

Threatened and Endangered Species

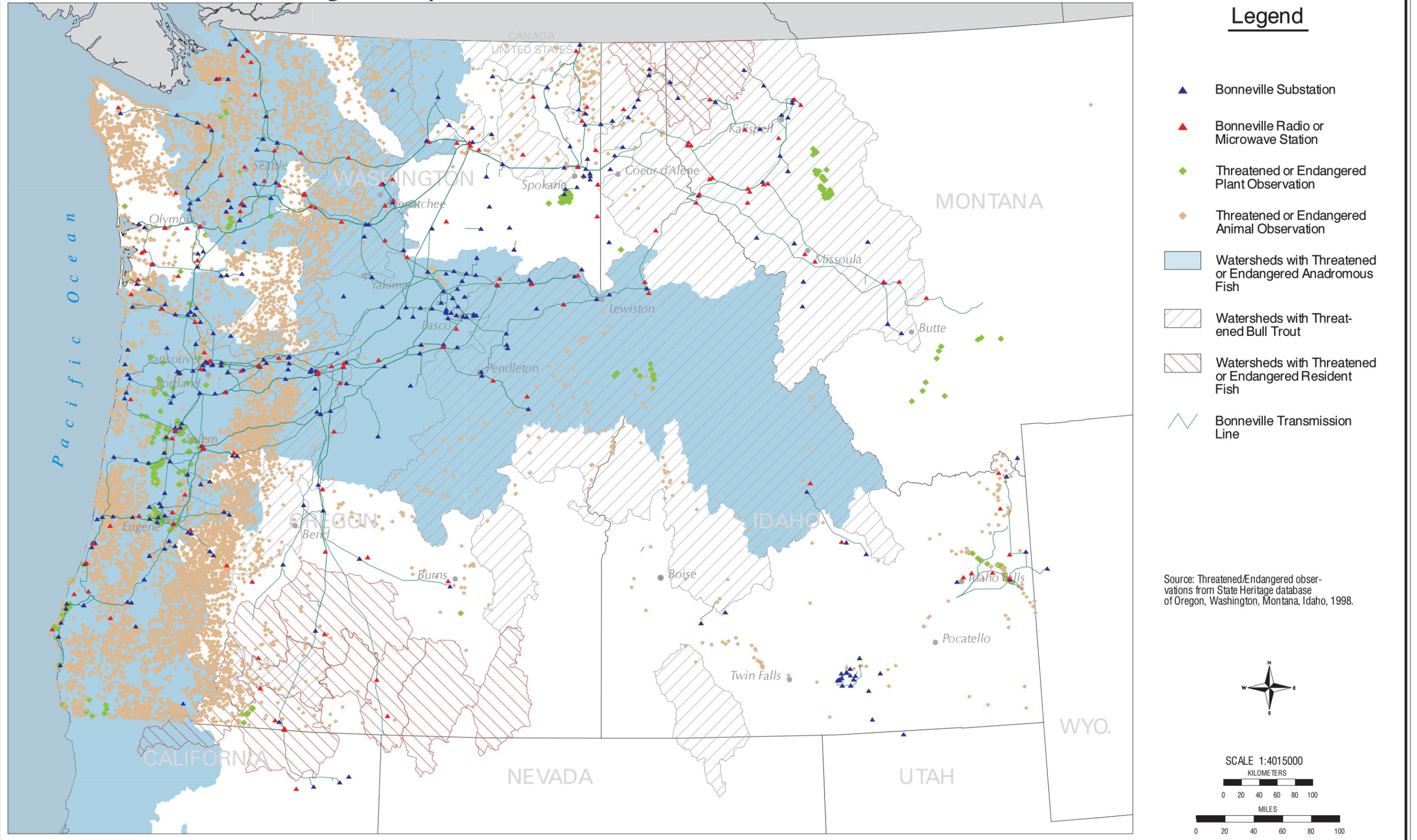


Figure V-3 T&E Species

Table V-4: Threatened and Endangered Fish Species

Fish			
Common Name	Scientific Name	Status	State
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	E	MT
White Sturgeon (Kootenai River pop.)	<i>Acipenser transmontanus</i>	E	MT, ID
Borax Lake Chub	<i>Gila boraxobius</i>	E	OR
Hutton Tui Chub	<i>Gila bicolor</i>	T	OR
Oregon Chub	<i>Oreonichthys crameri</i>	E	OR
Foskett Speckled Dace	<i>Rhinichthys osculus ssp.</i>	T	OR
Lost River Sucker	<i>Deltistes luxatus</i>	E	OR
Warner Sucker	<i>Catostomus warnerensis</i>	T	OR
Shortnose Sucker	<i>Chasmistes brevirostris</i>	E	OR
Lahontan Cutthroat Trout	<i>Oncorhynchus clarki henshawi</i>	T	OR
Umpqua River Cutthroat Trout	<i>Oncorhynchus clarki clarki</i>	E	OR, WA
Chinook Salmon	<i>Oncorhynchus tschawytscha</i>	T, E (depending on location)	ID, OR, WA
Coho Salmon	<i>Oncorhynchus kisutch</i>	T	OR
Sockeye Salmon	<i>Oncorhynchus nerka</i>	E	ID, WA
Chum Salmon	<i>Oncorhynchus keta</i>	T	OR, WA
Steelhead	<i>Oncorhynchus mykiss</i>	T, E (depending on location)	OR, WA, ID
Bull Trout (Klamath River pop.)	<i>Salvelinus confluentus</i>	T	CA, OR
Bull Trout (Columbia River pop.)	<i>Salvelinus confluentus</i>	T	MT, ID, NV, OR, WA

Table V- 5: Threatened and Endangered Snail Species

Snails			
Common Name	Scientific Name	Status	State
Banbury Springs Limpet	<i>Lanx sp.</i>	E	ID
Bliss Rapids Snail	<i>Taylorconcha serpenticola</i>	T	ID
Utah Valvata Snail	<i>Valvata utahensis</i>	E	ID
Bruneau Hot Springsnail	<i>Pyrgulopsis bruneauensis</i>	E	ID
Snake River Physa Snail	<i>Physa natricina</i>	E	ID
Idaho Springsnail	<i>Fontelicella idahoensis</i>	E	ID

Wildlife

Pacific Northwest wildlife is diverse, ranging from creatures such as large mammals to birds, insects, and reptiles, all contributing to the ecological health and diversity of the region. Some gain special interest because of their economic and recreational value or because they are protected by a state or the Federal Government.

Transmission-line corridors, microwave beam paths, and access-road corridors contain a variety of wildlife habitats. Substations and other electric-yard facilities do not provide any wildlife habitat, but may be next to such habitat.

