
Cowlitz Fisheries Annual Project Review Meeting

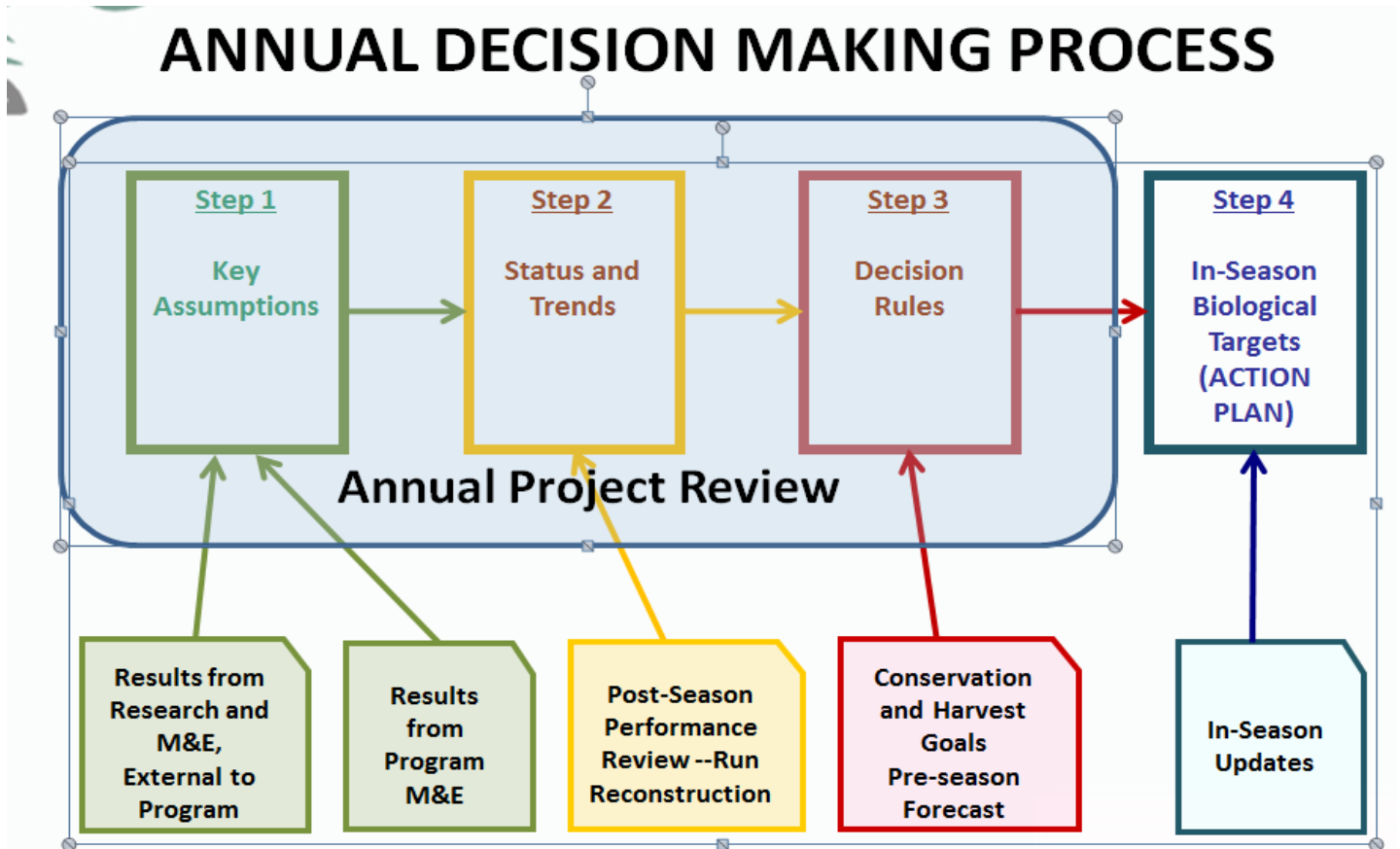


Key Terms and Definitions

- **AMP** Adaptive Management Plan
- **APR** Annual Project Review
- **ESA** Endangered Species Act
- **FERC** Federal Energy Regulatory Commission
- **FHMP** Fisheries and Hatchery Management Plan
- **FMEP** Fishery Management Evaluation Plan
- **FTC** Fisheries Technical Committee
- **HGMP** Hatchery and Genetic Management Plan
- **HOR** Hatchery Origin Recruit
- **HSRG** Hatchery Science Review Group
- **ISIT** In-Season Implementation Tool
- **M&E** Monitoring & Evaluation Plan
- **NMFS** National Marine Fisheries Service (now NOAA – Fisheries)
- **NOAA** National Oceanic and Atmospheric Administration
- **NOR** Natural Origin Recruit
- **pHOS** Percent Hatchery Origin Spawners
- **pNOB** Percent Natural Origin Brood
- **SA** Cowlitz River Hydroelectric Project Settlement Agreement
- **SAR** Smolt-to-Adult Return
- **USFWS** U.S. Fish and Wildlife Service
- **WDFW** Washington Department of Fish and Wildlife

Annual Decision Making Process: Established through the Fisheries and Hatchery Management Plan Update. The purpose is to provide a process for annual decisions to be made regarding hatchery production levels. Public meetings will occur in conjunction with this process to give the public an opportunity to provide input regarding potential fishery management decisions.

The framework of the Annual Decision Making Process:



Annual Project Review: The development of an annual, scientifically defensible work plan that is consistent with the Cowlitz River Hydroelectric Project Settlement Agreement and meets the resource goals.

Brood/Broodstock: Parents of juvenile fish. Brood or broodstock refer to adult fish that spawn in the hatchery or natural environment.

Escapement: Adult fish returning to hatcheries, dams or natural spawning locations on their adult spawning migration.

Hatchery Origin: Fish that are spawned and reared in the hatchery environment.

Hatchery Origin Recruit: Adults returning on their spawning migration that had parents that were spawned and reared in the hatchery environment.

Integrated Hatchery Program: Using natural-origin adults in the hatchery broodstock program.

Natural Origin: Fish that spawn and rear in the natural environment.

Natural Origin Recruit: Adults returning on their spawning migration that had parents that spawned and reared in the natural environment.

