

Project Title: Annual Stock Assessment - Coded Wire Tag Program (ODFW)

Project Number: 198201302

Response to ISRP comments in the preliminary review of Fiscal Year 2003 Mainstem and Systemwide Proposals (ISRP 2002).

ISRP Comments on this Project:

- 1) Are these tagging programs integrated with Regional tagging plans and how were these stocks selected for including in these proposals?

Answer –The process by which specific groups of fish are selected for tagging, under this proposal, is described in Section 9. f. of the proposal. This description applies to the project’s original goal of representative coded-wire tagging of Columbia Basin hatchery salmon. Inherent in this goal are the limitations that the stocks selected for tagging will be hatchery fish within the Columbia Basin. How this project fits within the Columbia Basin CWT program is described in Section 9. d. of the proposal. However, the CWT program is only one component of the Regional tagging and ultimately research, monitoring and evaluation plans. Various efforts are underway to develop a program for systemwide monitoring and evaluation of fish status to address the requirements of the Columbia River Fish and Wildlife Program, NMFS and USFWS Biological Opinions and Recovery Plans. The evolution of such efforts, include the RME work group and the CBFWA’s proposal 35033, should help to clarify regional data needs and thus fish marking needs. It is also assumed such efforts would identify which types of fish marking (mass marking, CWT, and PIT) are most appropriate for answering specific data needs, which stocks of fish need which marks, and consistent marking and data reporting protocols. While we do not anticipate the development of a systemwide monitoring and evaluation program will eliminate the need for representative coded-wire tagging of Columbia Basin salmon hatchery releases, it should help to prioritize tagging needs and identify gaps in tagging of specific stock. We look forward to working with the region to insure integration of the CWT program into a systemwide monitoring and evaluation program.

We feel a scientific/statistical review is needed to resolve which hatchery stocks can or should be used to represent particular ESU’s or whether using CWT hatchery fish to monitor wild fish is appropriate. As a first step the following table lists the groups of hatchery CWT fish being funded by this project in FY 2002, and the conspecific Federal ESU into which they are released.

Number and location of BPA funded coded-wire tagging (FY 2002) from this project in relation to Federal ESA listing units (ESU) of the same species.

ESU	Status*	Hatchery Marked at	Species	Release Site	Number CWT
Lower Columbia River Chinook Salmon	T	Big Creek	CHF	Big Creek	200,000
		Bonneville	CHF	Tanner Creek	100,000
		Oxbow	CHS	Clackamas River	50,000
		Marion Forks	CHS	Sandy River	<u>30,000</u>
Total:					380,000

Upper Willamette River Chinook Salmon	T	Willamette	CHS	Molalla River	30,000
		Marion Forks	CHS	North Santiam R.	30,000
		South Santiam	CHS	South Santiam R.	50,000
		Willamette	CHS	South Santiam R.	30,000
		McKenzie	CHS	McKenzie River	60,000
		Willamette	CHS	Willamette R, M Fk	<u>50,000</u>
Southwest Washington / Lower Columbia River Coho Salmon	C	CEDC	Coho	Klaskanine R, S Fk	25,000
		Oxbow	Coho	Youngs Bay	25,000
		Sandy	Coho	Blind Slough	25,000
		Big Creek	Coho	Big Creek	50,000
		Sandy	Coho	Sandy River	50,000
		Bonneville	Coho	Tanner Creek	25,000
		Oxbow	Coho	Tanner Creek	<u>25,000</u>
				Total:	225,000
No coho ESU designated. **		Cascade	Coho	Umatilla River	75,000
				Grand Total:	930,000

* T = Threatened, C = Candidate

** = Within the range of the Middle Columbia River Steelhead and Mid-Columbia River Spring-Run Chinook Salmon ESU's.

2) Since double-index tagging is not included in these proposals, how is the additional mortality in mass-mark selective fisheries being accounted for?

