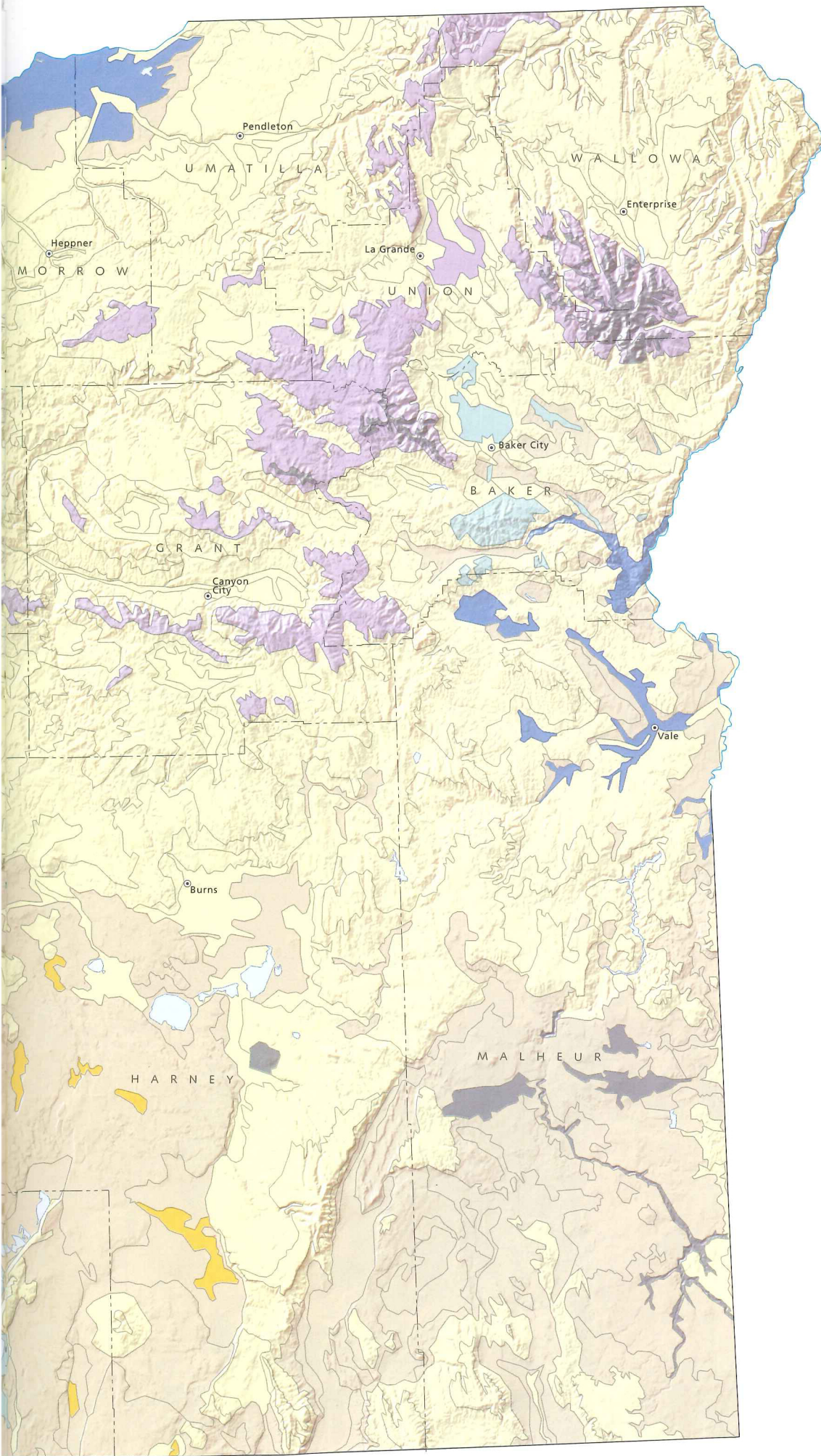


Of these, Oregon lacks only Gelisols, found in permafrost soils in Alaska, and Oxisols, highly weathered tropical soils found mainly in Hawaii. This map shows the general distribution of the 10 orders that occur in

Oregon. Each area on the map is colored for the single soil order dominant there, though all areas include soils in one or more other orders as well.



