

Soil Interpretations

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Basic soil properties are important to practitioners of many human endeavors, for example agriculture, forestry, land use planning and urban development. These properties can be interpreted—and mapped—for specific use by various industries or professions. Three such interpretive maps are shown on these pages.

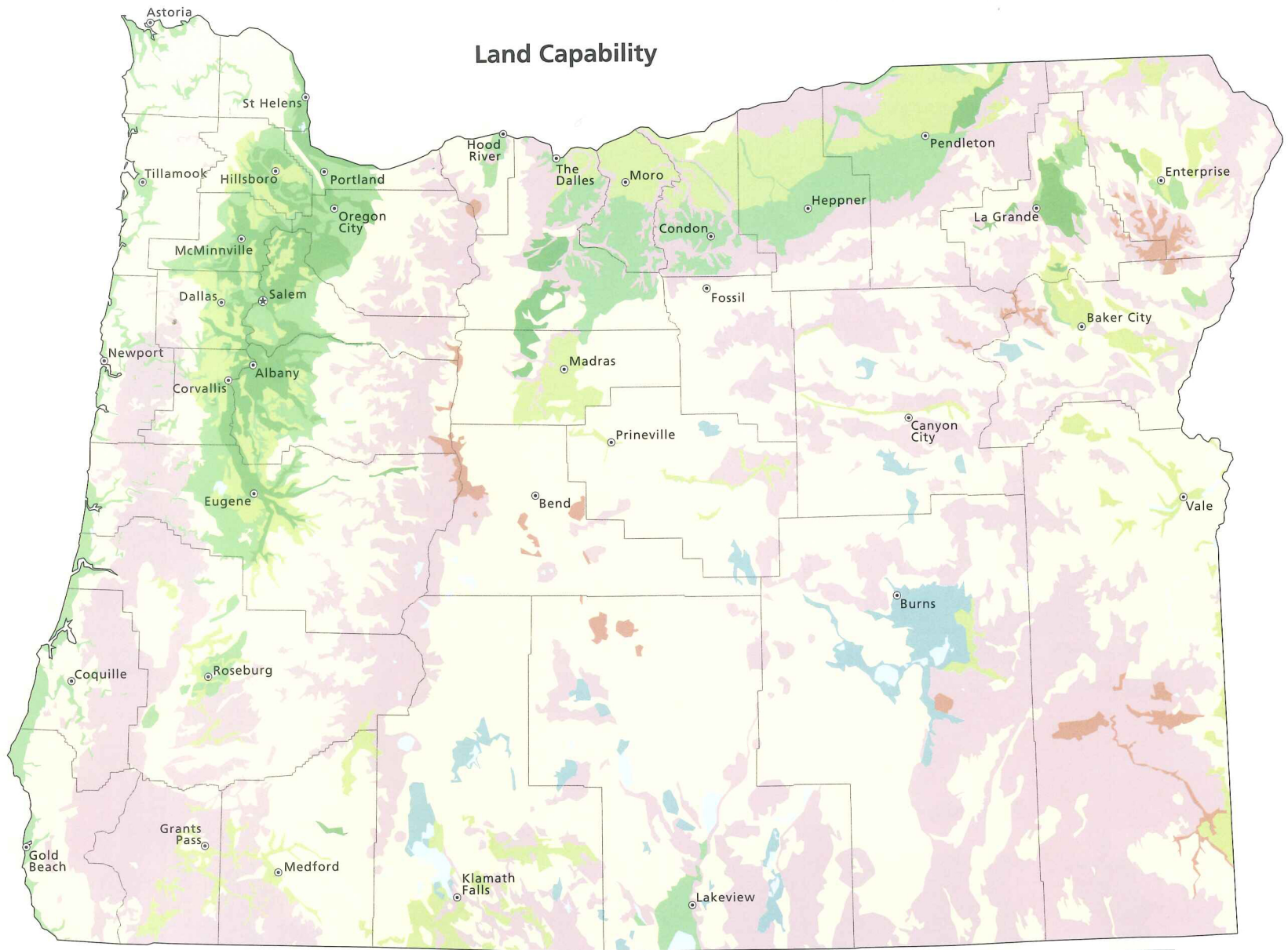
Land Capability

Land Capability Classes are broad groupings of soils differing from one another according to two criteria: their limitations for sustained production of cultivated crops, permanent pasture and rangeland vegetation; and the risks of soil damage if mismanaged. Examples of soil limitations are excessive wetness, erosion potential, steep slope, shallow depth and stone content; any and all of these limitations make it more difficult to manage soil for crop production. Soil damage refers mainly to loss of the most important part of the soil resource, the topsoil, by erosion; a secondary meaning is the damage to soils and water bodies

elsewhere by sediment deposition. Class I soils have essentially no limitations and pose the least risk of damage under intensive agricultural management. Both the number of limitations and the severity of their impact increase in successive classes. Soils in Classes I–IV can be used safely for crop production, but Class IV soils require major investments in conservation practices such as erosion control terraces, grassed waterways, minimum tillage and residue management. Risks of damage are too high for sustained crop production on Class VI and VII soils, but they can be used for hay, pasture and rangeland grazing enterprises.

Potential Prime Farmland

The U.S. Department of Agriculture Prime Farmland Classification system creates four very broad categories of agriculturally suitable soils: Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance. Prime Farmland soils are the very best and must meet several specific criteria—soil depth, pH, water holding capacity, erosion characteristics and moisture supply. Some soils meet all the requisite physical properties but occur in areas of



Land Capability Classes rate soils for non-irrigated agricultural uses. Increasing class numbers indicate progressively greater limitations and narrower options for use. Some class designations may change if water becomes available.

Oregon has a few Class I soils, but they occur in areas too small to be visible on a map at this scale.

Class V

Soils in Class V have little or no erosion hazard but have other limitations, primarily cold temperatures and short growing seasons, that limit their use.

Class II

Soils in Class II have some limitations that reduce the choice of plants or require moderate conservation practices.

Class VI

Soils in Class VI have severe limitations that make them generally unsuited to cultivation and that limit their use to pasture and similar low-intensity uses.

Class III

Soils in Class III have severe limitations that reduce the choice of plants, require moderate conservation practices or both.

Class VII

Soils in Class VII have very severe limitations that make them generally unsuited to cultivation and that restrict their use to grazing and similar low-intensity uses.

Class IV

Soils in Class IV have very severe limitations that reduce the choice of plants, require moderate conservation practices or both.

Class VIII

Class VIII soils are essentially rock outcrops or very steep, shallow, rocky soils that have no value for agriculture.

Water