviate the need for the indicator stock hatchery programs in this region. The managers are currently conducting this evaluation, and will decide on a course of action when that evaluation is complete. 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.

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 and confirmed the goals for all stocks in the region that formed the premise for the HSRG's recommendations. For example, the co-managers are no longer pursuing a conservation purpose for the Skagit hatchery spring Chinook program, as recommended by the HSRG.



- 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. Questions raised by the HSRG have not been addressed in many cases. The progress report states that this is because data are not yet available to support alternatives, such as using stocks other than existing Skagit hatchery stocks as indexes for harvest management. The HSRG continues to believe that better alternatives may exist to the current programs that are operated primarily to serve as indicator or double index stocks. These alternatives may also be more cost-effective than the current approach.

- 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 changed Skagit River coho from a segregated to integrated program, as recommended by the HSRG.

- 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 broodstocking of integrated and segregated programs have been met in most instances. Broodstock for the Skagit River summer and fall Chinook programs are comprised almost entirely of natural-origin adults. The co-managers have made plans to start incorporating natural-origin broodstock into the Skagit River coho broodstock, as recommended by the HSRG. The HSRG supports the co-managers' request for funding to monitor stock composition on the spawning grounds and in the hatchery broodstock.

- 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 the HSRG's recommendations to reduce the release numbers for the Skagit River chum or Baker/Skagit coho hatchery programs. They decided that both programs are already an appropriate size.



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

The co-managers have addressed several recommendations, to the extent available funds have allowed. Fish passage by the hatchery intake for Skagit River chum was improved, as recommended. Many of the HSRG's recommendations for the Baker River programs will be addressed under a new re-licensing agreement.

3. Steps taken to track progress toward expected outcomes

Please see general HSRG comments about managing for success.

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

The co-managers are currently collecting data that will be available to make comparisons for determining whether Skagit index stocks can be represented by other stocks. Catch contributions and spawning estimates for stocks in the region are made annually.

- 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 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. The monitoring of hatchery contributions to harvest and natural spawning escapement is critical for tracking the success of both integrated and segregated programs. Hatchery index releases are tagged at rates sufficient to estimate harvest rates. However, Chinook index escapement estimates lack precision for most brood years, due to mainstem spawning and the inability to recover sufficient numbers on carcasses. Stable funding is needed for long-term monitoring of stock composition on the spawning grounds.

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

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.