

Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin

MLRA Explorer Custom Report

A - Northwestern Forest, Forage, and Specialty Crop Region
4B - Coastal Redwood Belt

MLRA 4B - Coastal Redwood Belt

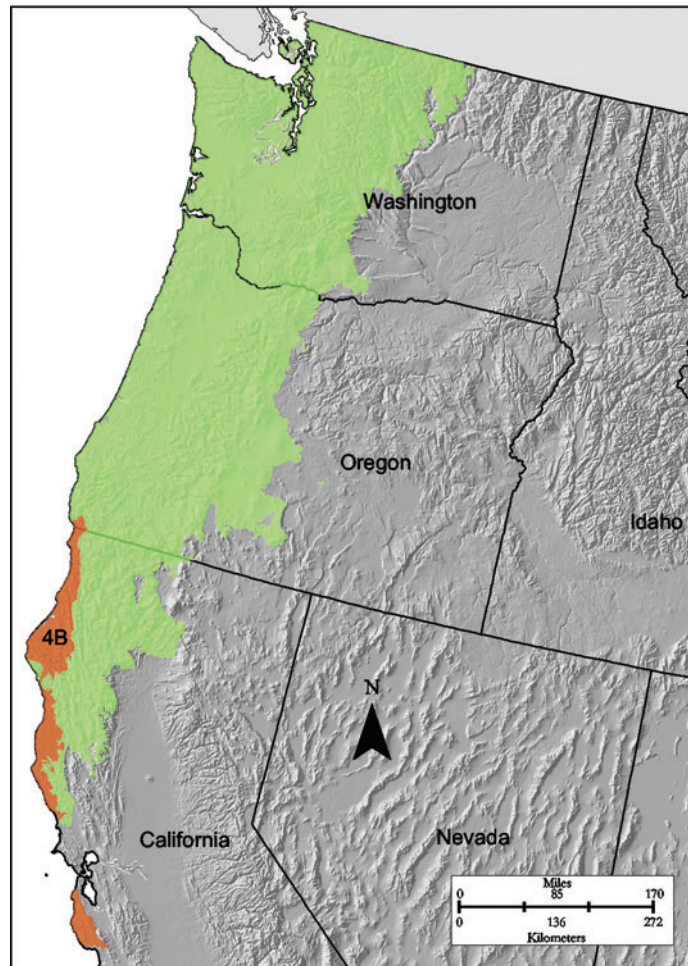


Figure 4B-1: Location of MLRA 4B in Land Resource Region A

Introduction

This area (shown in fig. 4B-1) is primarily in California (98 percent). A small part of the area is in Oregon (2 percent). This MLRA makes up about 4,670 square miles (12,095 square kilometers). The towns of Crescent City, Arcata, Eureka, and Fort Bragg, California, and Brookings, Oregon, are in this MLRA. U. S. Highway 101 parallels the coastline in the northern half of the area. Redwood National Park, King Range National Conservation Area (BLM), and numerous California State parks are in this MLRA.

Physiography

The northern one-third of this area lies within the Klamath Mountains Section of the Pacific Border Province of the Pacific Mountain System. The rest of the area is in the California Coast Ranges Section of the Pacific Border Province of the Pacific Mountain System. The Klamath Mountains are an uplifted peneplain consisting of resistant rocks that have been eroded by numerous streams. Numerous peaks of erosion-resistant rock are in these low mountains. The California Coast Ranges consist of parallel ranges and valleys underlain by folded and faulted metamorphic rocks. Their peaks are rounded, and landslides are a dominant geomorphic process.

Elevation generally ranges from sea level to 2,600 feet (795 meters), but on some Coast Range peaks it is 3,940 feet (1,200 meters). The Pacific Ocean bounds this area on the west, and the Coast Range forms the eastern edge. The MLRA is an area of steep mountainous terrain. Low but steeply sloping mountains are dominant. Gently sloping marine terraces border the coast, and a few broad valleys extend inland through the mountains. This area is very hilly inland. Most of the coast is a rugged, steep mountain face 200 to 900 feet (60 to 275 meters) high. Beaches occur at the mouth of rivers. The coast is eroding, and some isolated rocks and small islands are directly offshore.

The extent of the major Hydrologic Unit Areas (identified by four-digit numbers) that make up this MLRA is as follows: Klamath-Northern California Coastal (1801), 83 percent; Central California Coastal (1806), 8 percent; San Francisco Bay (1805), 7 percent; and Oregon-Washington Coastal (1710), 2 percent. The Smith, Klamath, Mad, Eel, Mattole, Noyo, Navarro, Chetco, Winchuck, and Garcia Rivers and Redwood Creek discharge into the Pacific Ocean from this area.

