

2006 Habitat Preparation Plan

North Fork Lewis River

Prepared by PacifiCorp

1.0 Introduction

The Lewis River Settlement Agreement (Section 7.4) calls for the following plan development to take place within six months after the effective date:

Habitat Preparation Plan. “PacifiCorp shall develop a plan (the “Habitat Preparation Plan”) in Consultation with the ACC to release live adult hatchery anadromous salmonids into Swift Reservoir, Yale Lake, and Lake Merwin for the purpose of preparing the habitat in those locations for the reintroduction of anadromous salmonids. The objective of the Habitat Preparation Plan will be to make possible (1) nutrient enrichment in the waters through decay of the adult hatchery fish and, (2) tilling of the gravel by the released hatchery adults as they attempt to spawn. The number, sex, and species of hatchery adult salmonids shall be determined as part of the Habitat Preparation Plan. PacifiCorp’s performance obligation under the Habitat Preparation Plan shall be limited to placing live adult hatchery anadromous salmonids for a period of five years in each of Swift Reservoir, Yale Lake, and Lake Merwin, commencing in each case five years prior to expected completion of the downstream fish passage facility from that reservoir. PacifiCorp shall implement the Habitat Preparation Plan at Swift Reservoir beginning as soon as practicable after the Habitat Preparation Plan is finalized and at the other reservoirs as provided in the Habitat Preparation Plan. PacifiCorp shall implement this program only to the extent there are excess hatchery fish available beyond those required for the Hatchery and Supplementation Plan described in Section 8. PacifiCorp shall not be required to pass or collect the progeny of hatchery adult anadromous salmonids introduced under the Habitat Preparation Plan unless and until collection and transport facilities for such progeny are constructed in accordance with Section 4. For the Merwin and Yale Projects, PacifiCorp’s obligations under this Section 7.4 shall cease if the Yale Downstream Facility or Merwin Downstream Facility, respectively, will not be constructed pursuant to Section 4.1.9.”

The purpose of this plan is to provide the logistical information and methods necessary to collect, transport, and distribute excess hatchery fish to the Lewis River upstream of Merwin dam. The transportation of adult hatchery fish into the upper basin is intended to prepare the stream gravels (through redd construction) and provide nutrient enhancement to specific areas prior to formal supplementation and construction of juvenile collection facilities. It is anticipated that the components of this plan may be modified from year to year based predominately on run size and stock availability.

For purposes of implementing this plan, release locations for transported fish will change based on completion of juvenile collection facilities planned at all three hydroelectric projects. According to the settlement agreement schedule (Section 7.4: Habitat Preparation Plan), excess hatchery fish will be transported to Swift reservoir from 2005 through 2009, to Yale reservoir from 2014 through 2018 and to Merwin reservoir from 2018 through 2022. This schedule will provide nutrient enhancement and spawning gravel preparation for formal reintroduction efforts as described in Section 4.0 of Settlement Agreement.

2.0 Plan Components

Stock Selection: In 2006, two stocks are proposed: spring chinook and early (type S) coho salmon. The selection of spring Chinook for 2006 is proposed for two reasons. First, spring Chinook may choose different spawning locations than coho salmon, and second, a substantial number of bull trout snorkel surveys are planned in 2006. These surveys, while targeting bull trout, will provide Chinook distribution information throughout the summer months. In addition, through the bull trout surveys it may be possible to determine whether Chinook salmon are using the same areas as bull trout for spawning and redd construction.

It is expected that some late (type N) coho will be selected during transportation activities; however, this stock will not be deliberately selected for transportation.

The selection of early coho has several biological advantages over other species returning to the Lewis River, which include the following:

- Early coho salmon historically used the Lewis River headwaters and tributaries in which to spawn.
- Competing uses (e.g., nutrient enhancement, tribal, in-river harvest and food banks) for returning adults are less compared to other species.
- Coho salmon are able to negotiate complex passage barriers, thus distribution of adults from their release point is maximized
- Transportation survival of coho is high relative to other species.
- Early coho salmon returns are sufficient to achieve transportation goals of the plan

The current hatchery broodstock collection goals for early coho are 1,277 adults. The ratio of females to males is 60:40. Table 1 provides trapping results for both early and late coho salmon, and spring chinook from 1998 to present.