Answer – Harvest managers use both the Index/Double Index tagging program and models based on estimated encounter rates, hook and release mortality, drop off mortality, time and area stock composition, etc. to estimate mortality of unmarked (“Wild”) fish in selective fisheries. This proposal does not include tagging of double index groups because that tagging is funded from other sources. However, this proposal does fund three coho Index (Ad+CWT) groups associated with three Double Index (CWT only) groups. Thus, this proposal does provide a critical component of the estimation of mortality in mass-mark selective fisheries from the Index/Double Index tagging program. This estimate of mortality of unmarked (“Wild”) fish in selective fisheries is based on the comparison of the catch and escapement of an Index group, Ad+CWT and thus subject to harvest, and Double Index group, CWT only and thus handled in the same manner as wild fish. The following table lists the Ad+CWT groups funded by this proposal that serve both this proposals goal of hatchery production monitoring and the goals of the Index/Double Index tagging program.

Hatchery	Stock	Release Site	Fin Clip	Number with a CWT	Funding Source
Sandy	Sandy R.	Sandy River	Ad	25,000	BPA *
Sandy	Sandy R.	Sandy River	None	25,000	Sandy Hatchery
Sandy	Sandy R.	Blind Slough	Ad	25,000	BPA *
Sandy	Sandy R.	Blind Slough	None	25,000	Sandy Hatchery
Cascade	Tanner Cr.	Umatilla River	Ad	25,000	BPA *
Cascade	Tanner Cr.	Umatilla River	None	25,000	Cascade Hatchery

* = This proposal.

- 3) An issue not addressed in any proposal is how tagging quality is assessed, and how consistently application standards are being met? For example, how long are tagged groups held to evaluate tag loss before release? Is any effort made to inspect tagging quality (placement of the CWT, quality of fin clip, etc.)?

Answer – This issue is in fact addressed in the narrative portion of the proposal, see Section 9. f. (Proposal objectives, tasks and methods) Objective 1. c). However, the wording of Objective 1. c) could be clearer. Following is a summary of the coded-wire tagging and fin clip quality assessment procedures for ODFW hatchery salmon.

First, during the tagging operation, the tagging supervisor checks tag retention, tag placement and fin clip quality every 2 hours. A sample of 10 fish per tagger is checked for tag retention and fin clip quality. Of those 10 fish, 1 of the tagged fish is sacrificed to check tag placement. This information is used by the tagging supervisor to insure quality, and to identify and correct problems during the tagging operation.

Second, the hatchery crew checks fin clip quality on a sample of 200 fish from each pond. This check is conducted the day after completion of marking the fish in each pond. This check is intended to catch fin clip quality problems prior to the marking equipment leaving the hatchery. This check provides a second assessment of fin clip quality at the time of marking, and is conducted by the hatchery staff instead of the tagging staff. This check is also conducted to catch problems that can occur outside the marking process, such as unmarked fish getting around barriers separating the marked and unmarked fish, and unmarked fish accidentally transferred to a pond or section of a pond containing marked fish.

Finally, tag retention and fin clip quality is checked at least 1 month after marking (PSC 1995). This check may be conducted by hatchery staff or by research and/or management staff associated with the tagging requested. Minimum sample size for the pre-release tag retention and fin clip quality check is 500 fish (Blankenship 1981). Due to the use of the adipose fin clip for mass marking of coho and spring chinook salmon, fish for tag retention samples must be collected at the time of tagging and held separate from the mass marked fish.

RME Group Comments on this Project:

I concur with the ISRP's response to the RME group's review of this proposal. In regards to the RME's questions about which groups of fish are marked and the relationship to ESA listed species see the answer to question 1 (above).

References

- Blankenship, L. 1981. Coded-wire tag loss study. Washington Department of Fisheries, Technical Report No. 65, Olympia, Washington.
- Independent Scientific Review Panel (ISRP). 2002. Preliminary Review of Fiscal Year 2003 Mainstem and Systemwide Proposals. Northwest Power Planning Council Document ISRP 2002-13.
- Pacific Salmon Commission (PSC). 1995. Hatchery methodology workshop. Held January 10th through 12th 1995, Seattle, Washington.