

North Coastal California

A STEWARDSHIP REPORT



November 2001

Save-the-Redwoods League

Bureau of Land Management

funding for workshops provided by

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TABLE OF CONTENTS

Introduction

A Brief land-use history

The Focus Areas

A - Lake Earl & the Crescent City Coastal Plain

B - The Smith River

C - Coastal Redwood National Park

D - Redwood Creek

E - Headwaters to Humboldt Bay

F - Humboldt Redwoods & the Lower Eel

G - Grizzly Creek & the Van Duzen

H - Mattole Valley

I - South Fork Eel River

J - Lost Coast Rivers

K - Middle & Main Fork Eel, & Mad River

A Conservation Lexicon

INTRODUCTION

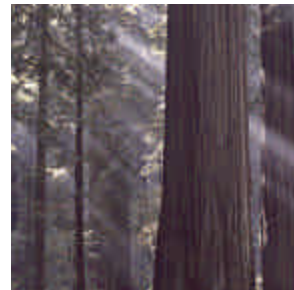
The magnificent natural landscapes of north coastal California inspire and renew resident and visitor alike. From high mountains, through deep valleys lined with ancient redwoods, down cool clear streams home to native salmon, to the remote coast, the region teems with natural wonder.

The Bureau of Land Management and Save-the-Redwoods League convened a series of workshops in late 2000 and early 2001 for groups working region-wide in the north coast on land management and conservation. The objective was to better understand the landscape and discuss ongoing land conservation efforts across the region. The specific goal was to identify non-regulatory actions that contribute to the maintenance and restoration of a natural and healthy ecosystem.

Often we only hear controversial news and event – clear-cuts, tree-sits, floods, fires, declining fisheries, and cash-strapped public agencies - but there are other stories to tell. Successful conservation efforts led by public agencies, local citizen groups, and landowners large and small are underway across the region. All share a common goal: to maintain and enhance the regions' natural landscape. Many groups focus on a particular watershed, issue, or area. But as Aldo Leopold wrote “Instead of learning more and more about less and less, we must learn more and more about the whole biotic landscape”. This series of workshops, and resulting report, is an attempt to share our understanding of the specifics so that we all gain a greater understanding of the landscape as a whole.

The report presents a guide to the different ‘personalities’ of the diverse landscapes of the north coast through a description of eleven focus areas. These focus areas were derived through an iterative group process, which involved recording the locations of critical natural resources and current projects on large maps. Multiple locations were combined into focus areas sharing a common geography or theme. Focus areas cover much, but not all of, the region. Often the boundaries of focus areas follow watershed lines, but sometimes they traverse watershed lines to include other closely related areas. Although important, places falling outside the focal areas described in this report lay outside the expertise of members of the group.

This report presents a snapshot of the north coast at one particular time, recorded by one particular group. As such it is based upon the knowledge of the participants, and the individuals and groups they work with. It should be considered a starting point for exploration, rather than a comprehensive document.



Each focus area write-up follows a standard format that includes the following descriptions:

- resources - including natural, fauna and flora, cultural, recreational, and visual;
- community values;
- opportunities and threats to identified resources and community values;
- current and potential conservation action;
- conservation partners;
- linkage to other areas;
- reference sources for further information.

The sharing of information, ideas, and project experiences generated great excitement about possibilities for future collaborative action. Participants came away with an increased understanding of the region, a greater awareness of the array of conservation projects underway, and an appreciation for the links between projects.

The workshops clearly demonstrated that individual projects benefit greatly from the sharing of results and experiences with colleagues. Our collective effort stems from the view that conservation projects are experiments through which we can learn more about the region and its natural systems. Subsequent projects can be refined, and hopefully improved, based upon the enhanced understanding that emerges. This is adaptive management at a large-scale.