Open-land Habitat

Habitat conditions (the kind and amount of food, cover, and water) determine the wildlife species and number of individuals. Rights-of-way are dominated by habitats for open-land wildlife. These consist of cropland, pasture, meadows, and areas overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, berries, browse, and wild herbaceous plants. Winter cover crops and grain stubble fields also provide winter feeding areas for many wildlife species. Shrub and thicket habitats occur mostly when land has been recently cleared for human uses such as rights-of-way. Typical mammals include deer, coyote, fox, skunk, rabbit, and mice. Birds commonly observed in these areas include quail, pheasant, red-tailed and Swainson’s hawk, owl, crows, meadowlarks, goldfinches, swallows, wrens, blackbirds, cowbirds, sparrows, and starlings.

Bonneville facilities are often located in the midst of forest wildlife habitats that consist of areas dominated by coniferous and/or deciduous tree cover, and associated forest understory vegetation. Typical mammals found in the forest habitat include elk, deer, black bear, cougar, bobcat, coyote, red fox, Douglas' squirrel, squirrel, chipmunk, and beaver. Common birds include ruffed grouse, hawks, owls, ravens, jays, woodpeckers, towhees, and finches. Forest amphibians and reptiles include newts, salamanders, western toads and Pacific treefrogs.

Forest Habitat

Riparian wildlife habitats and wetland habitats also occur within Bonneville rights-of-way and next to other Bonneville facilities. Riparian habitats occur in the zones that make a transition between aquatic and upland zones. Mammals found in riparian habitat include black-tailed deer, coyote, fox, beaver, otter, mink, raccoon, opossum, and bushy-tailed woodrats. Common riparian birds include bald eagles, hawks, owls, kingbirds, swallows, robins, blackheaded grosbeaks, juncos, bushtits, and starlings. Riparian reptiles and amphibians include northern alligator lizards, racer snakes, garter snakes, salamanders, rough-skinned newts, western toads, and several species of frogs.

