

## Appendix A

### Additional Measures



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## **Appendix A Additional Measures**

### **Habitat Protection Mitigation and Enhancement—Downstream of Trail Bridge Dam**

#### **Objectives**

The objective of this plan element is to increase the quality of spawning, rearing, and foraging habitat for native salmonids in two side channels to the McKenzie River downstream of Trail Bridge Dam.

#### **Background**

In a 2003 Biological Opinion, NOAA Fisheries and USFWS specified that EWEB would provide funding to the USDA Forest Service McKenzie River Ranger District to restore high priority side channel sites within an approximately 23-mile section of the mainstem McKenzie River from Trail Bridge Dam downstream to Dearborn Island (NOAA Fisheries 2003, USFWS 2003). EWEB provided this funding, and the USDA Forest Service used the funding for the necessary planning for the work.

#### **Description of Element**

EWEB shall provide monetary funds to the USDA Forest Service for enhancement work in the two McKenzie River side channels as described below. EWEB funding shall occur through the use of a Collection Agreement or other agreement consistent with USDA Forest Service regulations and signed by EWEB and the USDA Forest Service.

#### **Side Channel #1**

Side channel #1 is approximately 800 feet long and 40 feet wide. There are currently fewer than 5 pieces of large woody debris (LWD) and very little spawning gravel sized

for Chinook salmon in this side channel. The general concept for side channel #1 is to add gravel and wood to enhance spawning habitat at the upstream end and add an estimated 20 pieces of LWD to enhance rearing habitat throughout the remainder of the channel.

EWEB shall fund \$75,000 for LWD and gravel acquisition and placement, and \$15,000 every 10 years for monitoring and maintenance. The USDA Forest Service will use the funding to perform acquisition, placement, monitoring and maintenance. Specific actions will include the addition of LWD as necessary (estimated 20 pieces) and initial augmentation not to exceed 100 tons of gravel. Three years after placement, the USDA Forest Service will measure gravel patch areas to establish the maintenance threshold.

**Side Channel #2**

Side channel #2 consists of two channels, a larger channel and a smaller channel. The larger channel is approximately 950 feet long with an average width of 20 feet. Some spawning habitat is present in the upper half of the larger side channel. The smaller side channel is disconnected from the surface flow of the larger side channel. The smaller side channel is approximately 1000 feet long.

EWEB shall fund \$25,000 for LWD acquisition, placement, and side-channel opening excavation, and up to \$10,000 every 10 years for monitoring, and maintenance. The USDA Forest Service will use the funding to perform acquisition, placement, excavation, monitoring and maintenance. Estimated amount of material to be excavated and spread on site is 120 cubic yards (40 yards long X 3 yards wide X 1 yard deep).

**Monitoring, maintenance, and contingency actions**

In side channel #1, the USDA Forest Service will re-measure the gravel patch area every 10 years following initial placement. If the measured gravel patch area is below the maintenance threshold, the USDA Forest Service will augment as necessary to bring the spawning gravel area up to the maintenance threshold. Gravel maintenance will not exceed 100 tons every ten years. During the 10-year maintenance surveys, the USDA Forest Service will survey LWD and replace LWD to maintain the total number as determined at the time of initial installation.

In side-channel #2, the USDA Forest Service will survey LWD every 10- years and replace LWD to maintain the total number as determined at the time of initial installation.

**Escalation of funding amounts**

All costs or payment amounts specified in dollars in this Appendix A shall be deemed to be stated as of the year 2008, and EWEB shall escalate such sums as of September 1 of each following year (starting in September 2009) according to the following formula:

$$AD = D \times (NGDP/IGDP)$$

**WHERE:**

AD	=	Adjusted dollar amount as of September 1 of the year in which the adjustment is made.
D	=	Dollar amount prior to adjustment.
IGDP	=	GDP-IPD for the second quarter of the year of the previous adjustment date (or, in the case of the first adjustment, the second quarter of the year before the Effective Date).
NGDP	=	GDP-IPD for the second quarter of the year of the adjustment date.

“GDP-IPD” is the value published for the Gross Domestic Product Implicit Price Deflator by the U.S. Department of Commerce, Bureau of Economic Analysis in the publication Survey of Current Business, Table 1.1.9 (being on the basis of year 2000 = 100), in the

third month following the end of the applicable quarter. If that index ceases to be published, any reasonably equivalent index published by the Bureau of Economic Analysis may be substituted by the agreement of the USDA Forest Service and EWEB. If the base year for GDP-IPD is changed or if publication of the index is discontinued, EWEB shall promptly make adjustments or, if necessary, select an appropriate alternative index acceptable to the USDA Forest Service to achieve the same economic effect.