Table 1. Trap results for early (Type S), late (Type N) coho salmon and spring chinook captured at the Merwin dam fyke and Lewis River hatchery ladder: 1998-2005. (Source: WDFW Hatchery Escapement Reports available at <http://wdfw.wa.gov/hat/escape/escape.htm>)

	Lewis River Trapping Results					
Year	Coho				Spring Chinook	
	Type S		Type N			
	Adults	Jacks	Adults	Jacks	Adults	Jacks
1998	7,142	3,528	10,817	2,089	1,188	11
1999	14,962	2,343	17,724	6,757	846	78
2000	17,031	7,281	23,106	10,910	777	50
2001	38,783	1,291	60,873	533	1,178	53
2002	17,334	8,177	6,294	6,212	1,869	58
2003	38,367	1,932	21,896	2,569	3,037	357
2004	22,134	1,438	13,944	1,713	4,172	350
2005	21,458	2,544	21,386	2,156	1,986	219

Broodstock collection goals for spring chinook are 950. Projected in-river escapement is 4,400. Trapping collection is expected to be about 50 percent of the in-river escapement—about 2,200. The number of spring chinook transported to the upper basin will depend on actual trapping numbers and tribal needs. If these needs are met and surplus chinook are available, the surplus fish (up to 1,000) will be transported to the upper basin.

Collection Methods: Collection of adult coho and spring chinook will take place at both the Lewis River and Merwin traps located at the Lewis River hatchery and base of Merwin dam, respectively. The Lewis River trap along with fish from the Merwin trap will continue to be used for broodstock collection, nutrient enhancement programs (not included in this plan) and food bank needs. In selecting adult fish for transportation, fish shall be in good health and have no puncture wounds. Any fish with eye trauma (e.g., scrapes, lacerations or fungus) shall not be transported upstream. Fish should be bright and firm to help ensure maximum geographic distribution of fish and eventual carcasses in the upper watershed.

Transportation Number: The number of coho and spring chinook to be transported from the traps (in 2006) is estimated to total 2,000 adults. This number is based on preliminary run estimates from the Washington Department of Fish and Wildlife (WDFW); Females shall have priority over males when selecting fish for transportation. A high percentage of females will facilitate redd construction, and thereby, help meet the plan objective of gravel tilling. The ratio of spring chinook to coho will depend largely on spring chinook surplus numbers. All surplus chinook (that is, fish not needed for broodstock or tribal needs) that meet the condition criteria (e.g., no eye fungus or puncture wounds) shall be transported to the upper basin. The total number of spring chinook shall not exceed 1,000 adults. In the event that no surplus chinook are available, we expect to transport approximately 2,000 adult coho, as we did in 2005.

Transportation Vehicles: Two 1,500-gallon fish trucks will be used for transportation activities. Hatchery staff will use existing hatchery vehicles to meet the transportation goal in 2006. Each fish truck may complete up to two trips per week. This equates to a total of 4 complete trips per week. Each truck can transport up to 120 adult coho and up to 80 spring chinook for a transportation goal of between 320-480 salmon per week. PacifiCorp may use company purchased and owned fish trucks to transport adults to the upper basin.

Schedule: The schedule for spring chinook will begin in late April and continue throughout May. The schedule for coho will begin in September and continue for a period of up to 4 weeks. The exact start dates will vary based on run timing and size projections.

Release Points: Swift Ramp will be used as the primary release point during transportation activities upstream of Swift reservoir. If reservoir levels are too low for planting of fish from the Swift boat ramp, the Eagle Cliff bridge, Swift Dam, Muddy River or bridge crossing near the Curly Creek confluence (Curly Creek bridge) shall serve as alternates to the Swift boat ramp.

Pathogen Screening: According to WDFW disease policy, in-basin fish transfers do not require pathogen screening. Therefore, fish that are transported from either the Merwin or Lewis River trap upstream will not be tested.

Harvest Restrictions: Current sportfishing regulations should provide adequate protection to fish released upstream of Swift dam. All waters upstream of the Eagle Cliff bridge are catch and release only and restricted to the use of artificial flies and lures. In addition, fishing does not begin upstream of the bridge until June 1. For Swift reservoir, Opening Day of trout season is April 29. No spring chinook will be transported prior to this date. The fishing season on Swift reservoir and upstream of Eagle Cliff Bridge will close on October 31. During the October period, angling pressure is traditionally very light and no adverse effect is anticipated on released chinook and coho while they are attempting to construct redds and spawn.

3.0 Plan Modifications

On an annual basis, this plan shall be reviewed and modified if necessary by the Aquatics Coordination Committee. PacifiCorp, in consultation with the WDFW, will present the plan to the ACC for approval each year after final run projections are estimated by the WDFW (usually by March).