Geology

The mountains in this MLRA consist primarily of contorted metamorphic rocks. Some igneous intrusives are in the Klamath Mountains. Serpentine is evident in many of the metamorphic units, and failure planes in landslides are common within the serpentine layers. Changes in sea level created marine terraces along the coast. The terraces consist of sand and gravel originally deposited as beach or alluvial fan deposits at the mouth of the major rivers.

Climate

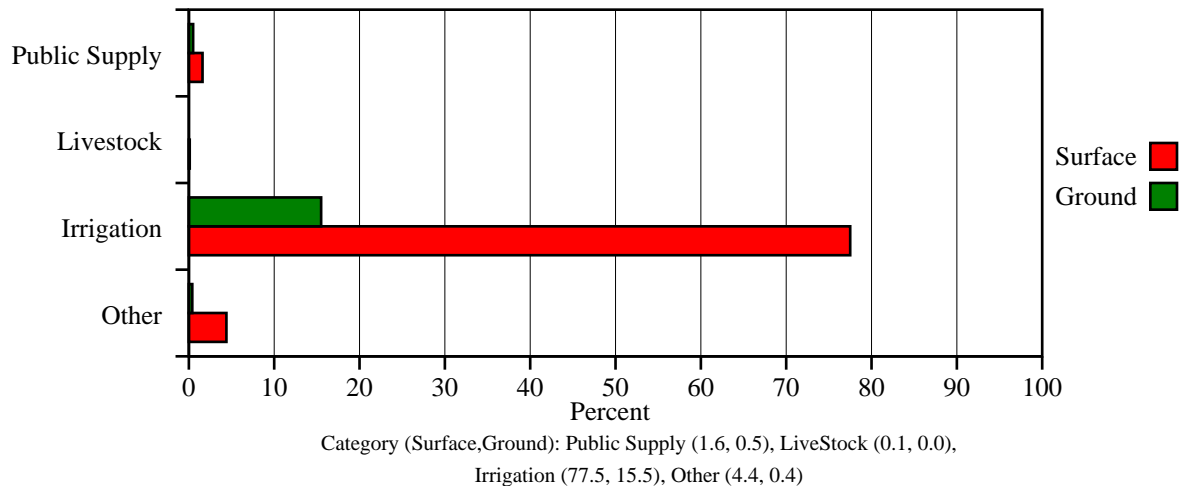
The average annual precipitation in this area is 23 to 98 inches (585 to 2,490 millimeters), increasing with elevation inland. Most of the rainfall occurs as low-intensity, Pacific frontal storms. Precipitation is evenly distributed throughout fall, winter, and spring, but summers are dry. Snowfall is rare along the coast, but snow accumulates at the higher elevations directly inland. Heavy fogs are common along the coast in summer. The average annual temperature is 49 to 59 degrees F (10 to 15 degrees C). The freeze-free period averages 300 days and ranges from 230 to 365 days, decreasing inland as elevation increases.

Water

The total withdrawals average 32 million gallons per day (120 million liters per day). About 16 percent is from ground water sources, and 84 percent is from surface water sources. Abundant precipitation and many perennial streams provide enough water for most needs. Rainfall is the source of water for most crops, but some high-value crops, such as lily bulbs, are grown under irrigation on the coastal terraces and on the flood plains a short distance inland from the mouth of the major rivers. The drier valleys depend on streamflow from the mountains. The surface water supply is often short in summer, and farms located far from streams may require supplemental ground water for irrigation. Surface water quality is generally good for all uses.

Ground water is plentiful in alluvial deposits along the major rivers and in coastal valleys. It is moderately hard or hard water of generally good quality and is suitable for most uses.

MLRA 4B Water Use by Category



Soils

The dominant soil orders in the MLRA are Alfisols, Entisols, Inceptisols, and Ultisols. The soils dominantly have an isomesic or mesic soil temperature regime; a udic, xeric, or ustic soil moisture regime; and mixed mineralogy. They generally are deep or very deep, well drained, and loamy or clayey and occur on mountain slopes and hills in addition to coastal terraces. The dominant parent material is residuum weathered from sandstone. The soils of dominant extent include Hapludalfs (Dehaven and Irmulco series), Dystroxerepts (Hugo series), Haplohumults (Vandamme, Winchuck, and Loeb series), Dystrudepts (Dulandy series), Haploxerults (Josephine series), and Haplustalfs (Kibesillah, Ornbaun, Yellowhound, and Zeni series). The soils on flood plains are Udifluvents (Bigriver and Cottoneva series).