Our combined efforts to reconstruct natural processes disrupted by human use should be done with humility. We should open the door for nature to define its areas and systems, freeing the landscapes from the limiting effects of human use in order for nature to sustain itself once more. We hope this report gives the reader an appreciation of the north coast region and lays the groundwork for collective understanding, an understanding that forms the basis of increased collaboration and cooperative action, and ultimately ensures the survival of the region's natural wonders.

The maps on the following pages present an overview of land ownership and vegetation within the study area.

PARTICIPANTS

Bureau of Land Management

California Department of
Forestry and Fire Protection

Coastal Conservancy

California Department of Fish
and Game

California Department of
Parks and Recreation

National Forest Service

National Marine Fisheries
Service

National Park Service

North Coast Regional Land
Trust

Sanctuary Forest, Inc.

Save-the-Redwoods League

The Conservation Fund

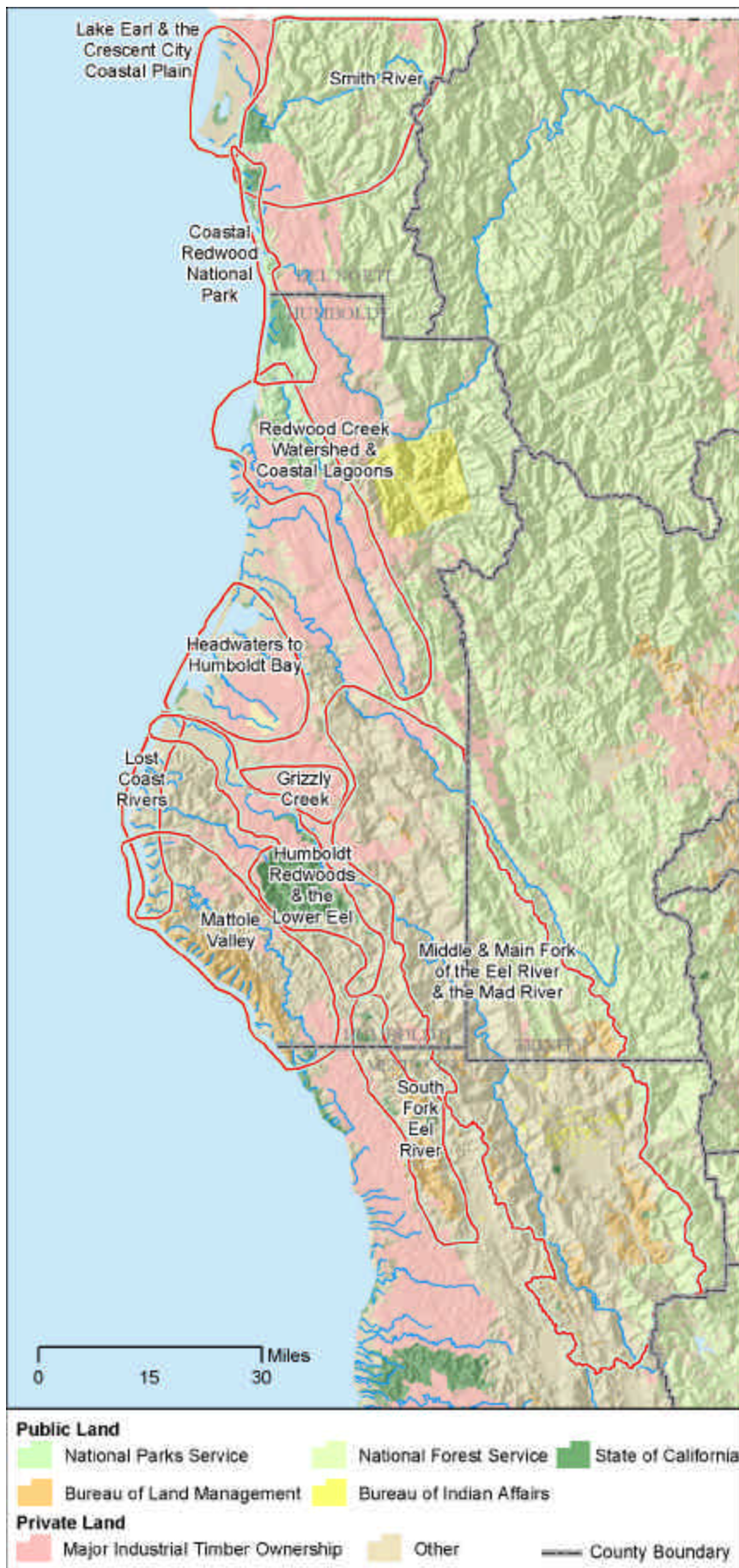
The Nature Conservancy

Trust for Public Land

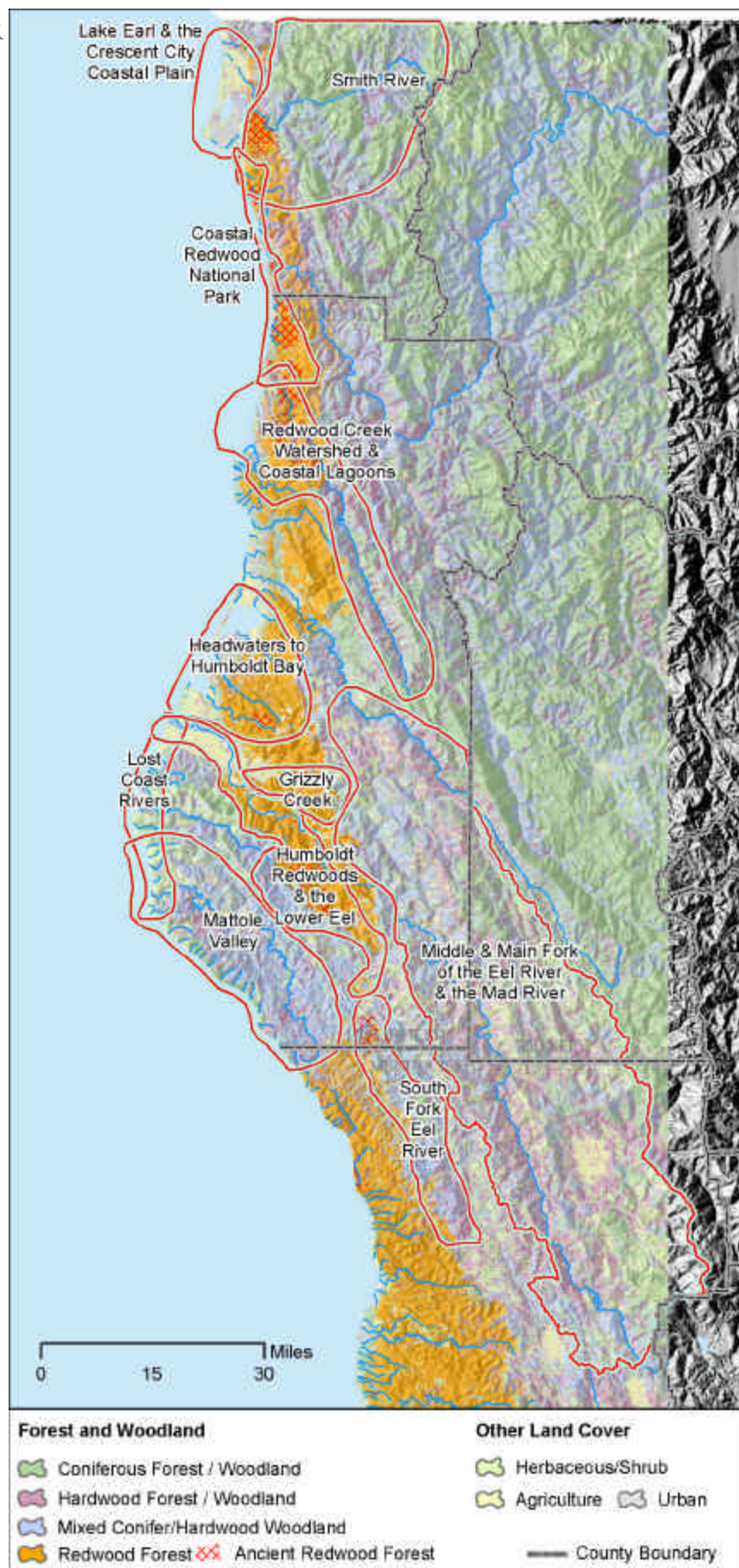
U.S. Fish and Wildlife Service

U.S. Geological Survey

LAND OWNERSHIP



LAND COVER



A BRIEF LAND-USE HISTORY

