USDA icon **Natural Resources Conservation Service**

Major Land Resource Area 001X
Northern Pacific Coast Range, Foothills, and Valleys

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Description

This long and narrow resource area stretches along the Pacific Border Province of the Pacific Mountain System in Oregon and Washington. The area is bounded by the Olympic Mountains on the north and the Klamath Mountains on the south. Most of the area consists of hills and low mountains with gentle to steep slopes. The parent materials are composed primarily of young Tertiary sedimentary rocks with some minor volcanic rocks. Glacial till and outwash deposits are found in the northern half of the area within Washington. In the far southern portion of the area, near the Klamath Mountains, the sedimentary rocks are older and some have been metamorphosed. The average annual precipitation ranges from 60 to 200 inches, increasing with elevation. The dominant soil orders in this MLRA are Andisols, Inceptisols, and Ultisols. Soil depth ranges from shallow to very deep. While most soils in the area are well drained and occur on foothills, mountain slopes and ridges, floodplain and depressional soils can range from well drained to very poorly drained. Soil textures are typically medial, loamy, or clayey. The dominant soils in the area have a mesic or frigid soil temperature regime and a udic soil moisture regime; however, soils with an aquic soil moisture regime or cryic soil temperature regime do occur.

Geographic subunits

Land Resource Unit 1 Olympic National Park Land Resource Unit. This LRU occurs on the Olympic Peninsula in and around Olympic National Park in Washington.

Land Resource Unit 2 The North Pacific Coast Range land resource unit of MLRA 1 is located in the northwestern corner on the Olympic Peninsula and within the Olympic National Forest in Washington State. LRU 2 is bounded on the west by MLRA 4a Sitka Spruce Belt and MLRA 2 Willamette and Puget Sound Valleys to the east. LRU 2 encircles the Olympic National Park (LRU 1). Several major rivers have headwaters in this LRU or carved valleys through the landscape depositing more recent alluvium. These include the Duckabush, Elwha, Queets, Quinault, Skokomish, Sol Duc, and Wynoochee Rivers.

Land Resource Unit 3 The Central Pacific Coast Range land resource unit of MLRA 1 ranges from the Olympic Peninsula south into northern Oregon. LRU 3 is located south of the Olympic National Forest and extends to the Siletz River in Oregon. LRU 3 is bounded on the west by MLRA 4a Sitka Spruce Belt and MLRA 2 Willamette and Puget Sound Valleys to the east. Several major rivers have headwaters in this LRU or carved valleys through the landscape depositing more recent alluvium. These include the Chehalis, Columbia, Grays, Humptulips, Klaskanine, Nehalem, Satsop, Siletz, Willapa, Wilson, Wynoochee, and Yamhill Rivers.

Land Resource Unit 4 The Southern Pacific Coast Range land resource unit of MLRA 1 is located in central to southern Oregon State. The LRU extends from the Siletz River to the Rogue River and is bounded on the west by MLRA 4a Sitka Spruce Belt and MLRA 2 Willamette and Puget Sound Valleys to the east. Several major rivers carved valleys through the landscape depositing more recent alluvium. These include the Alsea, Coos, Coquille, Green, Yachats, Siletz, Siuslaw, Umpqua, and Rogue Rivers.

Ecological site keys

Ecological Site Description Key for Major Land Resource Area 1

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1 Site is located within the Olympic National Park Land Resource Unit A (LRU A). This unit occurs on the Olympic Peninsula in and around Olympic National Park in Washington. If yes, go to “A.” If no, go to “2.”

A. The Ecological Site Descriptions for this region are in the development stage and part of the ongoing Initial Soil Survey Project for the Park.

2 Site is located within the North Pacific Coast Range Land Resource Unit B (LRU B). This unit occurs on the Olympic Peninsula in and around the Olympic National Forest in Washington. If yes, go to “B.” If no, go to “3.”