Soil Descriptions

Inceptisols

Soils that are beginning to form and have weakly developed soil profiles. Inceptisols are most common in the Coast Range, where they have dark surface horizons (or layers, as when viewed in cross-section) enriched with organic matter and subsoils in which only brighter colors and better structures differentiate the soil from the parent material. Inceptisols in the Klamath Mountains are similar, but have thinner surface horizons that are lower in organic matter.

Ultisols

Red soils with strongly developed subsoil horizons of clay accumulation. Oregon Ultisols are mostly paleosols (old soils) that formed long ago when the climate was warmer and wetter. Ultisols are prominent in the foothills on both sides of the Willamette Valley and also occur on foothills in Douglas, Josephine and Jackson Counties. They are widely used to produce grapes, Christmas trees, grass seed and timber.

Alfisols

Soils that have thin surface horizons enriched with organic matter and subsoil horizons of clay accumulation. Alfisols occur mainly in Western and southern Oregon. Typical examples include the reddish brown Willakenzie soils in the foothills of the Willamette Valley and the reddish brown Abegg and Ruch soils on old terraces in Jackson County.

Andisols

Soils developed in materials of volcanic origin. Coast Range Andisols are black, light-weight soils developed from basalt under cool, humid conditions. Cascade Range Andisols develop from mixed ash and weathered andesite. Andisols from Crater Lake northeastward to Newberry Crater are developed mainly from pumice. Andisols in northeastern Oregon are formed in a blanket of white ash mainly from the eruption of Mount Mazama.

Spodosols

Soils with white near-surface horizons over iron-rich subsoils formed in sandy materials under pine or spruce in cool, humid areas. Spodosols are the dominant soil at high elevations along the crest of the Cascades, but they are also prominent components of the landscape along the Coast from Newport to Brookings. Many coastal Spodosols in Coos and Curry Counties are intensively used for cranberry production.

Histosols

Highly organic soils, composed almost entirely of the decayed remains of plants that grew in marshy environments. Histosols are dominant only in the vicinity of Upper Klamath Lake, but they are perhaps better known in the small, finger-like areas of Lake Labish just north of Salem, where the Semiahmoo series is used intensively to produce Spanish onions.

Aridisols

Soils found in the driest parts of southeastern Oregon, mainly in old playas and lake basins and on surrounding uplands in Lake, Harney and Malheur Counties. Surface horizons for these soils are light in color and low in organic matter. Many Aridisols have subsoil horizons enriched with clay. Some have accumulations of free lime in the subsoil. A few, where the seasonal water table is close to the surface, are salty. Many Aridisols are underlain at shallow depth by either volcanic bedrock or by a soil-formed hardpan.

Mollisols

Soils formed mainly in association with grassland vegetation. Mollisols have relatively thick, dark surface horizons rich in organic matter under which are subsoils that are either weakly developed or enriched in clay or carbonates. More than 650 Oregon soil series are Mollisols—this order occupies the largest area of any soil order in the state. On the main floor of the Willamette Valley they are deep, dark, fertile soils. In Eastern Oregon they have lower amounts of organic matter and are more likely to be associated with carbonate accumulations, hardpans, or shallow bedrock.

Vertisols

Clay soils that shrink and swell appreciably upon wetting and drying. Vertisols are dominant soils only in small areas of south-central Oregon, but they form important components of the soil landscape on low foothills and in tributary valleys of the Willamette Valley (Bashaw series), Douglas County (Curtin series) and Jackson County (Carney and Coker series).

Entisols

Soils found mainly in recently deposited parent materials that are too young to have developed soil horizons. The largest area dominated by Entisols is the Columbia Basin in Morrow and Umatilla Counties. Irrigation with Columbia River water has made these sandy soils agriculturally productive. Other Entisols occur in small areas on floodplains of rivers and streams, where frequent flooding continually adds new sediments to the land surface.

Rock

Water

Note: Gray lines within soil orders are boundaries of suborders shown on the following two pages.