Percent Natural Influence (PNI): Proportion of natural influence on a population that has both natural and hatchery-origin fish. Calculated as $pNOB / (pNOB + pHOS)$. PNI is a measure of the impact of hatchery programs on the natural origin population. PNI is expressed as a percent instead of actual calculation.

For Example: PNI = 70% when 70% natural-origin fish spawn in the hatchery environment and 30% hatchery-origin fish spawn in the natural environment.

Calculation: $70\% \text{ natural-origin fish spawn in hatchery environment} / (70\% \text{ natural-origin fish spawn in hatchery environment} + 30\% \text{ hatchery-origin fish spawn in natural environment}) = 70\% / (70\% + 30\%) = 70\% / 100\% = .70 = 70\%$

Populations: The Lower Columbia Salmon Recovery Plan (Recovery Plan) identifies populations of salmon and steelhead in the Cowlitz Basin. The Recovery Plan further provides designations for these populations that represent their importance to the recovery of listed species in the Lower Columbia Basin and these designations are as follows:

- **Primary populations (P)** are targeted for the greatest improvement. These populations are the foundation of salmon and steelhead recovery in the Lower Columbia Basin.
- **Contributing populations (C)** are those for which some improvement will be needed. These populations are important to salmon and steelhead recovery in the Lower Columbia Basin.
- **Stabilizing populations (S)** are those that would be maintained at current levels. These are typically populations that provide less benefit for salmon and steelhead recovery in the Lower Columbia Basin.

The population designations for Cowlitz Basin populations:

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

Proportion of Hatchery Origin Spawners (pHOS): Proportion of natural spawners in a watershed or stream composed of hatchery-origin adults. pHOS is a measure of hatchery-origin fish spawning in the natural environment. pHOS is expressed as a percentage.

For Example: pHOS = 60% when 100 adults spawn in the natural environment and 60 of those adults are hatchery origin fish.

Calculation: $60 \text{ hatchery origin adults spawn} / 100 \text{ total adults spawn} = .60 = 60\%$

Proportion Natural Origin Brood (pNOB): Proportion of hatchery broodstock composed of natural-origin adults. pNOB is a measure of natural-origin fish spawned in the hatchery environment. pNOB is expressed as a percentage.

For Example: pNOB = 30% when 100 adults spawn in the hatchery environment and 30 of those adults are natural origin fish.

Calculation: $40 \text{ natural origin adults spawned} / 100 \text{ total adults spawned} = .40 = 40\%$

Redd: A salmon or steelhead spawning nest in gravel in which eggs are deposited.