

Idaho Common Resource Area Report (1/5/04)

<i>MLRA</i>	<i>MLRA Name</i>	<i>MLRA Description</i>	<i>Idaho Acres</i>
<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
8	Columbia Plateau	<p>Land use: More than 90 percent of this area is in farms or ranches; about 7 percent is federally owned, and the remainder is urban. Nearly one-half is cropland, most of which is dry-farmed. The main crops are wheat and peas, but a small acreage is in hay and improved pasture. In places where the annual precipitation is less than about 350 mm, a cropping system of alternate grain and summer fallow is practiced. Cropping systems of alternate grain and field peas, continuous grain crops, or variations, including rotations with grasses and legumes, are practiced in places where precipitation is greater than 350 mm. Small acreages along the major streams are irrigated and used for growing vegetables, fruits (mainly apples), and hay. Nearly all the remaining land, about two-fifths of the total area, is in range, but small sections are wooded. Elevation and topography: Elevation ranges from 400 to 1,100 m. These loess- and ash-mantled plateaus are nearly level to steeply sloping. Steep slopes are common along the walls of major valleys and in scablands.</p> <p>Climate: Average annual precipitation—225 to 450 mm. Maximum precipitation is in winter. Average annual temperature—7 to 13 C. Average freeze-free period--140 to 175 days.</p> <p>Water: The low to moderate precipitation limits the choice of agricultural enterprise. The major rivers provide water for irrigation along their courses, but the small streams provide little water. Ground-water supplies in the underlying basalt are small and mostly untapped.</p> <p>Soils: Most of the soils are Xerolls. They are well drained or somewhat excessively drained and have a mesic temperature regime. Nearly level to moderately steep, deep and moderately deep, silty Haploxerolls (Ritzville, Walla Walla, Condon, and Valby series) formed in loess on uplands. Nearly level, deep, medium textured Haploxerolls (Onyx, Hermiston, and Esquatzel series) are on flood plains. Shallow, stony Haploxerolls (Licksillet, Bakeoven, and Kuhl series) are on ridgetops and steep south slopes. Moderately deep Haploxerolls (Wrentham series) are on steep north slopes.</p> <p>Potential natural vegetation: This area supports shrub-grass associations. Big sagebrush and bluebunch wheatgrass are dominant on the moderately deep to very deep, gently sloping to moderately sloping soils and on soils that have steep and very steep south exposures. Big sagebrush and Idaho fescue are dominant on most moist sites and on moderately steep to very steep north exposures. Stiff sagebrush, low sagebrush, and Sandberg bluegrass are dominant on shallow and very shallow, stony soils. Small stands of ponderosa pine, with oak on warmer sites along the Columbia River, are on north slopes, in canyons and draws, and along stream channels. Dwarf hardwoods of hackberry and maple also grow in canyons and draws. Snowberry is the most common shrub in the pine stands. Poison-oak is the most common shrub in the oak stand.</p>	
8.6	Columbia Plateau - Lower Snake and Clearwater Canyons	<p>This unit consists of deeply dissected canyons cut through the basalt layers of the Columbia Plateau. It has isolated plateau fragments of the Dissected Loess Uplands CRA. The depth of the canyons, up to 2,000 feet, create drier conditions and mean annual precipitation decreases to about 10 inches at the bottom of these canyons. Outside of human population centers and transportation corridors, canyons provide wildlife habitat for bighorn sheep and game birds. Grass-covered: grazing, recreation, and wildlife habitat.</p>	48,369

9	Palouse and Nez Perce Prairies	<p>Land use: Less than 30 percent of this area is federally owned. Nearly all the remainder is in farms and ranches. About 40 percent, including most of the publicly owned land, is rangeland. About 50 percent is cropland, most of which is dry- farmed to wheat, peas, and lentils. About 1 percent is irrigated and used for growing vegetables and other specialty crops. Small wooded areas and urban areas make up about 10 percent.</p> <p>Elevation and topography: Elevation along the major streams is about 200 m, but in most of the plain it ranges from 600 to 1,200 m. The loess-covered basalt plain is moderately to strongly dissected; slopes are mostly hilly and steep. The major streams have cut deep canyons.</p> <p>Climate: Average annual precipitation—375 to 625 mm. Precipitation is evenly distributed throughout fall, winter, and spring; summers are relatively dry. Snow falls in winter. Average annual temperature—7 to 12 C. Average freeze-free period- -100 to 170 days, decreasing with elevation.</p> <p>Water: Precipitation is adequate for dry farming. Most irrigated areas are adjacent to large streams. Ground-water supplies are small and mostly untapped.</p> <p>Soils: Most of the soils are Xerolls, but Albolis, Aquolls, and Xerafls also occur in this area. These soils have a mesic temperature regime and a mixed mineralogy. Haploxerolls (Asotin, Athena, Bakeoven, Caldwell, Calouse, Garrison Linville, Palouse, and Snow series) formed mostly in deep loess or alluvium or in glacial outwash or deposits shallow to bedrock. Argixerolls (Gwin, Larkin, and Waha series), some of which are deep and others shallow, formed in loess or mixed loess and colluvium. Argialbolls (Latah, Tilma, and Thatuna series) are deep soils that formed in loess. Deep, somewhat poorly drained Argiaquolls (Konert and Konner series) formed in alluvium. Deep Haploxerafls (Freeman and Garfield series) formed in loess.</p> <p>Potential natural vegetation: This area supports grass, shrubs, and trees. Grassland of bluebunch wheatgrass and smaller amounts of Idaho fescue, Sandberg bluegrass, and needleandthread generally are at lower elevations and receive less rainfall. Shrub-grassland of snowberry and Idaho fescue or of big sagebrush with Idaho fescue and bluebunch wheatgrass are mainly at higher elevations. Rose, common cowparsnip,</p>	
9.2	Palouse and Nez Perce Prairies - Palouse Hills	<p>This unit is the western foothills of the Northern Rocky Mountains. This unit is characterized by a non-forested, loess-covered area with greater than 15 inches of precipitation. The highly productive soil has a higher organic matter and clay content. Original plant cover has been almost entirely supplanted by wheat farms. Water erosion is the major management issue. Perennial streams originate from the mountains to the east. Smaller, loess-bottomed streams rise within the CRA and are intermittent. Many of these intermittent streams are plowed and tilled. Extensive farming including small grains, peas, lentils, hay and pastureland.</p>	283,637
9.3	Palouse and Nez Perce Prairies - Dissected Loess Uplands	<p>This unit is located on the northeastern slopes of the Blue Mountains. It comprises non-forested, rolling loess hills, canyons, and flat plateau remnants isolated by the lower canyons of the Snake River (CRA 8.6). Grasslands without a sagebrush component dominate the lower elevations. Shrubs (rose and snowberry) appear with increasing moisture at higher elevations. Though grazing and farming have eliminated much of the original plant cover, the dissected terrain and thinner soil is not as suited to agriculture as the neighboring Palouse Hills and Deep Loess Foothills CRAs. Small grain, pea, and hay farming, grazing, and wildlife habitat.</p>	143,280

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<i>9.5</i>	Palouse and Nez Perce Prairies - Warm Canyons and Dissected Uplands	This unit is characterized by deep river canyons that divide the Blue Mountains from the Rocky Mountains. The Snake, Salmon, and Grande Ronde Rivers and their tributaries have cut the Columbia Plateau to depths of 2,000 to 5,000 feet through metasedimentary and metavolcanic rock. Canyon depth and the exposed metamorphic rocks result in stony soils on canyon slopes that retain little moisture. The dominant soils are Dixiejett and Lickskillet soil series. Temperature regime is mesic and the moisture regime is xeric and aridic. Mean annual precipitation is 12 to 16 inches. Bluebunch wheatgrass, Sandberg's bluegrass, and spiny greenbush are adapted to these hot, dry conditions. Land use includes grazing and recreation on National Forest lands and in the Hells Canyon National Recreation Area.	539,760
<i>9.11</i>	Palouse and Nez Perce Prairies - Nez Perce Prairie	This unit is a loess-covered plateau. It is higher, cooler, less hilly, and has shallower soils than the Palouse Hills CRA. Idaho fescue and bluebunch wheatgrass are native. Cropland is now extensive and grows wheat, barley, peas, and hay. The headwaters of many perennial streams are impacted by agricultural land use, negatively impacting the water quality of downstream canyon reaches.	464,223