B. Site is commonly found on floodplains, riparian corridors, and stream terraces. If yes, go to “a.” If no, go to “C.”

a. Site is located on river terraces that are affected by flooding. It is often forested, and common overstory species are western hemlock, Douglas-fir, and black cottonwood. Understory species are predominantly salmonberry, western swordfern, and Oregon oxalis. If yes, the site is Mesic Udic Riparian Forest (F001XB001WA). If no, go to "C." ... AX001X02X001 – Mesic Udic Riparian Forest

C. Site is located in a low-lying water table recharge area and has soils that are typically ponded during the growing season. If yes, go to "b." If no, go to "D".

b. Site is found in depressions, seeps, and terraces. It is often forested, and common overstory species are western hemlock and red alder. Understory species are predominately salmonberry, devilsclub, and American skunkcabbage. If yes, the site is Mesic Aquic Forest (F001XB003WA). If no, go to "D." ... AX001X02X003 – Mesic Aquic Forest

D. Site is located in a frigid soil temperature regime and at middle elevations where the growing season in shorter. If yes, go to "d." If no, go to "E."

c. Site is forested and located on mountain hillsides, terraces, and ridges. The most common overstory species include Pacific silver fir and western hemlock. Common understory species include Alaska huckleberry, red huckleberry, and queencup beadlily. If yes, the site is Frigid Udic Forest (F001XB402WA). If no, go to "d." ... AX001X02X402 – Frigid Udic Forest

d. Site is forested and located on mountain hillsides and terraces. The soil is usually moist throughout the growing season. The most common overstory species include Pacific silver fir, western hemlock, and western redcedar. Common understory species include Alaska huckleberry, salmonberry, threeleaf foamflower, and deerfoot vanillaleaf. If yes, the site is Frigid Udic Moist Forest (F001XB403WA). If no, go to "E." ... AX001X02X403 – Frigid Udic Moist Forest

E. Site is located in the mesic soil temperature regime at lower elevations where the growing season begins in early spring and ends in the fall. If yes, go to "e." If no, go to "F."

e. Site is forested and located on mountain hillsides and terraces. The most common overstory species include western hemlock and Douglas-fir. Common understory species include salal, Cascade Oregongrape, western swordfern, and twinflower. If yes, the site is Mesic Udic Forest (F001XB410WA). If no, go to "f." ... AX001X02X410 – Mesic Udic Forest

f. Site is forested and located on mountain footslopes, toeslopes, and backslopes. The soil is usually moist throughout the growing season. The most common overstory species include western hemlock, Douglas-fir, and western redcedar. Common understory species include salmonberry, salal, and western swordfern. If yes, the site is Mesic Udic Moist Forest (F001XB411WA). If no, go to "F." ... AX001X02X411 – Mesic Udic Moist Forest

F. Site is found in the isofrigid soil temperature regime. If yes, go to "g." If no, go to "3."

g. Site is located on mountain slopes and hills at elevations between 800-2,500 feet. The most common overstory species includes Sitka spruce, Pacific silver fir, and western hemlock. Common understory species include Alaska huckleberry, red huckleberry, queencup beadlily, and western swordfern. If yes, the site is Isofrigid Udic Forest (F001XB420WA). If no, go to "3." ... AX001X02X420 – Isofrigid Udic Forest

3 Site is located within the Central Pacific Coast Range Land Resource Unit C (LRU C). This unit occurs south of Olympic National Forest in Washington and extends to the Siletz River in Oregon. If yes, go to "G." If no, go to "4."

G. Site is commonly found on floodplains, riparian corridors, and stream terraces. If yes, go to "h." If no, go to "H."

h. Site is located on river terraces that are affected by flooding. It is often forested, and common overstory species are primarily bigleaf maple, red alder, black cottonwood, and Oregon ash. Douglas-fir, western redcedar, and grand fir occur in late seral sites or on terraces. Understory species are predominantly salmonberry, western swordfern, and Oregon oxalis. If yes, the site is Mesic Udic Riparian Forest (F001XC001OR). If no, go to "H." ... AX001X03X001 – Mesic Udic Riparian Forest