Riparian Habitat

Wetland habitats are permanently or intermittently flooded, and include such areas as freshwater marshes, swamps, bogs, seeps, wet meadows, and shallow ponds and lakes. Some of the wildlife attracted to these wetland habitats are beaver, muskrat, mink, raccoon, bald eagle, osprey, marsh hawk, ducks, geese, coots, rails, herons, kingfishers, snipe, sandpipers, plovers, killdeer, swallows, common yellowthroat, painted turtle, garter snake, newts, salamanders, toads, and several species of frogs.

Special and Unique Habitats ¹ are non-plant features that are found throughout the region and are used by wildlife. They include the following:

Other Habitats

- **Snags** are standing dead trees. Snags provide cavities for shelter, and abundant insect populations for food.
- **Downed Woody Debris** includes large logs and root wads. Loose bark and areas under logs are used for cover and foraging spots for amphibians, reptiles and small mammals. Rootwads are used for nesting; and the entire log provides a food source for woodpeckers.

¹ As defined by Thomas (1979).

- **Exotic trees**, such as Lombardy poplar, black locust, and Siberian elm, are found at old homestead sites or existing rural homes and farms. These trees are used for perching, breeding, and shelter by raptors.
- **Talus** is an accumulation of rock fragments at the base of cliffs and steep slopes. Talus is used by variety of reptiles, small mammals, and rare species such as the Larch Mountain Salamander.
- **Cliffs** provide secure habitat for nesting hawks and falcons as well as lizards, snakes, and upland game birds (e.g., chukar). Steep terrain limits human and predator access, thus providing wildlife refuges.

Divided Habitat

Rights-of-way often cut through habitat types, thus dividing them and creating a contrast between what is *in* the right-of-way and what is *outside* it. Some species of wildlife take advantage of this difference in habitat. Edge species (species that tend to live where two differing habitats meet) use rights-of-way frequently. Red-tailed and Swainson's hawks, for example, will often nest in forested habitats next to transmission-line corridors, but feed in the open area within the corridor. Other edge species include barn swallow, common raven, western fence lizard, dark-eyed junco, common nighthawk, black-tailed deer, and eastern cottontail rabbit.

Deer and elk are often attracted to maintained Bonneville rights-of-way next to forested habitats. The low-growing shrubs and grasses within maintained corridors provide forage that is not available within shaded forests. The rights-of-way containing nutritious vegetation for forage can contribute to increased populations. Year-round deer use of rights-of-way is directly related to the amount of browse available (Goodwin, 1975; Cavanaugh et al., 1976; Eaton and Gates, 1979).

In urban and suburban areas, transmission-line corridors can serve as greenbelts, providing habitat for a variety of wildlife, including various songbirds, small mammals, and even larger mammals, such as deer and coyote.

Threatened and Endangered Animal Species

As with plant species, T&E animal species are protected by law, requiring Federal agencies to make sure that their actions do not jeopardize these species or their critical habitat. Figure V-3 (after page 124) shows T&E habitat in the Bonneville Service Area. Tables V-6 and V-7 show currently listed threatened or endangered mammals, birds and insects.

Table V- 6: Threatened and Endangered Mammals

Mammals			
Common Name	Scientific Name	Status	State
Grizzly Bear	<i>Urus arctos</i>	T	MT, WA, ID, WY
Woodland Caribou	<i>Rangifer tarandus caribou</i>	E	WA, ID
Columbian White-tailed Deer	<i>Odocoileus virginianus leucurus</i>	E	OR, WA
Gray Wolf	<i>Canis lupus</i>	E	MT, WA, ID, WY

Table V- 7: Threatened and Endangered Bird and Insect Species

Birds	Scientific Name	Status	State
Common Name			
Piping Plover	<i>Charadrius melodus</i>	T	MT
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	T	OR, WA
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	MT, OR, WA, ID, NV, UT, WY
Marbled Murrelet	<i>Brachyramphus marmoratus marmoratus</i>	T	OR, WA
Whooping Crane	<i>Grus americana</i>	E	MT, ID
Brown Pelican	<i>Pelecanus occidentalis</i>	E	OR, WA
Aleutian Canada Goose	<i>Branta canadensis leucopareia</i>	T	OR, WA
Northern Spotted Owl	<i>Strix occidentalis caurina</i>	T	OR, WA
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	E	MT, OR, WA, ID, NV, UT, WY
Insect			
Oregon Silverspot Butterfly	<i>Speyeria zerene hippolyta</i>	T	OR, WA

Of the presently listed threatened or endangered bird species present in Bonneville's service territory, the following four have habitat most likely to be affected by Bonneville's activities:

- northern spotted owl,
- marbled murrelet,
- peregrine falcon, and
- bald eagle.