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10	Central Rocky and Blue Mountain Foothills	<p>Land use: Nearly three-fifths of this MLRA is federally owned; most of the remainder is in farms or ranches. More than 90 percent is rangeland. About 5 percent of the total area, land bordering the large streams, is irrigated and used for growing potatoes and small grains and for pasture. Small tracts of deep soils are dry-farmed.</p> <p>Elevation and topography: Elevation ranges from 400 to 2,000 m, increasing from west to east. The lava plains and hills are nearly level to steeply sloping. Deep alluvial deposits are in valleys and on fans adjacent to the mountains. The major streams are deeply entrenched, especially in the western part. Isolated mountain ranges occur throughout the area.</p> <p>Climate: Average annual precipitation—250 to 500 mm. Precipitation is evenly distributed throughout fall, winter, and spring but is low in summer. Average annual temperature—4 to 13 C. Average freeze free period—60 to 165 days, decreasing from west to east and with elevation.</p> <p>Water: The low to moderate precipitation is adequate for dryfarming on the smoother areas of deep soils. Streams provide enough irrigation water to meet present needs along the major valleys. Ground-water supplies are small and mostly untapped.</p> <p>Soils: The dominant soils are Xerolls and Argids. They are well drained and moderately fine textured to fine textured and have a mesic temperature regime. Deep, rolling to hilly Argixerolls (Gem, Simas, and Tub series) are on uplands. Shallow, gently sloping to steep, stony Argixerolls (Ruckles series) are on uplands underlain by basalt. Moderately deep, sloping to very steep Haploxerolls (Loveline series) are on uplands. Nearly level to sloping Durargids (Madras and Lookout series) are on plateaus. These soils have a duripan.</p> <p>Potential natural vegetation: This area supports a shrub-grass association. Big sagebrush and bluebunch wheatgrass are dominant on the moderately deep to very deep soils and on steep and very steep south exposures. Big sagebrush and Idaho fescue are dominant on moist sites. Stiff sagebrush, low sagebrush, and Sandberg bluegrass are dominant on drier sites. Antelope bitterbrush and Idaho fescue grow on moist sites at high elevations. Western juniper is common on the drier, stonier sites. Curlleaf mountainmahogany grows at high elevations.</p>	
<i>10.1</i>	Central Rocky and Blue Mountain Foothills - Warm Dry Blue and Seven Devils Mountain Foothills	This unit lies between Oregon's Blue and Wallowa Mountains and the northwestern Snake River Plain. This unit is characterized by rangeland soils on hills and mountains associated with basalt and exposed tuffaceous sediments. The combined masses of the Cascade Range and the Blue and Wallowa mountains block any maritime influence, creating a continental climate. As a result, plants are subject to wide temperature ranges, high evapotranspiration, and high early-season moisture stress. The dominant soils are Brogan, Simas, Ruckles and Ruclick soil series. Temperature regime is mesic and the moisture regime is aridic. Mean annual precipitation is 9 to 12 inches. Vegetation is Wyoming big sage and bluebunch wheatgrass (warm day climate).	389,206
<i>10.2</i>	Central Rocky and Blue Mountain Foothills - Lava Fields	This unit contains basalt lava flows, cinder cones, and spatter cones. Exposed basalt or very shallow loessial soils over volcanics are characteristic and are either barren or sparsely covered by shrubs and grasses. Soil temperature regime is dominantly frigid and the soil moisture regimes are xeric and aridic. Livestock carrying capacity is very low. Surface water availability is very limited. This unit includes the Craters of the Moon National Monument. Lithology, depth to bedrock, livestock carrying capacity, and water availability are unlike	475,577
<i>10.3</i>	Central Rocky and Blue Mountain Foothills - Camas Prairie	This unit is a cold, wet valley used for small grain and alfalfa farming, pasture, range, and wildlife refuge. It is flanked by the foothills of the Rocky Mountains to the north and the Bennett Hills to the south. These foothills trap mountain runoff. Resultant wet soils and flooding occur and are local and seasonal problems. Frigid mollisols are common and are colder than the soils of the lower Treasure Valley. Wet bottomlands support meadow grasses and sedges. Alluvial fans and terraces are covered by grasses and sagebrush.	339,037

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<i>10.4</i>	Central Rocky and Blue Mountain Foothills - Semiarid Foothills	The shrub- and grass-covered foothill unit is higher and more rugged than nearby CRA units. A few perennial streams flow across the unit but are absent on the lacustrine deposits of the Unwooded Alkaline Foothills CRA. Shallow, clayey soils are common and often support medusahead, wildrye, cheatgrass, and scattered shrubs. Wildfire frequency is high. Land use is primarily livestock grazing and is distinct from the irrigated agriculture of the Treasure Valley.	997,608
<i>10.5</i>	Central Rocky and Blue Mountain Foothills - Eastern Snake River Basalt Plains	This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is the land type. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native	109,756
<i>10.6</i>	Central Rocky and Blue Mountain Foothills - Unwooded Alkaline Foothills	The shrub- and grass-covered foothill unit is higher and more rugged than adjacent valleys. Sandy, alkaline lacustrine deposits occur unlike in other units and support a unique flora. Potential natural vegetation is saltbush-greasewood and sagebrush steppe. Today, cheatgrass and crested wheatgrass are also common and the unit is used for livestock grazing. The soil temperature regime is dominantly mesic and the soil moisture regime is aridic bordering on xeric. Perennial streams are rare.	74,306
<i>10.7</i>	Central Rocky and Blue Mountain Foothills - Foothill Shrublands–Grasslands	This unit consists of grass- and shrub- covered foothills in the rain shadow of high mountains. Its hills and benches are dry, treeless, and covered by shrubs and grasses. The vegetation mosaic is unlike open forests. Land use is mostly grazing but rural residential development is expanding near the city of Boise.	909,084

11 Snake River Plains

Land use: Nearly half of this area is federally owned; the remainder is in farms and ranches. Most of the federally owned land is rangeland. Forage production is low, and annual grasses have invaded much of the rangeland. The National Reactor Testing Station is in the northeast, and Craters of the Moon National Monument is on bare lava flows in the east. About one-fourth of the area, the plains bordering the Snake River and its tributaries, is irrigated. Potatoes, grain, sugar beets, beans, and alfalfa hay are the principal crops. There is some irrigated pasture. Small tracts in places where the soils and moisture are favorable are dry-farmed.

Elevation and topography: Elevation ranges from 600 to 1,700 m. These nearly level to steeply sloping lava plains have a thin to moderately thick cover of loess. In places, the rivers are in deep, steep-walled canyons. Alluvial fans, terraces, and bottom land are gently sloping to moderately sloping.

Climate: Average annual precipitation—175 to 325 mm. There is little or no precipitation in summer. Average annual temperature—5 to 11 C. Average freeze-free period—90 to 170 days, lowest in the northeast.

Water: Large quantities of water are available for irrigation along the Snake River and its tributaries. Ground water is plentiful in some of the deep alluvial deposits throughout the area and in the lavas north of the Snake River in eastern and south-central Idaho. It is used extensively for irrigation. Water is scarce on sites far from the major rivers, and these sites depend on local precipitation for water.

Soils: Dominant soils are Orthids, Argids, and Orthents. They have a mesic or frigid temperature regime. Deep and moderately deep, silty Calciorthids (Portneuf and Pancheri series), Haplargids (Power series) and Camborthids (Trevino and Tenno series) are on loess-covered plains of the west and central parts of the area. Durorthids (Minidoka and Nyssa series) and Durargids (Purdam and Chilcott series) that have a hardpan are on older land surfaces. Moderately coarse textured Torriorthents (Turbyfill and Umapine series), Camborthids (Vining series), Calciorthids (Declo series), and Calcixerolls (Bannock series) are extensive in the central and eastern parts of the area.

Potential natural vegetation: This area supports shrub-grass vegetation. Big sagebrush, winterfat, shadscale, Indian ricegrass, needleandthread, Thurber needlegrass, and Sandberg bluegrass grow on the lower Snake River Plains. Big and threetip sagebrush, bluebunch wheatgrass, Thurber needlegrass, and arrowleaf balsamroot grow on the middle Snake River Plains. The upper Snake River Plains support bluebunch wheatgrass and big sagebrush. Black sagebrush and gardner saltbush are dominant on some soils. Phlox, tapertip hawksbeard, biscuitroot, and penstemon are also important.

<i>11.1</i>	Snake River Plains - Treasure Valley	This unit is characterized by irrigated cropland, pastureland, and rapidly growing cities, suburbs, and industries. Many canals, reservoirs, and diversions are present. Aridic soils predominate and require irrigation to grow commercial crops. Surface water quality has been significantly affected by channel alteration, dams, irrigation return flow, and urban, industrial, and agricultural pollution. Crops include wheat, barley, alfalfa, sugar beets, potatoes, and beans. Crop diversity is greater, temperatures are warmer, and the mean frost free season is longer than in other CRA units. Population density is much greater than in nearby, rangeland-dominated units.	828,276
<i>11.2</i>	Snake River Plains - Lava Fields	This unit consists of basalt lava flows, cinder cones, and spatter cones. Exposed basalt or very shallow loessial soils over volcanics are characteristic and are either barren or sparsely covered by shrubs and grasses. Soil moisture regime is aridic and soil temperature regime is dominantly mesic. Livestock carrying capacity is very low. Surface water availability is very limited. This unit includes the part of the Idaho National Engineering Laboratory. Lithology, depth to bedrock, livestock carrying capacity, and water availability are unlike neighboring	242,322
<i>11.3</i>	Snake River Plains - Upper Snake River Plain	The nearly level unit is characterized by cropland, pastureland, cities, suburbs, and industries. Extensive surface irrigated small grain, sugar beet, potato, and alfalfa farming occurs. Frost-free season is shorter and crop variety is less than downstream CRA units. Aquatic resources have been degraded by irrigation diversions, channelization, dams, sewage treatment, nonpoint pollution, food processing, and phosphate processing.	936,577