H. Site is located in a low-lying water table recharge area and has soils that are typically ponded during the growing season. If yes, go to "i." If no, go to "I".

i. Site is found in depressions, seeps, and terraces. It is often forested, and common overstory species include western hemlock and red alder. Understory species are predominately salmonberry, devilsclub, and American skunkcabbage. If yes, the site is Mesic Aquic Forest (F001XC003OR). If no, go to "j." ... AX001X03X003 – Mesic Aquic Forest

j. Site is located in non-forested bogs, fens, or depressions with a seasonal high water table. Soils are typically anaerobic during most of the growing season. Common species include bog Labrador tea or western Labrador tea, sweetgale, sedges, and sphagnum mosses. If yes, the site is Bog or Fen (R001XC205OR). If no, go to "I." ... AX001X03X205 – Bog or Fen

I. Site is found in the cryic soil temperature regime at high elevations where the growing season is extremely short. If yes, go to "k." If no, go to "J."

k. Site is forested and located on mountain shoulders and summits. The most common overstory species include Pacific silver fir, noble fir, and western hemlock. The most common understory species include red huckleberry, salal, Oregon oxalis, and western swordfern. If yes, the site is Cryic Udic Forest (F001XC401OR). If no, go to "l." ... AX001X03X401 – Cryic Udic Forest

l. Site is non-forested and open meadows located on mountain summits and backslopes. The most common species include Cascade desertparsley, Pacific lupine, arrowleaf ragwort, and Roemer's fescue. If yes, the site is Cryic Udic Meadow (R001XC201OR). If no, go to "J." ... AX001X03X201 – Cryic Udic Meadow

J. Site is located in the frigid soil temperature regime at middle elevations where the growing season is shorter. If yes, go to "m." If no, go to "K."

m. Site is forested and located on mountain hillsides, terraces, and ridges. The most common overstory species include western hemlock and Douglas-fir. Common understory species include salal, Cascade Oregongrape, western swordfern, and deerfoot vanillaleaf. If yes, the site is Frigid Udic Forest (F001XC402OR). If no, go to "K." ... AX001X03X402 – Frigid Udic Forest

K. Site is located in the mesic soil temperature regime at lower elevations where the growing season begins in early spring and ends in the fall. If yes, go to "n." If no, go to "4."

n. Site is forested and located on mountain hillsides and terraces. The most common overstory species are western hemlock and Douglas-fir. Common understory species include salal, Cascade Oregongrape, and western swordfern. If yes, the site is Mesic Udic Forest (F001XC410OR). If no, go to "o." ... AX001X03X410 – Mesic Udic Forest

o. Site is forested and located on mountain footslopes, toeslopes, and backslopes. The soil is usually moist throughout the growing season. The most common overstory species include western hemlock, Douglas-fir, and western redcedar. Common understory species include salmonberry, salal, Oregon oxalis, and western swordfern. If yes, the site is Mesic Udic Moist Forest (F001XC411OR). If no, go to "p." ... AX001X03X411 – Mesic Udic Moist Forest

p. Site is forested and located on mountain hillsides and terraces in areas with the highest temperature ranges on the eastern extent of the MLRA. It often occurs on warm and dry aspects. Common overstory species include Douglas-fir and western hemlock. Common understory species include oceanspray, salal, Cascade Oregongrape, western swordfern, and twinflower. If yes, the site is Mesic Udic Warm Forest (F001XC413OR). If no, go to "4." ... AX001X03X413 – Mesic Udic Warm Forest

4 Site is located in the Southern Pacific Coast Range Land Resource Unit F (LRU D). This unit extends from the Siletz River to the Rogue River in Oregon. If yes, go to "L."

