

Effectiveness of Riparian Management Zones in Providing Habitat for Wildlife

Final Report

Submitted to the LWAG, Timber Fish and Wildlife Program
May 2000

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Chapter 2

STUDY DESIGN

INTRODUCTION

The objectives of the statewide study were threefold: 1) to determine whether current Riparian Management Zone (RMZ) habitat specifications provide adequate habitat to maintain wildlife as specified in the TFW wildlife goal (TFW Agreement 1987, Wildlife Action Plan 1990), and if they do not, 2) to identify those habitat conditions created by current RMZ management practices that adversely affect species assemblages, and 3) to provide recommendations for improving RMZ guidelines. These objectives were addressed on each side of the state in an experimental fashion by monitoring the population responses of selected wildlife species and species groups within riparian zones and nearby upland habitats on 18 sites of harvest age. The original study design designated that six sites would be harvested according to RMZ guidelines current at the time, six according to modifications of the guidelines that the research team would design in cooperation with the Wildlife Steering Committee, and six control sites would not be harvested. These sites will be classified as State, Modified, and Control, respectively, throughout this report. Following the original study design, wildlife monitoring would be for 2 yr prior to and 2 yr immediately after harvest. This strategy would establish the baseline conditions from which to compare future changes in the State and Modified treatments.

WEST SIDE

Research was conducted in coniferous forests of the coastal and Cascade Mountains of western Washington.

Site selection

Site selection began in spring 1991, but, due to a variety of factors, was not completed until late 1992. Site selection criteria were chosen to make the study broadly applicable to forest lands in western Washington. At the same time, adequate replication required that the scope of the study be limited with respect to the number of varying environmental factors. Within an area of study, sampling sites were sought to minimize variation in forest age and composition, elevation, moisture condition, and water type. In consultation with the TFW Wildlife Steering Committee, we selected sites that had the following characteristics: 1) low elevation (<620 m); 2) second-growth forest (55-65 yr old), dominated by Douglas-fir; 3) Type 3 water by forest regulations, Type 4 could be chosen if streams differed only in the presence of salmonids; 4) predominately coniferous riparian canopy with deciduous tree component; 5) at least 500 m in stream length; 6) road access within 0.5 km; 6) could be harvested according to the project's specifications and time lines. The selection process resulted in the 18 sites listed in Table 1. The sites were distributed widely in western Washington (Fig. 1).

Table 1. West side study sites by treatment type, harvest completion date, and ownership

Stream	Treatment	Schedule	Ownership
Abernathy	Control	No harvest	Washington State Department of Natural Resources (DNR)
Blue Tick	Modified	Mar 1994	Washington State DNR
Elbe Hills	Control	No harvest	Washington State DNR
Eleven Creek 31	Modified	Sep 1994	The Weyerhaeuser Company
Eleven Creek 32	State	Mar 1994	The Weyerhaeuser Company
Griffen Creek	Modified	Mar 1994	The Weyerhaeuser Company
Hotel Creek	Control	No harvest	City of Seattle - Cedar River Watershed
Kapowsin	State	Mar 1995	Champion Pacific Timberlands
Ms. Black	Modified	Jan 1994	Washington State DNR
Night Dancer	State	Mar 1995	Washington State DNR
Porter Creek	Control	No harvest	Washington State DNR
Pot Pourri	State	Mar 1994	Washington State DNR
Ryderwood 860	Modified	Mar 1994	International Paper and Hampton Tree Farms
Ryderwood 1557	State	Jun 1994	International Paper and Hampton Tree Farms
Side Rod	Modified	Mar 1994	Washington State DNR
Simmons Creek	State	Mar 1994	Plum Creek Timber
Taylor Creek	Control	No harvest	Cedar River Watershed, Seattle
Vail Control	Control	No harvest	The Weyerhaeuser Company