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<i>11.4</i>	Snake River Plains - Eastern Snake River Basalt Plains	This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native	3,509,501
<i>11.5</i>	Snake River Plains - Mountain Home Uplands	This upland shrub- and grass-covered unit is sparsely populated. Local relief is between that of the flanking foothills and the Magic and Treasure Valleys. Soils are warmer than the frigid soils of the Owyhee Mountains. Today, cheatgrass, medusahead, wildrye, and sagebrush occur and livestock carrying capacity is low; native grasses are rare and vegetative regeneration capacity is limited.	1,885,065
<i>11.6</i>	Snake River Plains - Magic Valley	This unit is underlain by alluvium, loess, and basalt lava flows. Its aridic soils require irrigation to grow commercial crops. Many canals, reservoirs, and diversions supply water to its pastureland, cropland, and residential, commercial, and industrial developments. Small grains, alfalfa, sugar beets, potatoes, and beans are grown. Livestock and dairy farms are common. Dams, irrigation diversions, pollution, and channel alteration have affected water quality. Over-irrigation has raised ground water levels and created artificial wetlands. Natural vegetation is mostly sagebrush and bunchgrass but low terraces have salt tolerant plants. Population density is greater than in adjacent rangeland-dominated units.	1,088,293
<i>11.7</i>	Snake River Plains - Dry Unwooded Alkaline Foothills	The shrub- and grass-covered foothill unit is higher and more rugged than adjacent valley CRAs. Alkaline lacustrine terrace deposits characterize the soil and support a unique flora. Shallow and moderately deep soils over cemented pans are common. Potential natural vegetation is saltbush-greasewood and sagebrush steppe. Today, cheatgrass and crested wheatgrass are also common and the unit is used for livestock grazing. The soil temperature regime is mesic and the soil moisture regime is aridic.	946,960
<i>11.8</i>	Snake River Plains - Dissected High Lava Plateau	This unit consists of alluvial fans, rolling plains, and shear-walled canyons cut into extrusive rocks. Sagebrush grassland is common and scattered woodland grows on rocky uplands. This unit has more cool season grasses than the valleys to the south and lacks the saltbush-greasewood of the Raft River Valley. Frigid and mesic aridisols and mollisols occur. Grazing is the primary land use. Cropland is much less common than in other CRAs. Areas of high water quality and native fish assemblages occur in isolated canyons.	219,541
<i>11.9</i>	Snake River Plains - Saltbush-Dominated Valleys	This arid, gently sloping unit is dominated by shadscale and greasewood vegetation. Light-colored saline and alkalali soils are common; they are dry for extended periods and may be leached of salt by irrigation water. Potential natural vegetation is shadscale and greasewood; this vegetative community is distinct from surrounding units. The primary land use is grazing but irrigated cropland occurs.	237,895

12	Lost River Valleys and Mountains	<p>Land use: Nearly all this area is federally owned. The high mountain slopes are forested, and some lumber is produced. The low grass and shrubs on the slopes and in the valleys are grazed. Irrigated land in the valleys, making up about 1 percent of the area, is used mostly for hay and pasture, but potatoes and small grains are also grown.</p> <p>Elevation and topography: Elevation ranges from 1,400 m in the valleys to more than 3,100 m at the highest mountain crests. Steep to very steep mountains underlain by mixed sedimentary rocks and volcanic rocks make up about 50 percent of the area. The large valleys, deeply mantled by recent alluvium and some lacustrine deposits, are level to moderately steep.</p> <p>Climate: Average annual precipitation—175 to 275 mm in the valleys and 625 mm or more on mountain crests. Average annual temperature—3 to 7 C in the valleys but much lower in the mountains. Average freeze-free period—80 to 110 days in the valleys. Frost occurs every month of the year in the high mountains.</p> <p>Water: The moderate precipitation provides enough moisture for grass and shrubs to grow on mountain slopes. The valleys depend on the streamflow of the Salmon, Lemhi, Pahsimeroi, Big Lost, and Little Lost Rivers for water for livestock and irrigation. Springs and deep wells in the valleys supply a small amount of ground water for domestic uses and for irrigation.</p> <p>Soils: Major soils of the valleys are Orthids, Orthents, Aquolls, and Xerolls, which have a frigid temperature regime. The dominant soils of the mountains are Rendolls, Borolls, Orthents, and Ochrepts, which have a cryic temperature regime. Moderately deep, gently sloping, gravelly, medium textured Calciorthids (McCaleb series) and shallow, very gravelly Torriorthents (Ramshorn series) are on low alluvial fans and terraces. Moderately deep, nearly level, poorly drained, medium textured Haplaquolls (Tew series) are on stream bottoms and terraces. Moderately deep, gravelly, medium textured Argixerolls (Soelberg series) are on high alluvial fans near the mountains. Shallow, very gravelly, medium textured Rendolls (Sheege series) are on south-facing slopes. Moderately deep, medium textured Cryoborolls (Pavohroo series) are on north-facing slopes. Shallow, stony Cryorthents and Cryochrepts are on the highest mountains.</p> <p>Potential natural vegetation: This area supports desert shrub, shrub-grass, and forest vegetation. Indian ricegrass, needleandthread, shadscale, gardner saltbush, and scarlet globemallow are major species in the valleys. Big and low sagebrush, winterfat, bluebunch wheatgrass, Sandberg bluegrass, and a variety of forbs grow on mountain foot slopes. Bluebunch wheatgrass, prairie junegrass, oniongrass, Indian paintbrush, lupine, sedge, big and low sagebrush, and rabbitbrush grow on low mountain slopes. Curleaf mountainmahogany, Douglas-fir, aspen, and Rocky Mountain juniper grow on high mountain slopes.</p>	
<i>12.1</i>	Lost River Valleys and Mountains - Dry Intermontane Sagebrush Valleys	This unit contains stream terraces, floodplains, saline areas, and alluvial fans. Water availability and potential for cropland agriculture are low because this unit is in the rain shadow of high mountains, receives little mountain runoff, and is underlain by highly permeable valley fill deposits. Its deep gravel deposits are unlike the basalt bedrock of MLRA 11. Sagebrush grassland is widespread and contrasts with the open-canopied forests of the more rugged and higher mountains. Shadscale and greasewood grow on alkaline soils that receive less than 8 inches of precipitation annually. Grazing is the dominant land use. The Pahsimeroi and Lemhi Rivers were once important salmon and steelhead fisheries.	1,252,697
<i>12.2</i>	Lost River Valleys and Mountains - Dry Gneissic-Schistose-Volcanic Hills	This unit is shrub- and grass-covered and is underlain by Quaternary and Tertiary volcanics. It is less rugged and drier than the higher Barren Mountains CRA, but is more rugged and receives more precipitation than the Dry Intermontane Sagebrush Valleys CRA. Its sagebrush-grassland vegetation contrasts with the open-canopied forest-shrubland-grassland mosaic along the Continental Divide. Grazing is the most common land use.	1,677,421
<i>12.3</i>	Lost River Valleys and Mountains - Barren Mountains	This unit is largely underlain by quartzite and carbonate-rich rocks and is drier than mountainous units to the north. Elevations range from about 6,800 to 10,000 feet. Open-canopied Douglas-fir/lodgepole pine/subalpine fir forests, aspen groves, sagebrush, mountain brush, and grasses occur. Forests are limited to a narrow elevational band and are most widespread on north-facing slopes. Pacific forest elements are absent and barrens	989,011

13 Eastern Idaho Plateaus

Land use: Nearly three-fourths of this area is in farms and ranches; the remainder is federally owned. Most of the Fort Hall Indian Reservation is in this MLRA. About one-fourth of the area is dry-farmed, and wheat is the major crop. An additional 10 percent, land along some of the large streams, is irrigated and used largely for alfalfa hay, meadows, and pasture, but some small grains and potatoes are grown. About one-half of the area is rangeland. About 10 percent, consisting of high mountain slopes, is in forests that produce some timber.

Elevation and topography: Elevation ranges from 1,400 to 2,000 m in plains and plateaus and from 2,300 to 2,600 m on mountain crests, but on some peaks it is more than 3,100 m. The dissected plateaus and plains are underlain mainly by sedimentary rocks and some volcanic rocks that are mantled by loess on gentle and moderate slopes. Lacustrine deposits and deep alluvium fill some level valleys and basins. The plains and plateaus are separated by many rugged but discontinuous mountain ranges of folded sedimentary rocks.

Climate: Average annual precipitation—300 to 625 mm. Minimum precipitation is from midsummer through autumn. Average annual temperature—4 to 7 C., but it is lower in the mountains. Average freeze-free period—50 to 120 days. Frost occurs every month of the year in the high mountains.

Water: Precipitation provides water for dryfarming and grazing, but careful management is needed to make the best use of the limited amount. Several large streams that flow through the area supply water for irrigation, mainly outside the MLRA. Small but important tracts are irrigated along the Bear, Portneuf, Blackfoot, Snake, and Teton Rivers. Ground water is scarce except near the large streams.

Soils: The dominant soils are Xerolls and Borolls. They have a frigid or cryic temperature regime, depending largely on elevation. Deep, silty Argixerolls (Bancroft series) and Haploxerolls (Rexburg series) are major soils on the loess-covered plains. Deep, silty Cryoborolls (Tetonia and Lanark series) are on foothills. Moderately deep, gravelly, medium textured Cryoborolls (Driggs series) are on alluvial fans and terraces near the mountains. Shallow, skeletal, medium textured Rendolls (Sheege series) are on south-facing slopes of the mountains. Moderately deep, medium textured Cryoborolls (Pavohroo series) are on north-facing slopes.

Potential natural vegetation: This area supports grass-shrub vegetation. Bluebunch wheatgrass and big sagebrush are dominant. Arrowleaf balsamroot is common. Prairie junegrass, Sandberg bluegrass, Nevada bluegrass, oniongrass, slender wheatgrass, milkvetch, lambstongue fawnlily, phlox, penstemon, antelope bitterbrush, rabbitbrush, snowberry, and low Oregon-grape are other important plants. Scattered stands of Douglas-fir and aspen grow on north slopes and on the more moist soils.