The spotted owl and marbled murrelet nest in large old-growth trees in the forests of western Washington and Oregon. Some of these forests have nest sites; others may not have nests, but offer conditions suitable for nesting. These suitable areas are called Critical Habitat. As described under **Vegetation**, old-growth or mature trees are found next to, not in, transmission-line corridors. These potential nesting trees can become "danger" trees and threaten the transmission lines.

The peregrine falcon and bald eagle have breeding and wintering areas on the shorelines of the Washington and Oregon coasts, the Strait of Juan De Fuca, the Puget Sound area, and the larger rivers and lakes within Bonneville's service area. These birds often fly through transmission-line corridors, and sometimes perch and even nest on transmission towers.

Other presently listed threatened and endangered wildlife species that may live within Bonneville managed areas include the following:

- grizzly bear,
- gray wolf, and
- Columbian white-tailed deer.

Grizzly bears and gray wolves are wide-ranging species that may cross Bonneville rights-of-way and roads; however, they are more closely associated with wilderness and roadless areas. Grizzly bears and gray wolves are found in the Northern Cascades, Bitterroot Mountains, Lower Clark Fork, and Central Idaho Mountains. Bonneville has transmission lines that cross grizzly bear habitat.

Gray wolves also occur around transmission lines; however, there are no packs, and no denning or rendezvous sites known in the vicinity of Bonneville rights-of-way. Columbian white-tailed deer are found on islands in the lower Columbia River and on the mainland along the river, as well as in the valley floors of the Umpqua River Basin.

As with sensitive plants, the USFS identifies sensitive animal species in each Forest Region. Many of these animals are closely tied to specific habitat types, especially to native habitat such as late-successional and old-growth forest, native shrub- and grasslands.

Those sensitive species that are associated with late-successional forest but that are not also threatened and endangered species include the following:

- birds such as the northern goshawk, several species of woodpecker, and other cavity-nesting birds, and
- small mammals, such as the marten and fisher.

Sensitive species associated with grasslands/shrubs of the relatively dry interior Columbia River Basin and portions of Idaho include the following:

- Colombian sharp-tailed grouse
- pygmy rabbit,
- kit fox, and
- Idaho ground squirrel.

Sensitive Animal Species

Land Use

The two dominant land uses within or near Bonneville's transmission facilities are agriculture and commercial forest. Other land uses include recreation, residential, commercial, and industrial.

Agricultural lands generally include crops, orchards, and rangelands. Transmission lines and access roads cross agricultural areas. Some Bonneville land outside substation fences is used for agriculture.

Low-growing crops or grazing lands need little to no vegetation management by Bonneville (except for noxious weeds). Problems for transmission reliability can occur where orchards or Christmas tree farms along transmission corridors are left untrimmed or not harvested and trees grow too close to the lines.

Oregon

Agriculture is Oregon's second largest industry, after forestry. In the cool moist climate of the Willamette Valley, over 170 different crop and livestock items are produced, including grass and legume seeds, tree fruits and nuts, wine grapes, berries, vegetables, nursery stock,

Agriculture

Christmas trees, and field crops such as wheat, oats, mint and hops, hay, livestock and poultry and miscellaneous field crops. On the coast, Tillamook County dairy farms are famous for their cheeses. Cranberries are harvested near Coos Bay.

East of the Cascades, haying and raising cattle on ranges and pastures is common. Crops in this area often require irrigation, but make for some of the highest crop yields in the nation for certain commodities.

Hood River County, amid the foothills of Mt Hood in north-central Oregon, produces high-quality tree fruit, particularly apples and pears; The Dalles, just to the east, produces sweet cherries. The Rogue River Valley in southern Oregon produces pears and other tree fruit.

In central Oregon around Madras, Redmond, and Prineville, rich soil irrigated by the Deschutes, Crooked, and John Day rivers produces potatoes, mint, hay, and other field crops in abundance. In south-central Oregon, on a high plateau with sandy volcanic soils, the Klamath Basin specializes in fresh market potatoes, sugar beets, and beef cattle.

