

Management and Policy Summary
LSRCP Snake River Fall Chinook Workshop

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I would like to thank the LSRCP staff for their role in coordinating the workshop. I would especially like to thank the presenters, who obviously spend considerable time summarizing and analyzing data as well as preparing the presentations. There is clearly a well coordinated and cooperative multi-agency effort underway to implement and monitor the Snake River fall Chinook hatchery program. We share the previously expressed managers' perspectives regarding the critical social and cultural importance of the Snake River fall Chinook hatchery mitigation program. However, it is essential that the program is managed within the sound conservation and recovery principles that are the foundation of the ESA and Oregon's Native Fish Conservation Policy.

The information that was shared over the past two days is very positive. We have seen dramatic increases in natural- and hatchery-origin fall Chinook abundance over the past two decades. The increase in abundance from the severely depressed status of a few hundred spawners to 15,000 natural and 45,000 hatchery fish truly represents one of the most encouraging rebounds in the Columbia River Basin in recent history. There have been significant adaptive management changes and program production and release location expansions resulting in distribution of spawners throughout most of the historical range below Hells Canyon Dam. The program has achieved the LSRCP return goals in recent years, and both the NPTH and IPC programs have been able to reach full implementation with the increased availability of broodstock.

Although a wealth of information was presented, there remains substantial uncertainty and, in some cases, absence of data for some of the most important performance indicators of population viability and hatchery effectiveness including natural-origin spawner abundance, productivity, age structure, relative reproductive success of natural spawning hatchery fish, and the contribution of various factors (supplementation, ocean conditions, hydro-operations, spill) to the rebound in the natural population. Retrospectively, these uncertainties once again highlight the critical importance of having a well designed and appropriately funded RM&E program in place from the beginning of a large-scale program like the Snake fall Chinook hatchery program. It is essential that the co-managers determine why we have achieved such a positive abundance response in Snake River fall Chinook, as it may represent one of very few successful examples of hatchery supplementation. Understanding the magnitude of contribution of supplementation, ocean conditions, in-river migration, hydro-operations and spill, as well as, density dependent relationships is critical to future management decisions.

ODFW has been a strong supporter of the ICTRT viability criteria for all ESU's/DPS's and has used these criteria as a foundation for development of delisting criteria in conservation and recovery plans for Interior Columbia Basin ESA listed salmon and steelhead. NOAA and other co-managers are currently in the process of developing viability criteria for the Snake River Fall Chinook Recovery Plan. Adaptive management and comprehensive RM&E of the hatchery

program will be important to ensure that operations and outcomes are consistent with sound conservation-recovery principles and with a pathway leading to recovery. As Tom Cooney highlighted earlier in his presentation, demonstration of the ability of the natural population to be sustainable in the face of prolonged poor ocean and in-river survival conditions, the ability for the population to develop locally adapted spawning aggregates throughout the historical range and demonstrating persistence capability in the absence of hatchery supplementation is essential for recovery.

It will be challenging to maintain the fall Chinook hatchery mitigation program as it is currently implemented and meet sound viability criteria, especially with the high proportion of hatchery spawners from one common broodstock source in all of the major spawning aggregates in the population. Creative adaptive management changes will likely be needed.

The future expansion of research, monitoring and evaluation activities will clearly improve the quality of information that is needed to assess the status of the natural population as well as the effectiveness and risks of the hatchery supplementation program. It is critically important to gain a better understanding and reduce uncertainty of how the hatchery supplementation program has and will influence natural-origin abundance and productivity currently and in the future.

I think it is essential that the co-managers do not become complacent and assume the progress and performance we have observed over the last two decades ensures ultimate success. There is considerable opportunity for continued improvement to address some of the challenges such as early age-at-maturation and poor smolt-to-adult survival for hatchery fish. In addition, we need to continue to identify improvements to address the key threats and limiting factors, like hydrosystem operations, to improve full life cycle survival and to work towards restoration of natural production throughout the historical range, including areas above Hells Canyon Dam. There is tremendous strength and effectiveness that comes from the co-manager cooperation and union that has built around Snake River fall Chinook. Maintaining this co-manager cooperation should remain a high priority and will serve well in addressing future management challenges.