All landscapes are palimpsests - being akin to an ancient manuscript that has been written on repeatedly over the centuries, with glimpses of previous texts visible beneath and through the new ones. If we know how to read it, today's landscape includes glimpses and references to events long since past. It is the sum of the geology, climate, human use and other forces over many thousands of years. A basic understanding of the landscape can help us interpret current events and plan future conservation projects.

This section gives a brief introduction to the geology, climate and human ecology of the north coast. More detailed information on vegetation and land use is included in the description of each focus area.

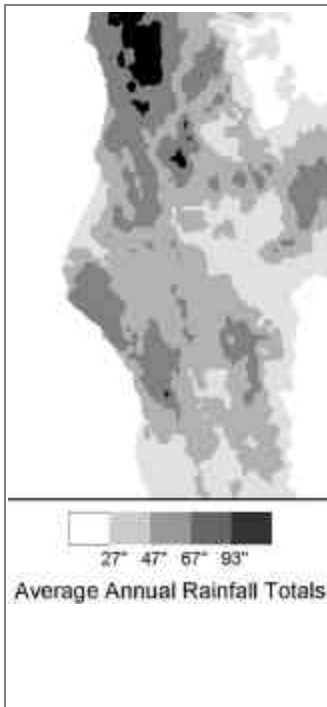
Geology

The California north coast is part of a province known as the Coast Ranges that extend for two-thirds the length of California. It encompasses mountains, hills, valleys, and plains that are close enough to the Pacific Ocean for the climate to be modified greatly by the marine influence. The Coast Ranges is a series of parallel mountain ranges trending approximately northwest to southeast. Generally summit elevations increase as you move inland, reaching 6,000 feet on the eastern edge.

The Coast Ranges rose from the ocean between 20 and 28 million years ago as the Pacific oceanic plate met the North American continental plate along the San Andreas fault. As these plate collided, the oceanic crust was dragged down under the North American Plate, causing earthquakes, while some of the crust was scraped off, buckled and piled up, eventually creating the coast range mountains.

Most rocks in the area belong to the Franciscan Complex. This "complex" is just that - a highly complicated assortment of sedimentary rocks deposited in seawater at various depths on top of harder basaltic ocean floor rock. Once the rocks are brought to the surface through the plate collision, adjacent rock outcrops often seem unrelated to one another and many defy interpretation.

Rapid tectonic uplift (up to 4 meters in 1,000 years) has caused hillslopes to become highly dissected and incised by stream channels, creating steep inner river gorges. The weak rocks are highly fractured along numerous faults and are weathered (in the moist climate) to form deep soils subject to extensive earth-flow and debris slides. Sediment production from the region's many rivers are among the highest in the United States, excluding rivers draining active volcanoes or glaciers. In fact, the Eel River carries over 4,000 tons of sediment every year from every square mile of its drainage basin. On average 4 to 8 inches of soil is washing off the slopes every hundred years. At more than 13 times the national average, this is the



highest rate of erosion ever measured in the United States (except for active volcanoes and glaciers).

