Overarching Policies

Lower Columbia Salmon Recovery Plan

The Lower Columbia River Salmon Recovery Plan (Recovery Plan) sets forth improvements that are necessary for each H (Hatchery, Harvest, Habitat and Hydropower) in order to achieve recovery. The recovery plan also classifies each population in the lower Columbia Basin with respect to its importance to recovery (see Attachment 1).

- **Primary Populations** need to be restored to high or greater viability. These populations are critical to recovery of listed species.
- **Contributing Populations** require some level of improvement to achieve an average of medium viability for groups of populations defined in the Recovery Plan. These populations provide increased flexibility for hatchery programs to support harvest opportunities.
- **Stabilizing Populations** need to be protected from further deterioration and maintained at current abundance and productivity levels. These populations require the fewest changes to current hatchery programs.

Proposed Recovery Designations for Cowlitz River salmon and steelhead populations

- **Primary (P), contributing (C), and stabilizing (S) population designations for the recovery scenario**
- **Respective target viabilities are high or better (P), a significant improvement above current levels (C), and no further degradation below current levels (S)**
- **X refers to subset of larger population**

		Chinook			Chum		Steelhead		Coho
		Fall	Late Fall	Spr.	Fall	Sum.	Win.	Sum.	
CASCADE	Lower Cowlitz	C	--	--	C	C	C	--	P
	Upper Cowlitz	S	--	P			P	--	P
	Cispus		--	P	--	--	P	--	P
	Tilton		--	S	C	--	C	--	C

The Recovery Plan sets for specific improvements in current hatchery programs that are necessary to assist achieving recovery. The level of improvement necessary will vary depending on the importance of the population to recovery. Hatchery production negatively impacts the fitness ofnaturally produced fish, thereby lowering the productivity of a naturally reproducing population. For hatchery programs the goal is to reduce the negative impact of hatchery programs on the fitness of naturally reproducing populations. The recovery plan sets forth goals for the amount of reduction in negative impact of the hatchery program on naturally produced populations, which have been converted to needed improvements in fitness for each population in the Cowlitz River Basin

The two primary actions that will reduce the negative impact of hatchery programs are:

- Incorporate naturally produced fish into the hatchery broodstock to improve the fitness of the hatchery population
- Reduce number of hatchery fish returning to natural spawning areas

Important Definitions

pHOS: Proportion of natural spawners composed of hatchery-origin fish

pNOB: Proportion of hatchery broodstock composed of natural-origin fish

PNI: Proportion Natural Influence
pNOB/(pNOB+pHOS)

Segregated Program: Hatchery-origin and natural-origin fish do not interbreed

Integrated Program: Hatchery-origin and natural-origin fish interbreed regularly

Hatchery Scientific Review Group (HSRG)

The HSRG recently reviewed hatchery programs throughout the Columbia River Basin. In conjunction with this review the HSRG developed standards that hatchery programs need to achieve to ensure that negative impacts of hatchery programs are not impeding the recovery of naturally produced populations. The standards set forth vary depending on the importance of that stock for recovery, as follows:

- **Primary Populations:** Integrated programs should have PNI $\geq$ 0.67 and pHOS < 30%
  Segregated programs should have pHOS < 5%
- **Contributing Populations:** Integrated programs should have PNI $\geq$ 0.50 and pHOS < 30%
  Segregated programs should have pHOS < 10%
- **Stabilizing Populations:** Should be as good or better than current PNI and pHOS

WDFW will consider these HSRG standards when we evaluate programs for their impact on the recovery of listed species.

Settlement Agreement

The Cowlitz River Hydroelectric Project Settlement Agreement also provides important guidance and limitations that need to be addressed.

- Emphasizes restoration and recovery of wild, indigenous salmonid runs, including ESA-listed and unlisted stocks, to harvestable levels.
- Recognizes need to provide fish production for sustainable fisheries
- Production at the remodeled hatchery shall not exceed 650,000 pounds per year for all stocks

AHA Subgroup

The FTC established a subgroup of technical representatives from several FTC members to develop alternatives for consideration by the FTC. The subgroup utilized Recovery Plan goals and HSRG standards in developing these alternatives, which are summarized in the attached document.