Biology

This area supports forest and grass vegetation. Redwood, Douglas-fir, grand fir, bishop pine, western red cedar, Port-Orford cedar, red alder, California bay laurel, golden chinkapin, Pacific madrone, tanoak, Sitka spruce, and California black oak are the dominant tree species. California oatgrass, tufted hairgrass, western and Idaho fescues, Pacific reedgrass, and native and introduced bentgrasses are common perennial grasses. Soft chess, wild oats, bromes, filaree, and burclover are important naturalized annuals. Gorse-broom and Scotch-broom are dominant in some parts of the coastal zone. Some of the major wildlife species in this area are black-tailed deer, coyote, gray fox, raccoon, muskrat, river otter, rabbit, squirrel, mink, turkey, blue grouse, California valley quail, band-tailed pigeon, and mourning dove. The species of fish in the area include bluegill, redear, black bass, crappie, catfish, steelhead, salmon, striped bass, rainbow trout, surf perch, tom cod, and sculpin.

Land Use

Most of this area consists of privately owned farms, ranches, or forests. Lumbering is the major industry. About 14 percent of the area is grassland used for grazing. Cultivated land is in the valleys and along the coast. It is used mainly for forage and grain for dairy cattle. Vegetables, fruits (apples), and lily bulbs are grown in areas where the soils and climate are favorable.

Because of steep slopes, erodible soils, and high rainfall, the major soil resource concern on uplands is erosion. The erosion hazard is severe if the plant cover is removed. Mass movement in the form of landslides and slips is a serious problem and a major source of sediment in the rivers. Older or improperly designed roads also contribute sediment. Other management concerns include

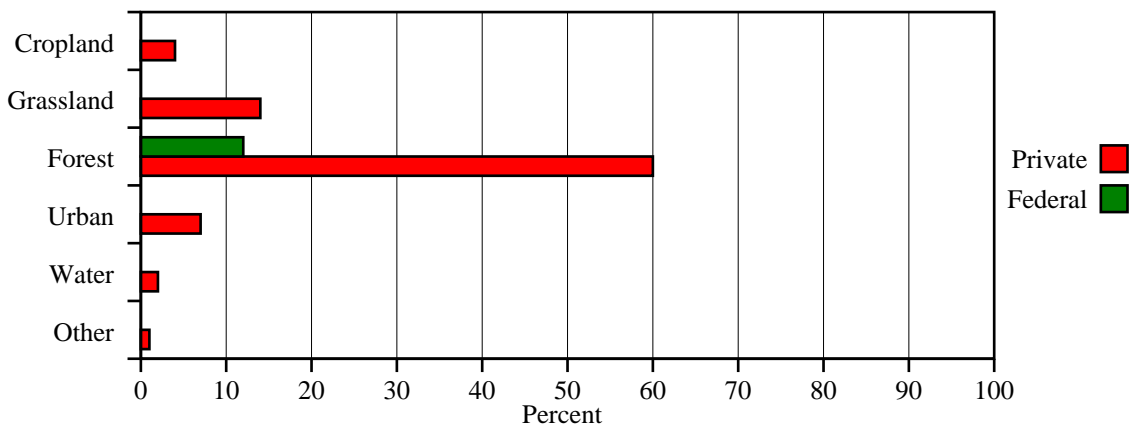
compaction resulting from farming activities, impacts on the health of forestland, such as catastrophic wildfire, and maintenance of the content of organic matter in the soils.

Conservation practices on forestland generally include tree and shrub establishment, forest stand improvement, forest harvest trails and landings, critical area planting, and control of understory fuels. These practices improve forest health and reduce the impacts on wildlife. They also control erosion on access roads and protect riparian areas and fish habitat.

Conservation practices on rangeland and other grazing land generally include prescribed grazing, fencing, and water management.

Conservation practices on cropland generally include those activities that keep erosion within acceptable limits in the fields while protecting riparian areas and reducing the hazard of streambank erosion. Conservation practices on dairy farms generally include the proper containment and disposal of animal waste.

MLRA 4B Land Use by Category



Category (Private,Federal): Cropland (4.0, 0.0), Grassland (14.0, 0.0), Forest (60.0, 12.0), Urban (7.0, 0.0), Water (2.0, 0.0), Other (1.0, 0.0)