L. Site is commonly found on floodplains, riparian corridors, or stream terraces. If yes, go to "q." If no, go to "M."

q. Site is located on low to middle elevation in narrow to wide river terraces that are affected by flooding. It is often forested, and common overstory species are primarily bigleaf maple, red alder, California laurel, tanoak, and Douglas-fir. Understory species are predominantly salmonberry, thimbleberry, red elderberry, vine maple, western swordfern, and Oregon oxalis. If yes, the site is Mesic Udic Riparian Forest (F001XD001OR). If no, go to "r." ... AX001X04X001 – Mesic Udic Riparian Forest

r. Site is found at low elevations in broad and wide riparian corridors on stream terraces and flood plain steps on alluvial soils. Common overstory species are primarily black cottonwood, red alder, bigleaf maple, California laurel, Douglas-fir, and western hemlock. Understory species include salmonberry, western swordfern, and Oregon oxalis. If yes, the site is Mesic Udic Flood Plain Forest (F001XD002OR). If no, go to "M." ... AX001X04X002 – Mesic Udic Flood Plain Forest

M. Site is located in a low-lying water table recharge area and has soils that are typically ponded during the growing season. If yes, go to "s." If no, go to "N".

s. Site is found in depressions, seeps, and terraces. It is often forested, and common overstory species include western hemlock, western redcedar, and red alder. Understory species are predominately salal, evergreen huckleberry, and American skunkcabbage. If yes, the site is Mesic Aquic Forest (F001XD003OR). If no, go to "N." ... AX001X04X003 – Mesic Aquic Forest

N. Site is found in the cryic soil temperature regime at high elevations where the growing season is extremely short. If yes, go to "t." If no, go to "O."

t. Site is forested located on mountain shoulders and summits. The most common overstory species include Pacific silver fir, noble fir, and western hemlock. The most common understory species include black mountain huckleberry, rusty menziesia, common beargrass, Oregon oxalis, and western swordfern. If yes, the site is Cryic Udic Forest (F001XD401OR). If no, go to "O." ... AX001X04X401 – Cryic Udic Forest

O. Site is located in the frigid soil temperature regime at middle elevations where the growing season is shorter. If yes, go to "u." If no, go to "P."

u. Site is forested and located on mountain hillsides, terraces, and ridges. The most common overstory species include western hemlock and Douglas-fir. Common understory species include salal, Pacific rhododendron, common beargrass, and western swordfern. If yes, the site is Frigid Udic Forest (F001XD402OR). If no, go to "P" ... AX001X04X402 – Frigid Udic Forest

P. Site is located in the mesic soil temperature regime at lower elevations where the growing season begins in early spring and ends in the fall. If yes, go to "v."

v. Site is forested and located on mountain hillsides and terraces. The most common overstory species include western hemlock and Douglas-fir. Common understory species include salal, oval-leaf huckleberry, western cordilleran bunchberry, Cascade Oregongrape, and western swordfern. If yes, the site is Mesic Udic Forest (F001XD410OR). If no, go to "w." ... AX001X04X410 – Mesic Udic Forest

w. Site is forested and located on mountain footslopes, toeslopes, and backslopes. The soil is usually moist throughout the growing season. The most common overstory species include western hemlock, Douglas-fir, and western redcedar. Common understory species include salmonberry, salal, vine maple, Oregon oxalis, and western swordfern. If yes, the site is Mesic Udic Moist Forest (F001XD411OR). If no, go to "x." ... AX001X04X411 – Mesic Udic Moist Forest

x. Site is forested and located on mountains, side slopes, benches, and ridgetops. The most common overstory species include Port Orford cedar, western hemlock, Douglas-fir, tanoak, and grand fir. Understory species include salal, Pacific rhododendron, western swordfern, and Oregon oxalis. If yes, the site is Mesic Udic Wet Forest (F001XD412OR). If no, go to "y." ... AX001X04X412 – Mesic Udic Wet Forest

y. Site is forested and located on mountain hillsides and terraces in areas with the highest temperature ranges on the eastern extent of the MLRA. It often occurs on warm and dry aspects. Common overstory species include Douglas-fir and western hemlock. Common understory species include oceanspray, salal, Cascade Oregongrape, western swordfern, and twinflower. If yes, the site is Mesic Udic Warm Forest (F001XD413OR). ... AX001X04X413 – Mesic Udic Warm Forest