Washington

Washington is divided into two regions. Farms to the west of the Cascades tend to be small. Dairy products, poultry, and berries are the primary commodities produced.

The eastern side of the state has larger farms. Small grains such as wheat and barley, potatoes, fruit and vegetables are the primary commodities produced. In 1996, Washington produced more than half of the nation's apple crop.

Idaho

Idaho has diverse agriculture. In the north part of the state, the primary crops are grain, dry pea, lentil, and hay. The southwest corner's traditional crops are mixed, with fruit orchards, vegetables, and specialized commodities such as mint, hops, and seed crops. Along the Snake River, the land is dotted with large irrigated fields of alfalfa hay, dry beans, potatoes, small grains, and sugar beets. The southeast and east are a mixture of dryland and irrigated grain, hay, and potato fields. Cattle and sheep graze on the vast rangelands throughout the state.

Montana

Crops account for over half of Montana's agriculture products. Wheat is the largest crop (including four classes: hard red spring, hard red winter, durum, and soft white). Montana also produces sugar beets, alfalfa hay, and other crops such as apples, buckwheat, canola, cherries, potatoes, dry beans, field peas, flax, grapes, garlic, lentils, safflowers, sunflowers, oats, mustard, corn, rapeseed, mint, kabocha squash, Christmas trees, and many more crops.

California, Modoc County

Modoc County, California, the only county in California with Bonneville facilities, produces alfalfa hay, pasture and rangeland with cattle, potatoes, barley, sugar beets, onions, wheat, and horseradish.

Wyoming, Teton County

Teton County, Wyoming, the only county in Wyoming with Bonneville facilities, has wheat and barley fields as well as pastures near the transmission line and substation.

Bonneville's facilities also cross private, commercial, and government-managed forests. Uses of these forests vary from wood product production to recreation and rural residential.

Timber production is common throughout western Oregon and western Washington, a region where precipitation and temperature are optimal for tree growth. These coniferous forests are some of the most productive in the world, exhibiting high growth rates and large tree sizes. Because there is less precipitation east of the Cascades, timber management is limited to the more moist and colder higher elevations. Here, tree growth rates are slower due to the less optimal conditions.

Under intensive management, forestlands are planted, competing species are controlled, and timber trees are harvested on short rotations. Maintaining site productivity and high tree-growth rates is a high priority. Because trees, especially those grown for timber, can grow too close to transmission lines, timber production does not occur within the transmission-line rights-of-way. An exception is where conductors cross canyons with sufficient clearance for mature tree heights.

Transmission-line rights-of-way and associated access roads are often used by recreationists such as hunters, anglers, and campers,

Forest Lands

Recreation

Residential, Commercial and Industrial

especially on Federal lands. During winter, cross-country skiers and snowmobilers may also use transmission-line corridors and roads. In rural and urban areas, open cleared rights-of-way are often used as playing fields, bike trails, or hiking trails.

Many Bonneville electric facilities are located in cities, towns, suburbs, or in commercial or industrial areas. Substations, transmission lines, access roads, and maintenance facilities were often originally built on the outskirts of town; with growth, homes and business have built up around them. These areas include the following:

- Eugene, Salem, Portland, Redmond, Pendleton, and Bend (OR);
- Bellevue, Vancouver, Wenatchee, Yakima, Pasco, and Spokane (WA);
- Idaho Falls, Coeur d'Alene, and Lewiston (ID); and
- Kalispell, Missoula, and Butte (MT).

In these areas, businesses, homes, and other properties adjoin rights-of-way and substations, while lawns, gardens, playgrounds, bike paths, and parking lots may extend beneath the transmission lines.

Land Ownership/Management

This section describes the various ownerships crossed by Bonneville facilities. Figure V-4 shows the different categories of land ownership.

Bonneville and Private Lands

Bonneville owns most of the land under and around our substations, maintenance facilities, and microwave sites. We do not own land where these facilities are located on USFS- or BLM-managed lands.

Bonneville usually obtains easements from the landowner for transmission-line rights-of-way and access roads. Sixty-six percent of the land crossed by Bonneville's rights-of-way is owned by private individuals or companies. Easements are generally written to be perpetual: they stay in effect even if the land is subdivided and/or sold. The easements include rights for Bonneville to manage the line and right-of-way. The details of each easement vary, as do the rights Bonneville has on that land.