<i>13.1</i>	Eastern Idaho Plateaus - Dissected Plateaus and Teton Basin	This unit is used for cropland and rangeland. Potatoes are an important cash crop. Sprinkler irrigated land supports potatoes, alfalfa, and pasture. Non-irrigated land supports small grains. Mollisols developed in thick loess deposits or alluvium and are subject to wind erosion. Potential natural vegetation is sagebrush steppe and is unlike the forests of the higher, more rugged mountains. Wet meadows occur in the poorly-drained soils of the	678,712
<i>13.2</i>	Eastern Idaho Plateaus - Eastern Snake River Basalt Plains	This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native plants. Soil moisture regime is xeric and soil temperature regime is frigid.	493,665
<i>13.3</i>	Eastern Idaho Plateaus - Wet Valleys	This unit is characterized by wetlands, lakes, canals, cold winters, and a short growing season. Nearly nearly, poorly-drained floodplains and low terraces are widespread and support sedges, rushes, cattails, marsh grasses, annual bluegrass, and clover. Well-drained alluvial fans and foothills covered in sagebrush grassland act as a transition to the surrounding and much more rugged Partly Forested Mountains, Semiarid Bear Hills, and Semiarid Foothills CRA Units. Mollisols occur and have a frigid temperature regime. Land use is irrigated hayland, meadow pastureland, and rangeland. Land use and drainage conditions are all different from neighboring units.	124,894

<i>MLRA</i>	<i>MLRA Name</i>	<i>MLRA Description</i>	<i>Idaho Acres</i>
<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
<i>13.4</i>	Eastern Idaho Plateaus - Sagebrush Steppe- and Woodland-Covered Hills and Low Mountains	This unit occupies an elevational band between the higher mountains and the lower inter-montane valleys. Potential natural vegetation is mostly sagebrush steppe. Cool season grasses are more common than in the adjacent, drier units. Juniper woodland vegetative sites occur on shallow rocky soils. Land use is primarily	260,330
<i>13.5</i>	Eastern Idaho Plateaus - High Elevation Forests and Shrublands	This unit is mountainous and occupies the elevational band above Sagebrush Steppe Valleys and Woodland-Covered Hills and Low Mountains CRA units. It is characterized by a mix of conifers, mountain brush, and sagebrush grassland. North-facing slopes and many flatter areas support open stands of Douglas-fir, aspen and lodgepole pine. Winters are colder and the mean annual precipitation is higher than in lower elevational units.	520,670
<i>13.6</i>	Eastern Idaho Plateaus - Sagebrush Steppe Valleys	This valley unit is flanked by hills and mountains. It is dominated by sagebrush grassland and lacks woodlands, open conifer forest, and the saltbush-greasewood vegetation. Perennial bunchgrasses are more abundant than in the Sagebrush Basins and Slopes in Utah. Valleys mostly drain to the Snake River and fish assemblages are unlike those of the internally-drained basins to the south (MLRA 28A). Grazing is the dominant land use but non-irrigated wheat and barley farming is much more common than in MLRA 28A. This unit is less suitable for cropland and has less available water than many parts of the Snake River Plain (MLRA 11).	1,016,615

25 Owyhee High Plateaus

Land use: About three-fourths of this area is federally owned. Most of the remainder is in farms and ranches. Livestock production on rangelands is the main agricultural activity. Tracts in valleys, making up 2 or 3 percent of the total area, are irrigated and used for producing grain and forage for livestock. Small acreages in Idaho are dry-farmed to wheat. Open forests on high mountain slopes are grazed by livestock and wildlife.

Elevation and topography: Elevation ranges from 1,400 to 2,300 m on rolling plateaus and in gently sloping basins, but on some steep mountains it is more than 3,000 m. Steep north-southtrending mountain ranges are separated by broad basins filled with alluvium.

Climate: Average annual precipitation—200 to 400 mm in most of the area, but as much as 760 mm on mountain slopes. Precipitation is evenly distributed throughout the year, but it is low from midsummer to early in autumn. Average annual temperature—6 to 8 C. Average freeze-free period—90 to 120 days, decreasing with elevation; less than 60 days on high mountains.

Water: The supply of water from precipitation and streamflow is small and unreliable, except along the Owyhee, Bruneau, and Humboldt Rivers. Streamflow depends largely on accumulated snow on the higher mountains. Except in alluvial deposits along large streams, ground-water supplies are small and little used. Precipitation is adequate for dry farming on a few acreages of deep soils in Idaho.

Soils: Most of the soils are Xerolls. They are deep to shallow, medium textured to fine textured soils. They have a mesic, frigid, or cryic temperature regime, depending mostly on elevation. Argixerolls (Gem and Gabica series) and Haploxerolls (Bakeoven and Licksillet series) are on the plateaus. Durixerolls (Donna and Stampede series) are in valleys at an elevation above 1,700 m. Haplargids (Nannyton series), Camborthids (Orovada series), and Durargids (Cherry Springs series) are on alluvial fans and terraces in valleys at an elevation below 1,700 m. Poorly drained Haplaquolls (Humboldt series) are on flood plains of the few major streams. Argixerolls (Kanlee, Chen, and Ramires series) and Cryoborolls (Harmehl and Mosquet series) are on mountains.

Potential natural vegetation: This area supports shrub-grass vegetation characterized by big sage brush or low sagebrush and by bluebunch wheat grass, western wheatgrass, or Idaho fescue. Other important plants are Sandberg bluegrass, foxtail wheatgrass, penstemon, phlox, milkvetch, lupine, aster, and rabbitbrush. On the high plateaus are juniper and curleaf mountainmahogany and an understory predominantly of snowberry and ceanothus. Conifers, aspen, and very large mountainmahogany are in the Ruby Range and Jarbridge Mountains. The conifers include whitebark pine, limber pine, Engelmann spruce, subalpine fir, and bristlecone pine.

25.2	Owyhee High Plateau - Dissected High Lava Plateau	This unit has alluvial fans, rolling plains, and shear-walled canyons that are cut into extrusive rocks. Sagebrush grassland is common and scattered woodland grows on rocky uplands. This region has more cool season grasses than the valleys to the south and lacks saltbush–greasewood. Frigid and mesic Aridisols and Mollisols occur. Grazing is the primary land use. Cropland is less common than in the Snake River Plain. High water quality and native fish assemblages occur in isolated canyons.	3,211,124
25.3	Owyhee High Plateau - Owyhee Uplands and Canyons	The Owyhee Uplands and Canyons ecoregion contains deep, precipitous river canyons, barren lava fields, badlands, and tuffaceous outcrops that are riddled by caves. Sagebrush grassland occurs.	848,742
25.4	Owyhee High Plateau - High Desert Wetlands	The High Desert Wetlands ecoregion is critical habitat for nesting and migratory birds. Sedges, meadow barley, creeping wildrye, and Nevada bluegrass are found in wetter areas. Water levels in its lakes and wetlands fluctuate seasonally and annually.	66,596
25.6	Owyhee High Plateau - Semiarid Uplands	The disjunct Semiarid Uplands ecoregion includes mid-elevation zones in the Owyhee and Jarbridge mountains and hills, volcanic cones, buttes, and rocky outcrops that rise out of neighboring, drier lava plains. Mountain sagebrush, western juniper, mountain brush, and grasses grow in the ecoregion. In the Jarbridge Mountains, juniper woodland can be of limited extent. Elsewhere, density and extent of juniper woodland varies with long term climate changes, grazing pressure, and fire suppression.	378,220

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<i>25.7</i>	Owyhee High Plateau - Semiarid Hills and Low Mountains	This unit occupies an elevational band between the higher mountains and the lower inter-montane valleys. Potential natural vegetation is mostly sagebrush steppe. Cool season grasses are more common than in the adjacent, drier regions. Juniper woodland grows on rock outcrops. Land use is primarily livestock grazing.	554,309
<i>25.9</i>	Owyhee High Plateau - High Elevation Forests and Shrublands	The High Elevation Forests and Shrublands ecoregion is mountainous and occupies the elevational band above Sagebrush Steppe- and Woodland-Covered Hills and Low Mountains region. It is characterized by a mix of conifers, mountain brush, and sagebrush grassland. North-facing slopes and many flatter areas support open stands of Douglas-fir, aspen and lodgepole pine. Winters are colder and mean annual precipitation is greater than in lower regions.	82,571
<i>25.10</i>	Owyhee High Plateau - Sagebrush Steppe Valleys	The unit is in valleys is flanked by hills and mountains. It is dominated by sagebrush grassland. Grazing is the dominant land use but non-irrigated wheat and barley farming is much more common than in the semiarid Central Basin and Range region. The Sagebrush Steppe Valleys region is less suitable for cropland agriculture and has less available water than many parts of the Snake River Plain.	120,813
<i>25.11</i>	Owyhee High Plateau - Partly Forested Mountains	The Partly Forested Mountains ecoregion occupies the elevational belt above the Semiarid Uplands. Elevations exceed 6,500 feet. Annual precipitation is sufficient to support Douglas-fir, ponderosa pine, mountain big sagebrush, and mountain brush.	24,134

28A Great Salt Lake Area

Land use: More than 75 percent of this area is federally owned, large tracts of which are used for training and testing purposes by the Armed Forces and the Nuclear Regulatory Commission. A large area west and southwest of Great Salt Lake is a salty playa. The remainder is in farms and ranches. Livestock production on range is the principal agricultural activity in the west. The production of desert shrubs and grasses is very low. In most of the area, the extent of the livestock industry is determined largely by the amount of hay, pasture, and grain that can be produced under irrigation from the small local water supplies. About 5 percent of the area is irrigated cropland used for growing alfalfa, grain, sugar beets, vegetables, and fruits. About 5 percent is used for dryland wheat. Concerns of management include efficient use of range vegetation and limited water supplies, control of erosion in critical areas, and efficient use of irrigation water.

Elevation and topography: Elevation ranges from 1,200 to 2,000 m in the basins and from 2,000 to 3,400 m in the mountains. Nearly level basins bordered by long, gently sloping alluvial fans are between widely separated north-south-trending, steep mountain ranges.

