

INTRODUCTION

Watershed Analysis for Mendocino Redwood Company's Ownership in the Cottaneva Creek Watershed

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This report presents the results of a watershed analysis performed by Mendocino Redwood Company (MRC) on their ownership in the Cottaneva Creek watershed. The MRC ownership in the Cottaneva Creek watershed is considered the Cottaneva watershed analysis unit (WAU). This section presents a brief overview of the watershed and the watershed analysis process followed by MRC. More specific information is found in the individual modules of this report.

MENDOCINO REDWOOD COMPANY'S WATERSHED ANALYSIS APPROACH

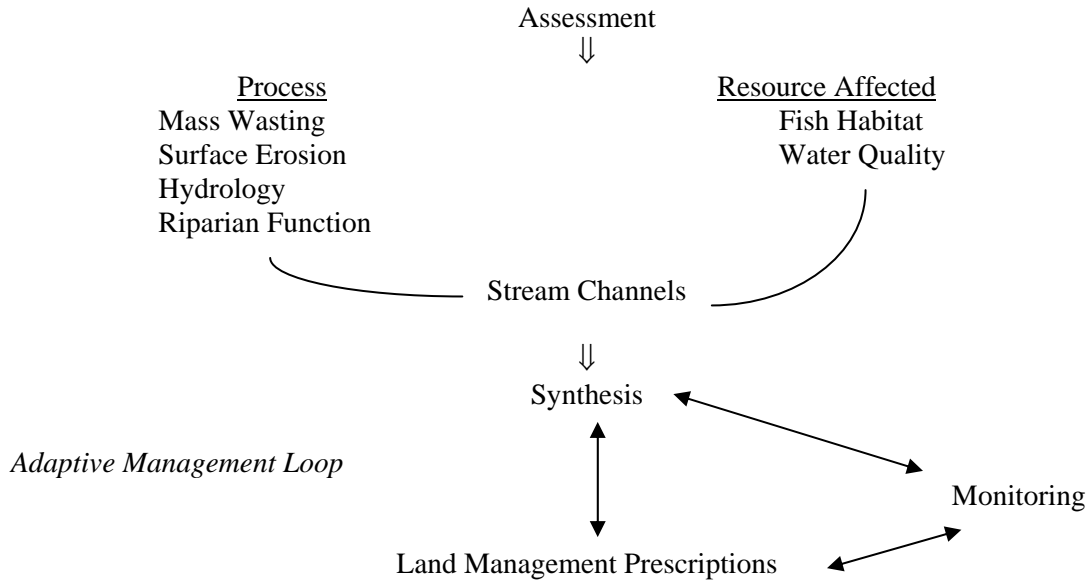
Cottaneva Creek and its tributaries support populations of steelhead trout and coho salmon. For this reason MRC conducted a watershed analysis to assist in their efforts to reduce non-point source pollution, evaluate current and past land management practices and establish a baseline for monitoring of watershed conditions over time. The watershed analysis will also be used to identify needs for site-specific management planning in the watershed to reduce impacts to aquatic resources and potentially to improve fish, amphibian and aquatic habitat conditions.

The watershed analysis of the Cottaneva Creek WAU was conducted following modified guidelines from the Standard Methodology for Conducting Watershed Analysis (Version 4.0, Washington Forest Practices Board). Some variations of the methods in this manual were performed when it was determined that the methodology better served the purpose of this assessment. The watershed analysis process is not a regulatory requirement in the state of California. However, MRC is using this process to address cumulative effects from forest practices and provide baseline information of watershed conditions for aquatic habitat and water quality for their ownership.

MRC's approach to the Cottaneva Creek watershed analysis was to perform resource assessments of mass wasting, surface and point source erosion (roads/skid trails), hydrology, fish habitat, riparian condition and stream channel condition. Mass wasting, riparian condition and surface and point source erosion modules address the hillslope hazards. The physical processes and potential triggering mechanisms for each hillslope hazard are described in the module reports. The fish habitat and stream channel condition modules address the vulnerability of aquatic resources. The results of the resource assessments are synthesized and reported in a causal mechanism report (Figure 1). A causal mechanism report is produced for hillslope hazards that has affected or has the potential to adversely affect aquatic resources that current company management policies does not specifically address. A prescription is developed to address the issues and processes identified in each causal mechanism report. Finally, monitoring is suggested to determine the efficacy of the prescriptions to protect sensitive aquatic resources. The

monitoring will provide the feedback for MRC's adaptive management approach to resource conservation.

Figure 1. Watershed Analysis Overview



ASSESSMENT OVERVIEW

This watershed analysis was produced from a combination of field observations performed during the summer of 2004, aerial photograph interpretation, and use of existing analysis on the Cottaneva WAU.

Existing data or analysis used in this watershed analysis included: Louisiana-Pacific's (L-P) Coastal Mendocino Sustained Yield Plan and monitoring data collected by L-P and MRC. These information sources are cited in each module as they are used.

Aerial photograph interpretation was performed using available aerial photographs for the recent time period. The delineation of time periods for analysis was based on the available aerial photographs. The aerial photographs used are described below.

<u>Aerial Photo Year</u>	<u>Scale</u>	<u>Photo Source</u>
1952	1:20000	Mendocino County
1963-64	1:20000	Mendocino County
1978	1:15840	Mendocino Redwood Company
1990	1:12000	Mendocino Redwood Company
2000	1:12000	Mendocino Redwood Company

The synthesis of the field observations, aerial photo interpretation and existing analysis on the Cottaneva WAU constitutes the resource assessment modules in this report.

COTTANEVA CREEK WATERSHED OVERVIEW

Physical Characteristics

General Location

The Cottaneva WAU is located in the California Coast Range and drains into the Pacific Ocean in western Mendocino County, California. The outlet of the Cottaneva Creek is approximately 25 miles north of the city of Fort Bragg.

The Cottaneva Creek watershed encompasses approximately a 16.5 square mile area. MRC owns approximately 75 percent of the land in the Cottaneva Creek watershed (see Base Map, Cottaneva Creek Watershed Map and Table 1). The basin's elevations range from sea level to 2,300 feet. Rainfall is seasonal in this region, with most of the rain (approximately 50-70 inches/year) occurring between October and May.

Table 1. Mendocino Redwood Company Lands by Planning Watershed for Cottaneva WAU.

Calwater Planning Watershed	Calwater Planning Watershed Number	Calwater Planning Watershed Acres	MRC Land Acres	Percent MRC Lands
Cottaneva Creek	113.12011	10,580	7,969	75.3

Aquatic Species Present

The anadromous fish species inhabiting the Cottaneva WAU are steelhead trout (*Oncorhynchus mykiss*) and coho salmon (*O. kisutch*). Other species include three-spine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), coastrange sculpin (*C. aleuticus*), Pacific giant salamander (*Dicamptodon tenebrosus*), tailed frog (*Ascaphus truei*), southern torrent salamander (*Rhyacotriton variegatus*), and tarichid newts (*Taricha spp*).

LITERATURE CITED

Louisiana-Pacific Corporation. 1997. Sustained Yield Plan for Coastal Mendocino.

Washington Forest Practice Board. 1995. Standard methodology for conducting watershed analysis. Version 4.0. WA-DNR Seattle, WA.

Cottaneva Creek Watershed Analysis Unit

Base Map



- MRC Ownership
- Planning Watershed Boundary
- Cottaneva Creek Watershed Analysis Unit Boundary

Transportation

- Paved Road
- Rocked Road
- Native Road
- Jeep Trail

Flow Class

- Class I
- Class II
- Class III

Topography

- Index Contour (200' interval)
- Regular Contour (40' interval)

