

2005 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 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 2010, to Yale reservoir from 2014 through 2019 and to Merwin reservoir from 2018 through 2023. 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: The primary stock to be used in the habitat preparation plan shall be early (type S) coho salmon. A main reason for using coho is that they are not an ESA listed stock. PacifiCorp does not have ESA coverage for transportation of listed species such as, chinook or steelhead. Other stocks may be used but only as an alternate to early coho and by special permit. 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 (e.g., chinook).
- 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.
- Lewis River coho salmon are not an ESA listed species (coho are designated as a candidate for listing)
- 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 from 1998 to present.

Table 1. Trap results for early (Type S) and late (Type N) coho salmon captured at the Merwin dam fyke and Lewis River hatchery ladder: 1998-2004. (Source: WDFW Hatchery Escapement Reports available at <http://wdfw.wa.gov/hat/escape/escape.htm>)

Year	Trap Results				TOTAL
	Type S		Type N		
	Adults	Jacks	Adults	Jacks	
1998	7,142	3,528	10,817	2,089	23,576
1999	14,962	2,343	17,724	6,757	41,786
2000	17,031	7,281	23,106	10,910	58,328
2001	38,783	1,291	60,873	533	101,480
2002	17,334	8,177	4,211	5,044	34,766
2003	38,367	1,932	21,896	2,569	64,764
2004	22,134	1,438	4,683	1,428	29,683

Collection Methods: Collection of adult coho will take place primarily at the Lewis River trap located at the Lewis River hatchery. 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 coho 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 to be transported from the Lewis River trap (in 2005) is estimated to be 2,000 adults. This number is based on preliminary run estimates from the Washington Department of Fish and Wildlife (WDFW), which portend poor returns for both early and late coho in 2005. 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.

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 2005. Each fish truck will complete at least two trips per week. This equates to a total of 4 complete trips per week. Each truck can transport up to 120 adult coho for a transportation goal of 480 coho salmon per week. In future years, PacifiCorp may use company purchased and owned fish trucks to transport adults to the upper basin.

Schedule: Assuming that each truck is fully loaded with coho salmon each trip, the goal of 2,000 coho would be reached in approximately 4 weeks (or slightly less than 17 trips). To compensate for slightly less than full loads and to achieve a distribution of fish from across the run spectrum, the schedule will begin in September and continue for a period of up to 5 weeks. The exact start date in September may 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 released coho. All waters upstream of Swift dam will close to angling on October 31. Waters upstream of the Eagle Cliff bridge have an additional restriction of catch and release only with selective gear. During the October period, angling pressure is traditionally very light and no adverse effect is anticipated on released coho.

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).