Climate: Average annual precipitation—125 to 500 mm. The driest period is from midsummer to early autumn. Average annual temperature—7 to 13 C. Average freeze-free period—60 to 160 days, decreasing with elevation.

Water: Water is scarce. Both surface water and ground water are used for irrigation. For the most part, streams are small and intermittent and depend on sources in the higher mountains. Use of deep wells is limited by the high cost. Shallow wells are unreliable in flow, and the water commonly contains large amounts of salt.

Soils: The dominant soils in valleys are Orthents, Fluvents, Aquepts, Aquolls, Orthids, and Argids, which have a mesic temperature regime. The dominant soils on mountain slopes are Xerolls, Ustalfs, and Xeralfs, which have a frigid or cryic temperature regime. Mineralogy is mixed, montmorillonitic, or carbonatic. The soils formed in mixed parent materials, mostly lacustrine sediments. The well drained, deep Torriorthents (Heist, Pomat, and Yuba series), Torrifluvents (Quaker, Redfield, and Sigurd series), and Torripsamments (Yenrab series) are on alluvial fans, flood plains, and other recent surfaces. Haplaquolls (Provo series), Fluvaquepts (Poganeab series), Salorthids (Cache and Saltair series), Natraquolls (Airport series), Natrustalfs (Leland, Harrisville, and Jordan series) and Calciquolls (Chipman, Logan, and Warm Springs series) are on wet flood plains and basin surfaces. Deep Haplargids (Decca, Hansel, and Hoye series), Natrargids (Mellor, Antelope Springs, and Uvada series), Calciorthids (Hiko Peak, Escalante, and Sanpete series), and Paleorthids (Neola and Denmark series) are on older valley surfaces. Haploxerolls (Kearns, Kidman, and Lakewin series), Palexerolls (Pavant, May Day, and Paice series), Calcixerolls (Pleasant Grove, Welby, and Pharo series), and Argixerolls (Bingham, Parleys, and Timpanogos series) are on lake terraces and alluvial fans.

Potential natural vegetation: This area supports desert shrub, shrub-grass, and woodland vegetation. In places where precipitation is less than about 200 mm, the soils support shadscale, winterfat, black sagebrush, and associated grasses such as Indian ricegrass and squirreltail. Greasewood and Nuttall saltbush grow on soils having a high salt or sodium content. In places where precipitation is 200 to 300 mm, the soils support big sagebrush, shadscale, winterfat, and associated grasses such as bluebunch wheatgrass, Indian ricegrass, and bluegrasses. In places where precipitation is more than 300 mm, the soils support Utah juniper, singleleaf pinyon, big sagebrush, bluebunch wheatgrass, bluegrasses, and needleandthread. A large nearly barren area west of Great Salt Lake has a very sparse cover of pickleweed, sapphire eriastrum, seepweed, and greasewood.

<i>28A.1</i>	Great Salt Lake Area - Sagebrush Basins and Slopes	This unit consists of basins, fan piedmonts and low terraces that are often internally drained. Soil temperature regimes are mostly mesic, and soil moisture regimes are typically aridic bordering xeric with some xeric areas mainly in the urban and cropland zones along the western slopes and valleys of the Wasatch Mountains. Soils range from shallow to very deep. Lime- and silica-cemented hardpans are common on stable landscapes. Typical vegetation includes Wyoming big sagebrush, black sagebrush, winterfat, Indian ricegrass, with singleleaf pinyon and Utah juniper in some areas.	143,626
<i>28A.2</i>	Great Salt Lake Area - Woodland- and Shrub-Covered Low Mountains	The Woodland- and Shrub-Covered Low Mountains ecoregion is higher, wetter, rockier, and more rugged than nearby grass- and shrub-covered ecoregions. Shallow soils support mountain big sagebrush, mountain brush, Utah juniper, and grasses.	14,977

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284.5	Great Salt Lake Area - Northern Agricultural Valleys	This unit is on gently sloping hills and terraces and some valley basins. Mountain-fed perennial streams and canals supply water to pastureland, towns, and cropland growing hay and small grains. Soils are in a semiarid climate and are usually Xerals or Xerolls with a mesic temperature regime. Precipitation ranges from 9 to 16	277,081
284.8	Great Salt Lake Area - Sagebrush Steppe Valleys	The unit consists of valleys flanked by hills and mountains. It is dominated by sagebrush grassland. Grazing is the dominant land use but non-irrigated wheat and barley farming is much more common than in the semiarid Central Basin and Range region. The Sagebrush Steppe Valleys region is less suitable for cropland agriculture and has less available water than many parts of the Snake River Plain.	27,745

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<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
43A	Northern Rocky Mountains	<p>Land Use: Much of this area is federally owned and administered by the Forest Service, U.S. Department of Agriculture. Much of the privately owned land is controlled by large commercial timber companies. The forested areas are used for wildlife habitat, recreation, watershed, livestock grazing and timber production. Meadows provide summer grazing for livestock and big game animals. This area is in Idaho, Montana, and Washington. It makes up about 29,370 square miles (76,085 square kilometers).</p> <p>Physiography: This area lies within the Okanogan Highlands, Flathead Valley, Northern Rockies, and Bitterroot Mountains sections in the Northern Rocky Mountain-Steppe-Coniferous Forest-Alpine Meadow Province. The area is characterized by glaciated mountains, thrust and block faulted mountains, hills, and small valleys. Elevation is about 1,800 to 10,100 feet (549 to 3,078 meters). The Columbia River drains this MLRA.</p> <p>Geology: This area is underlain primarily by stacked slabs of layered, sedimentary bedrock. These formations range in age from the Precambrian to the Cretaceous. The rocks consist of shale, sandstone, siltstone, limestone, argillite, siltite, quartzite, gneiss, schist, dolomite, basalt, and granite. The formations have been faulted and stacked into a series of imbricate slabs by regional tectonic activity. Pleistocene glaciers carved a rugged landscape, with sculpted hills and narrow valleys filled with till and outwash. Groundwater occurs primarily in alluvium and glacial outwash in intermountain valleys, and in some fractured zones with the bedrock.</p> <p>Climate: The average annual precipitation is 16 to 75 inches (406 to 1905 millimeters). Rainfall and snowfall occurrence varies widely throughout the MLRA. The average annual temperature is 34 to 45 degrees F. (1 to 7 degrees C.). The average frost-free period is 30 to 125 days.</p> <p>Soils: Many of the soils are ash influenced by Mt. Mazama ash deposits. The soils in the area have frigid and cryic soil temperature regimes, ustic, xeric, and udic soil moisture regimes, and dominantly mixed mineralogy. They are shallow to very deep, very poorly to well drained and represent most textural classes.</p> <p>Biological Resources: This area is in the northern part of the northern Rocky Mountains. Grand fir, Douglas-fir, western red cedar, western hemlock, western larch, lodgepole pine, subalpine fir, ponderosa pine, whitebark pine, and western white pine are the dominant overstory species depending on precipitation, temperature, elevation and landform aspect. Understory vegetation is quite variable, also depending on climatic and landform factors. Some of the major wildlife species in this area are white-tail deer, mule deer, elk, moose, black bear, grizzly</p>	
<i>43A.1</i>	Northern Rocky Mountains--Grassy Potlatch Ridges	The Grassy Potlatch Ridges ecoregion is underlain by volcanics and mantled by loess and volcanic ash. Idaho fescue, bluebunch wheatgrass, bluegrass, snowberry, and, on cooler, moister sites, scattered ponderosa pine occur and contrast with the forests of the Northern Idaho Hills and the forests and savannas of the Lower Clearwater Canyons. Today, small grain farming, hay operations, and livestock grazing are extensive.	288,829
<i>43A.2</i>	Northern Rocky Mountains--Clearwater Mountains and Breaks	The Clearwater Mountains and Breaks ecoregion is exposed to substantial maritime influence, mantled by thick volcanic ash, and underlain by granitics. Its moist coniferous forests lack western hemlock and are transitional between those of the Idaho Panhandle and the drier forests of the southern Idaho Batholith.	903,932
<i>43A.3</i>	Northern Rocky Mountains--Lower Clearwater Canyons	The deep, narrow Lower Clearwater Canyons are lower, drier, warmer, and have been more developed than the Lochsa-Selway-Clearwater Canyons. Savanna, Douglas-fir-ponderosa pine forest, and, in riparian areas, western redcedar-western white pine-grand fir forest occur. Forests are more widespread on canyon bottoms than on	379,801
<i>43A.4</i>	Northern Rocky Mountains--Weippe Prairie	The Weippe Prairie ecoregion is a gently sloping basalt plateau that is mantled by loess and volcanic ash. Its mixed coniferous forest contains ponderosa pine, Douglas-fir, grand fir, western redcedar, and western larch. Hay farming, grazing, and logging are common.	172,245