The Humboldt Bay flats and the Crescent City Coastal Plain lies at the mouths of the Eel River and Smith River respectively. They are the largest areas of flat land in the region. They were formed when the sediment-laden rivers met the Pacific Ocean, depositing thick alluvial plain and deltas at the river mouths. At one time these delta plains were thick with black cottonwood, willow and red alder forests, often mixed with Sitka spruce and redwood. All of these forests have been cleared for agriculture and urban development.

Three plates, the Pacific Plate, Gorda Plate and North American Plate, meet at a single point at the Mendocino triple junction, off Cape Mendocino. The result is a highly active fault zone capable of producing earthquakes of high magnitude. Between 1980 and 1997 there were five earthquakes close to magnitude 7, and an additional six above magnitude 6.

Climate

The climate of the north coast varies widely, primarily in response to proximity to the ocean and local topography. Rainfall is generally high and concentrated in the winter. Annual rainfall totals in the Mattole Valley, at over 100 inches, are among the highest in California. Near the coast fog, cool temperatures, and high humidity characterize summers, while further inland temperatures are higher and humidity lower. Winters temperatures are moderate, with snow occurring on the higher eastern peaks.

Cultural Ecology



Humans have lived in the area for at least 8,000 to 10,000 years; initially they were primarily hunter-gatherers with little direct impact on streams or aquatic communities. Their most significant influence on the landscape resulted from their use of fire for maintenance of oak savanna woodlands and native prairie grasslands for hunting, particularly in the larger river valleys. They probably moved into the area from the north, coming across the Bering Straits land bridge from Russia during the last ice age (8,000 to 12,000 years before present). Much tribal life was focused on the rivers, and on particular the salmon within the rivers, and permanent villages were established almost exclusively along the major salmon streams. The valleys and coastal areas of California, including the landscape of the north coast, in which the native Americans hunted, gathered and fished, were so fertile that this was likely the most densely populated lands anywhere in North America. The variety of northwest California ethnographic cultures is the most complex in the United States, reflecting their diverse prehistory, historic practices and adaptations to the rich and diverse landscape.

These people thrived on the diversity of habitats from ocean to estuary to forest. They intensively gathered numerous resources, including acorns, fish, shellfish and game, which abounded in the region's forests and productive rivers. Salmon was the primary catch, although lamprey eels and sturgeon were also caught. A variety of more recent land management practices, including dams, water withdrawal, over-fishing, timber harvest, gravel extraction and inappropriate grazing patterns have now weakened the native salmon and trout population and brought it to the edge of extinction.

During the 1800s, the Euro-American settlers decimated almost all of the Native Americans through disease, violence and displacement - in some

instances whole tribes were wiped out. Due to the relative isolation of the region, the Yurok, Hoopa, Tolowa and Karok of the north coast survived better than many other groups in the State. Those who survived the onslaught were rounded up and divided between the Round Valley and Hoopa reservations. Some continue to live on these reservations, while others live on their own more recently established reservations.

The first Euro-American travelers to the region were early explorers, like Jedediah Smith who in 1828 traveled from San Francisco to Oregon along the coast. Jedediah Smith was the first white-man to explore the interior of northern California. Hunters followed the explorers along with early settlers who exploited the region's forests, rivers, and the ocean.

Dating to the first Euro-American immigrants in the 1800's lumbering in particular had a significant effect on the native forests and streams. Early lumbering relied on muscle power alone to fell and move trees - muscles that belonged to early settlers, their horses and oxen. By the early years of the 20th century the steam engine and the railroad replaced the oxen and the pace of cutting accelerated. Improved roads made the region more accessible and opened up new areas to timber extraction. Following World War II the development of larger trucks and tractors, combined with improved mill technology, enabled loggers to cut a higher proportion of trees, entering previously uncut areas for the first time.

At the close of the 20th century over 95% of the primeval forest across the region had been cut at least once. The lumber and agricultural industries remain important to the economy of the north coast, although government services (local, state and federal), recreation and tourism are of growing economic importance across the region.

Further Information

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