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<i>43A.5</i>	Northern Rocky Mountains--Coeur d'Alene Metasedimentary Zone	The Coeur d'Alene Metasedimentary Zone is forested and underlain by fractured quartzite and argillaceous rock. Douglas-fir, grand fir, western redcedar, western hemlock, and, at higher elevations, mountain hemlock, subalpine fir, Engelmann spruce, and whitebark pine occur. Smelter emissions have denuded some slopes. Acid drainage from mine tailings have left some streams nearly devoid of aquatic life. Massive restoration efforts are	1,155,318
<i>43A.6</i>	Northern Rocky Mountains--St. Joe Schist-Gneiss Zone	The St. Joe Schist-Gneiss Zone is mountainous, mantled by volcanic ash, and prone to landslides. High gradient streams dissect the region and receive episodic sedimentation from slides. Streams were used to transport logs to mills; log drives greatly altered aquatic ecosystems and stream morphology. Pacific influence is greater than to the south. Potential natural vegetation is mapped as cedar-hemlock-pine but hemlock is absent in the south. Near treeline, mountain hemlock, subalpine fir, Engelmann spruce, and whitebark pine occur.	1,930,336
<i>43A.7</i>	Northern Rocky Mountains--Purcell-Cabinet-North Bitterroot Mountains	The Purcell-Cabinet-North Bitterroot Mountains ecoregion is mantled by volcanic ash and glacial deposits and is underlain by quartzite and argillaceous rocks. Continental ice shaped its terrain but did not extend further south. Potential for natural and management-induced slope instability exists where water tables are perched in compacted tills and glacio-fluvial deposits. However, in general, slopes yield less sediment to streams after disturbance than in nearby granitic and schistic areas. Cedar-hemlock-pine forest and, at higher elevations, western spruce-fir forest occur. Birch and aspen grow on floodplains and are seral species on moist, low to mid-	484,124
<i>43A.8</i>	Northern Rocky Mountains--Northern Idaho Hills and Low Relief Mountains	The Northern Idaho Hills and Low Relief Mountains ecoregion is mantled by volcanic ash and loess and has rich, forest-type soils that are unlike the grassland-type soils of the Columbia Plateau. Grand fir, western redcedar, Douglas fir, and ponderosa pine are common. Its productive forests are widely logged; logging is easier and cheaper than in more rugged terrain.	762,212
<i>43A.9</i>	Northern Rocky Mountains--Western Selkirk Maritime Forest	The mountainous Western Selkirk Maritime Forest ecoregion is dominated by Douglas-fir dominates or co-dominates most overstories. Maritime species such as grand fir, western redcedar, and western hemlock are more common than in the rain shadow of the North Cascades in Washington's Okanogan Highland. Boreal influence is absent in contrast to the northern Selkirk Mountains.	73,705
<i>43A.10</i>	Northern Rocky Mountains--Selkirk Mountains	The dissected, partly glaciated Selkirk Mountains ecoregion is rugged, covered in mixed coniferous forest, and mantled by volcanic ash that increases forest productivity. Both Pacific species (grand fir, western redcedar, and western hemlock) and Rocky Mountain species (western larch, western white pine, and lodgepole pine) are common. A combination of weather patterns, high relief, and very narrow valleys result in more summer precipitation, fog, and relative humidity at low and mid-elevations than elsewhere in northern Idaho and northeastern Washington. Boreal influence is stronger, subalpine fir-spruce forests are lower, and whitebark pine forests are more extensive than in the rest of the Northern Rockies. Boreal influence increases toward the north and some north-facing valleys have extensive peatlands. This region includes the largest contiguous old growth cedar-hemlock forest in the interior U.S., extensive peatlands, and important lynx and grizzly bear habitat. It supports the only woodland caribou herd in the conterminous U.S.. Erosion hazards can be high where road beds intercept perched water tables above subsurface compacted tills. Avalanche chutes are common.	583,215

43B Central Rocky Mountains

Land use: A large majority of this area is federally owned and administered by the U.S. Department of Agriculture, Forest Service. This area is in central and southeastern Idaho, western and southwestern Montana and northwestern Wyoming. Rugged mountains are the dominant feature of this area. Nearly all of this area is federally owned and administered by the U.S. Department of Agriculture, Forest Service. Large commercial timber companies own most of the private land in this area. All of the forested areas provide wildlife habitat and are used for recreation, watershed, and timber production. Meadows on the upper mountain slopes and crests above timberline provide summer grazing for livestock and big game animals.

Physiography: Elevation is mainly 1,000 feet (300 meters) to 9,850 feet (3,000 meters) with some mountain peaks reaching nearly 14,000 feet (4300 meters) in Montana and Wyoming. High mountains with steep slopes and sharp crests are cut by narrow valleys, most of which have steep gradients. Lakes are common, especially in glaciated areas.

Geology: The topography is dominantly uplift and faulted mountains and high plateaus with a variety of bedrock. Higher elevations are typically shaped by mountain glaciation and exhibit typical cirqueland features. Bedrock ranges from igneous, metamorphic, limestone and sandstone in the Belt Mountains of Montana to granites in Idaho to quartzite and argillite in the Beaverhead Mountains to sedimentary in the Big Horn Mountains of Wyoming.

Climate: The average annual precipitation ranges from 15 to 60 inches (375 to 1525 mm), increasing with elevation. Most of the precipitation comes as snow in the fall, winter and spring. The average annual temperature ranges from 36 to 45 degrees F (2 to 7 degrees C). Average frost-free period is 30 to 120 days. Frost occurs every month of the year on high mountains; some peaks have continuous cover of snow and ice.

Water: Moderate precipitation and many perennial streams and lakes provide ample water. Streams and reservoirs supply water to adjoining MLRA's for irrigation and other uses. Springs and shallow wells in the valleys provide water for domestic use and for livestock. Groundwater supplies are small and mostly untapped in the steep mountains.

Soils: Soils on mountain sideslopes are dominantly cryepts, ustepts, udepts and xerepts. Stony Cryorthents and areas of rock outcrop are on ridges and peaks above timberline. Ustalfs and cryalfs are on some mountain footslopes and plateaus. Most soils are sketetal and are medium to moderately coarse textured.

Biological Resources: This area supports coniferous forests. Forests of Ponderosa pine, lodgepole pine, Douglas fir, subalpine fir and spruce are common. Alpine grasses, forbs, and shrubs and scattered stands of subalpine fir, spruce and whitebark pine grow at high elevations. Some of the major wildlife species in this area include elk, mule deer, whitetail deer, moose, grizzly bear, black bear, mountain lion, bobcat, lynx, big horn sheep, mountain goats, coyotes, gray wolf, mountain grouse and numerous songbirds.

<i>MLRA</i>	<i>MLRA Name</i>	<i>MLRA Description</i>	<i>Idaho Acres</i>
<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
<i>43B.1</i>	Central Rocky Mountains--High Mountains	This area is in western and southwestern Montana and northwestern Wyoming. Rugged mountains are the dominant feature of this area. Nearly all of this area is federally owned and administered. High mountains with steep slopes and sharp crests are cut by narrow valleys, most of which have steep gradients. Average annual precipitation is mainly 400 to 1525 mm, increasing with elevation. The average annual temperature ranges from 2 to 7 degrees C. Average frost free period is 30 to 60 days. Frost occurs every month of the year on high mountains. Most soils are skeletal and are medium to moderately coarse textured. This area supports coniferous forests. It also includes areas above treeline that have tundra and alpine grasslands. There are also lower mountain passes that are drier and have shrubs and grasses used for grazing.	1,717,270
<i>43B.2</i>	Central Rocky Mountains--Lochsa-Selway-Clearwater Canyons	The deeply dissected Lochsa-Selway-Clearwater Canyons ecoregion contains cold, fast-flowing rivers. Local relief is greater than in the nearby mountains. Canyons become warmer and drier with increasing depth. It is dominated by Douglas-fir, grand fir, western redcedar, western larch, and western white pine. Ponderosa pine grows on lower, drier sites. Extensive wilderness occurs and includes the Selway River watershed. Elsewhere,	738,298
<i>43B.3</i>	Central Rocky Mountains--Dry, Partly Wooded Mountains	The Dry, Partly Wooded Mountains ecoregion is largely underlain by sedimentary and extrusive rocks; granitics are less common than in other parts of the Idaho Batholith. This region is in the rain shadow of high mountains. A mosaic of shrubland, open Douglas-fir forest, and aspen occurs. Mining has affected water quality. Rapid residential and commercial growth is occurring near Ketchum.	1,078,904
<i>43B.4</i>	Central Rocky Mountains--Lochsa Uplands	The mountainous Lochsa Uplands ecoregion is dissected. It is mostly underlain by granitic rocks and mantled by volcanic ash deposits that increase the fertility and water retention of upland soils. Grand fir, Douglas-fir, and western larch are common, Engelmann spruce and subalpine fir grow at high elevations, and redcedar occurs on north-facing slopes and in canyons. Maritime influence is less than to the north but greater than to the south. Logging and road building cause land slides and stream sedimentation.	321,612
<i>43B.5</i>	Central Rocky Mountains--High Glacial Drift-Filled Valleys	The High Glacial Drift-Filled Valleys ecoregion contains terraces, outwash plains, moraines, wetlands, and hills that are much less rugged and less forested than the Southern Forested Mountains. Originally, sedges and rushes were common on wet soils, bunchgrasses and mountain big sagebrush occurred on drier soils, and lodgepole pine and ponderosa pine grew on valley floors. Winters are cold and snowy. It receives large amounts of spring runoff from mountain snow pack. It is summer pasture for large numbers of livestock; cropland and growing residential and recreational developments also occur. Flood irrigation and grazing have raised sediment and phosphorus levels in streams.	373,874
<i>43B.6</i>	Central Rocky Mountains--South Clearwater Forested Mountains	The South Clearwater Forested Mountains ecoregion receives more maritime influence than ecoregions to the south but less than those to the north. Grand fir is usually the sole maritime tree species in the elevational zone between Douglas-fir and subalpine fir. Logging has caused slope instability (especially in granitic areas) and stream sedimentation. Placer gold mining has also heavily affected rivers.	1,299,994
<i>43B.7</i>	Central Rocky Mountains--Hot Dry Canyons	The Hot Dry Canyons ecoregion is deeply dissected. Local relief can approach 5,000 feet and canyons become warmer and drier with increasing depth. There is little winter snowfall. Ponderosa pine, mountain sagebrush, and grasses are widespread; Douglas-fir also occurs but is less common than in the Lochsa-Selway-Clearwater Canyons. South-facing slopes are drier and less wooded than north-facing slopes. Mining has affected canyon bottoms some of which now serve as transportation corridors.	965,904
<i>43B.8</i>	Central Rocky Mountains--Southern Forested Mountains	The Southern Forested Mountains ecoregion is mantled by droughty soils derived from granitic rocks and is only marginally affected by maritime influence. Open Douglas-fir is common, grand fir and subalpine fir occur at higher elevations, and ponderosa pine grows in canyons. Mountain sagebrush and forest are found in the south. Streams are subject to high sediment loading when soils are disturbed.	6,976,330

<i>MLRA</i>	<i>MLRA Name</i>	<i>MLRA Description</i>	<i>Idaho Acres</i>
<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
<i>43B.9</i>	Central Rocky Mountains--Yellowstone Basin	Nearly all this area is used as wildlife habitat, for recreation, and for timber production. Most of this area is high mountains. AAP is 625 to 1,525 mm. AAT is 2 to 7°C. AFFP is 30 to 60 days. Frost occurs every month of the year on high mountains. It has a coniferous forest-shrubland mosaic. Forests dominated by Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and flatter uplands. Recreation is a very important land use but mining, grazing, and logging also occur.	550,434
<i>43B.10</i>	Central Rocky Mountains--Cold Valleys	The Cold Valleys contain bottomlands, terraces, marshlands, alluvial fans, and foothills that are nestled below the Partly Forested Mountains. Mean annual frost-free season is brief, 40 to 90 days, and shorter than in the Sagebrush Steppe Valleys. Potential natural vegetation is mostly sagebrush steppe. Wet bottomlands support sedges, rushes, and willows. Pastureland, rangeland, and small grain, alfalfa, and potato farming occur. Fields, streams, and marshes are important habitat for both nesting and migratory birds.	199,212
<i>43B.11</i>	Central Rocky Mountains--Partly Forested Mountains	The steep, dry Partly Forested Mountains vary in elevation from about 6,000 to over 9,000 feet. AAP is 500 to 750 mm. AAT is 2 to 7°C. AFFP is 30 to 60 days. Frost occurs every month of the year on high mountains. Soils have a cryic temperature regime and are rocky and shallow. They support open-canopied forests, shrublands, and grasslands; Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and gently sloping uplands while mountain big sagebrush and mountain brush dominate south-facing slopes. Its vegetation is distinct from surrounding ecoregions. It is used as summer range and for timber production.	1,238,391
<i>43B.12</i>	Central Rocky Mountains--Semiarid Bear Hills	The Semiarid Bear Hills ecoregion is located in the rain shadow of high mountains. Its terrain is hilly and is distinct from the nearly flat Wet Valleys and the much more rugged Wasatch and Uinta Mountains. Bunchgrasses and mountain big sagebrush occur and contrast with the forests of nearby, mountainous ecoregions. Land use is primarily grazing.	201,655

43C Blue and Seven Devils Mountains

Land use: This area is used primarily for timber production, livestock grazing, wildlife habitat, recreation, and watershed. A large percentage of this area is federally owned and administered by the U.S. Department of Agriculture, Forest Service. Its complex geology and its vegetational banding characterize this area. The geology of the area is a complex mixture of sedimentary, metasedimentary, and volcanic both intrusive and extrusive rock types. The area has been subsequently covered with a layer of volcanic ash. The vegetational banding of the area is not only with elevation but also is banded from southwest to northeast. The vegetation ranges from Ponderosa pine and western juniper with sagebrush and bunch grasses at the lower elevations in the southwestern portion of the area to the maritime influenced grand fir plant communities in the northeastern part of the area. Subalpine fir and alpine meadows with scattered whitebark pine occur at higher elevations.

Physiography: Thrust and block fault mountains and deep canyons characterize this area. The highest peaks have been sculpted by alpine glaciation. Elevation ranges from about 2500 feet at several locations in the area to over 9800 feet at the top of Mount Sacajawea and the Matterhorn. The central and eastern part of the area has the steepest mountain slopes whereas the western and northern part of the area has more gentle rolling mountains.

Geology: This area consists of a complex collection of bedrock types that have been faulted and uplifted. include sedimentary, metasedimentary, and volcanics. Ages range from Mesozoic limestones to Cenozoic volcanics. The rocks consist of limestone, serpentine, greenstone (metamorphic lava), schist, granite, andesite and basalt. The Wallowa and Seven Devils mountains are dominantly composed of greenstone (metamorphosed lavas) with some peaks and ridges of limestone. The Wallowa and the northern end of the Elkhorn Mountains have a core of granite. The Strawberry Mountains are dominantly andesite. The northern one-third of the Blue Mountains is Columbia River Basalt. The lower elevations include Columbia River basalt and Clarno and John Day Formations. Pleistocene glaciation has sculpted the higher peaks and filled many of the valleys with glacial till and outwash.

Climate: The average annual precipitation ranges from about 12 inches at the lower elevations to over 70 inches at the higher elevations. Most of the precipitation occurs during the fall, winter, and spring. About half of the precipitation falls as snow. Summers are dry except for occasional thunderstorms especially at higher elevations. The average annual air temperature ranges from 36 to 45 degrees F. (2 to 7 degrees C.) in most of the area but ranges up to 50 degrees F. (10 degrees C.) in some of the deeper canyons. The average frost-free period is about 30 to 90 days but ranges from less than 10 days at the higher elevations where frost may occur on any day of the year to 120 days or more in some of the canyons. Some of the highest peaks have a continuous cover of snow and ice.

Water: Moderate precipitation and many perennial streams and lakes provide ample water. Adequate water flow and water quality is needed year-around for the local fish populations and for the anadromous fish migration and spawning. Streams and reservoirs supply water to adjoining MLRA's for irrigation and other uses. Springs and shallow wells in the valleys provide water for domestic use and for livestock. Groundwater supplies are minimal and mostly untapped in the steep mountains.

Soils: The extent of the soil orders and nonsoil areas in this MLRA is as follows: Mollisols about 40 percent, Andisols about 30 percent, Inceptisols about 15 percent, Entisols about 5 percent, and miscellaneous (nonsoil) areas about 10 percent. The soils have a mesic soil temperature regime at the lower elevations and have frigid and cryic temperature regimes as elevation increases. They have xeric or udic soil moisture regimes. Many of the soils have a component of volcanic ash from Mount Mazama which is now the present day Crater Lake located in southcentral Oregon. The soils are shallow to very deep, very poorly to well drained, and represent most textural classes. The soils at the lower elevations in the drier parts of the area are typically Argixerolls, Palixerolls, and Haploxerolls with smectitic mineralogy and are either fine (Hankins) or clayey-skeletal (Yawkey). The soils at slightly higher elevation or in the more protected areas still retain the volcanic ash influence and are Vitrandic Hapoxerolls (Egyptcreek) or Vitrandic Argixerolls (Klickson). Cryorthents, Cryepts and areas of rock outcrop are on ridges and peaks above timberline. The volcanic plateaus of the northeastern part of the area have Argialbolls (Cowsly). The lower foothills and mountain slopes in the maritime area have Alfic Vitrixerands (Culdesac, Boardtree, and Tolo). The higher cooler maritime area has Xeric Vitricryands (Helter), Alfic Vitricryands (Webbridge) and Typic Vitricryands (Eaglecap). The soils in the wet meadows and bottom areas are Fluvaquentic Haploxerolls (Damore) and Cumulic Cryaquolls (Silvies).

<i>MLRA</i>	<i>MLRA Name</i>	<i>MLRA Description</i>	<i>Idaho Acres</i>
<i>CRA</i>	<i>National CRA Name</i>	<i>Nation CRA Description</i>	
		<p>Biological Resources: This area has a highly diverse biological population. The vegetation distribution is related to the climate, especially the effective precipitation and aspect. At the lower elevations, which are the driest and warmest, the south slopes are typified by either an overstory of western juniper and a sagebrush/bunch grass plant community in the understory. On the north and east aspects at these lower elevations will be ponderosa pine with an understory of either bunch grasses or pinegrass. At slightly higher elevations there is an increase in precipitation and the vegetation is dominated by an overstory of Douglas fir with an understory of either snowberry or ninebark. In the northern and northwestern part of the area there is a maritime influence and in these areas grand fir becomes dominant. At the high elevations, subalpine fir, Engelmann spruce, and whitebark pine are present. Lodgepole pine and western larch are serial species especially in the areas that grand fir is the potential overstory species. The understories in the cooler, more moist areas are typically Clintonia and big huckleberry. Grasses, forbs and sedges dominate the high alpine meadows.</p> <p>Some of the major wildlife species in the area include elk, mule deer, whitetail deer, black bear, mountain lion, bobcat, lynx, big horn sheep, mountain goat, coyote, grouse, and songbirds. Streams provide habitat for several species of trout. Some of the major streams provide valuable spawning grounds for salmon and steelhead.</p>	
<i>43C.3</i>	Blue and Seven Devils Mountains - High Elevation Blue and Seven Devils Mountain Forests	This unit is characterized by forested plateaus having cryic temperatures. These areas characteristically have deep snowpack, and a very short growing season. Moisture regime is udic. Vegetation is dominated by subalpine fir, Engelmann spruce, and western larch. Streams follow fault lines, have steep gradients and have eroded deep canyons. Land uses include grazing, logging, recreation, and wildlife habitat.	235,699
<i>43C.6</i>	Blue and Seven Devils Mountains - Melange	This unit is characterized by a melange of bedrock types including limestone, mudstone, greenstone and schists. Soil temperature regimes are frigid and cryic and moisture regimes are xeric and udic. Forests dominated by Douglas-fir, ponderosa pine, and lodgepole pine, and shrublands and grasslands also occur. Lithology affects soil, vegetation, and the quantity and quality of surficial water. Grazing is common but logging is limited by the difficulty of reforesting droughty soils.	171,323
<i>43C.8</i>	Blue and Seven Devils Mountains - Blue and Seven Devils Mountains Dissected Uplands	This unit is characterized by deeply dissected forested mountain slopes. Temperature regime is frigid and the moisture regime is xeric. Vegetation is grand fir, Douglas-fir and ponderosa pine. The soils on the north facing slopes retain an ash mantle but south facing slopes lack this mantle due to erosion. Below about 4,500 feet elevation, the Douglas fir forest changes abruptly to the grassland of the Warm Canyons and Dissected Uplands CRA.	342,553

44 Northern Rocky Mountain Valleys

Land use: Nearly all this area is in farms and ranches. As much as one-third of the land in some valleys is irrigated. Potatoes, sugar beets, and peas are important cash crops, but a larger acreage is in hay, grain, and pasture for livestock feed. In places where precipitation is adequate, the land is dry-farmed to wheat. One-third to one-half of the area is range of native grasses and shrubs. Beef cattle and sheep are the principal livestock, but dairying is an important enterprise near the larger towns. Much of the area in northern Idaho is forested, and elsewhere many steep and stony soils are in woodland. These forests are of value to the lumber industry and are also grazed.

Elevation and topography: Elevation ranges from 600 to as much as 2,100 m; the highest is in south western Montana. The deep valleys bordered by mountains are mostly north-south trending. In the valleys, nearly level, broad flood plains are bordered by gently sloping to strongly sloping terraces and fans. In many places the valleys have been modified somewhat by glaciation, and in the north, lacustrine sediments cover much of the valley floors.

Climate: Average annual precipitation—300 to 400 mm in most of the area, less than 250 mm in Montana, and 850 mm in northern Idaho. Precipitation is fairly evenly distributed throughout fall, winter, and spring but is low in summer. Most of the precipitation in winter is snow. Average annual temperature—4 to 8 C. Average freeze-free period—100 to 120 days in much of the area, but it is 80 days or less at the highest elevations and 130 days or more at the lowest.

Water: Perennial streams flowing into the area from surrounding mountains are the principal source of water. The amount usually is adequate but depends on the snow accumulation in the mountains. Ground water is abundant in the deeper unconsolidated fill materials, and some is used for irrigation. Precipitation is adequate for some dryfarming at higher elevations and throughout the area in northern Idaho.

Soils: The dominant soils are mostly Orthids, Borolls, and Argids. They are medium textured to fine textured and mainly well drained and have a frigid or, at higher elevations, a cryic temperature regime. At the lower elevations, deep and moderately deep Calciorthids (Crago and Musselshell series), Haploborolls (Bitterroot and Grantsdale series), and Argiborolls (Martinsdale series) are on alluvial fans and terraces. Natrargids (Round Butte series) are on lacustrine fans and terraces, and Fluvents are on alluvial flood plains and low terraces. At the higher elevations, mostly deep, well drained to somewhat poorly drained Cryoborolls (Amsterdam, Bozeman, Bridger, and Gallatin series) are on alluvial terraces and fans, and Aquents and Aquepts are adjacent to drainageways and in undrained depressions.

Potential natural vegetation: This area supports conifer forests and grassland vegetation. Bluebunch wheatgrass, rough fescue, Idaho fescue, and bearded wheatgrass are the major species of the grassland in the valleys and foothills. Douglas-fir, ponderosa pine, grand fir, western redcedar, western hemlock, pinegrass, common snowberry, mallow ninebark, and white spirea are the major forest species.

<i>44.1</i>	Northern Rocky Mountain Valleys-- Kootenai Valley	The broad, glacial-scoured Kootenai Valley is drier than the valleys of the Inland Maritime Foothills and Valleys because it lies in the rain shadow of the Selkirk Range. Tree species diversity is high; representatives of both moist and dry gradients occur. The Kootenai River winds across a wide flood plain that has been reclaimed with levees and intensively farmed. Logging is common in the east near the mountains.	134,602
<i>44.2</i>	Northern Rocky Mountain Valleys-- Spokane Valley Outwash Plains	The Spokane Valley Outwash Plains ecoregion is gently rolling and includes the southern end of the Purcell Trench and the Spokane Valley. It once served as the main outlet for the Pleistocene Missoula Floods. In the northern valleys, coarse, gravelly soils developed from glacial outwash. In the southern Spokane Valley, more arable soils occur and developed from glacial lake sediment. Dry, open ponderosa pine and Douglas-fir	225,453
<i>44.3</i>	Northern Rocky Mountain Valleys-- Inland Maritime Foothills and Valleys	The Inland Maritime Foothills and Valleys ecoregion includes the wide, glaciated Pend Oreille and Priest valleys. Soils have more volcanic ash and water holding capacity than the drier Columbia, Kettle, and Sanpoil valleys of northeast Washington. Forests contain western hemlock, western redcedar, grand fir, Douglas fir, ponderosa pine, lodgepole pine, and an unusually large proportion of western larch. Birch and aspen grow on floodplains and are also common seral species on moist, low to mid-elevation uplands.	676,717

47 Wasatch and Uinta Mountains

Land use: Less than one-third of this area is in farms and ranches. Most of the remainder is federally owned. There are several national parks and monuments and primitive areas. Some land is set aside as Indian reservations. Grassland and woodland are grazed in summer. Some dense forests are on moist sites. Recreation and mining are important land uses. A few valleys are irrigated; forage for livestock is the main crop, but a few other crops are grown.

Elevation and topography: Elevation generally ranges from 1,500 to 2,700 m, but on some peaks it is 4,100 m. These strongly sloping to precipitous mountains have narrow crests and valleys. Some high plateaus have gently sloping tops and steep sides. The mountains are dissected by many streams, and lakes are common on mountain crests that have been glaciated.

Climate: Average annual precipitation—Mainly 375 to 750 mm but as much as 1,025 mm on some mountain peaks. Precipitation is evenly distributed throughout the year. Much of the precipitation is snow. Average annual temperature—2 to 8 C, decreasing with elevation. Average freeze-free period—Mainly 60 to 120 days, but there is no frost-free period on some high mountain peaks.

Water: Streams, lakes, and ground water supply enough water for the range and forestry enterprises in most of the area. Perennial streams provide irrigation water in the few major valleys.

Soils: Orthents, Fluvents, Aquolls, and Xerolls are common in the valleys. Ochrepts, Xerolls, Borolls, Boralfs, and Xeralfs are on mountain slopes. These soils have a frigid or cryic soil temperature regime and mixed, montmorillonitic, or carbonatic mineralogy. They formed in mixed parent materials of sedimentary and igneous rocks. Deep wet soils in the valley are Haplaquolls (Crooked Creek, Canburn, and Kovich series). Well drained Ustfluvents (Neto, Shupert, and Winetti series), Ustorthents (Podo and Ruko series), Xerorthents (Redcan series), and Calcixerolls (Calita and Lundy series) are in valleys. Palexerolls (Borvant series) are on old alluvial fans and low mountain foot slopes; they have a limecemented hardpan. On mountain slopes are shallow to deep Haploxerolls (Agassiz, Bradshaw, and Foxol series), Haploborolls (Bryean and Datino series), Argixerolls (Henefer, Smarts, and Wallsburg series), Argiborolls (Barfuss and LaPlatta series), and Palexerolls (Harkers, Goring, and Norcan series). In the high mountain areas are deep Paleborolls (Lucky Star, Elzinga, and Flygare series), Paleboralfs (Fitzgerald series), Cryoborolls (Bickmore, Daybell, and Dateman series), Cryoboralfs (Cliff, Duchesne, and Condie series), Cryochrepts (Scout, Lake Janee, and Marsell series), and Cryorthents (Mirrow Lake series).

Potential natural vegetation: This area supports conifer, aspen, grasses, mountain shrub, and sagebrush-grass vegetation. Big sagebrush and bluebunch wheatgrass are dominant sagebrushgrass species. The zone above an elevation of about 4,000 m supports alpine meadow. The conifers are Engelmann spruce, white fir, subalpine fir, Douglas-fir, lodgepole pine, and ponderosa pine. Numerous grasses and forbs grow under the aspen. Bluebunch wheatgrass, bearded wheatgrass, blue wildrye, mountain brome, several bluegrasses, and numerous forbs grow as an understory with Gambel oak, curleaf and birchleaf mountainmahogany, snowberry, serviceberry, and chokecherry.

47.2	Wasatch and Uinta Mountains - High Mountains	This area is in the higher elevations of the Wasatch and Uinta Mountains. Precipitation ranges from 16 to about 30 inches. Elevations are usually more than 6,000 feet and range to more than 10,000 feet. The mountains are covered in a mixture of mountain big sagebrush, mountain brush, and coniferous forests; with alpine vegetation on the highest mountain summits.	158,266
47.3	Wasatch and Uinta Mountains - Semiarid Foothills, Eastern Idaho	The Semiarid Foothills ecoregion ranges in elevation from about 5,500 to 8,200 feet. Widely spaced junipers occur in a matrix dominated by mountain big sagebrush and bluebunch wheatgrass. Overall, the vegetation is distinct from that of the higher, wetter Wasatch Montane Zone. Livestock grazing is common. Some rangeland has been cleared of trees and reseeded to grasses.	250,750