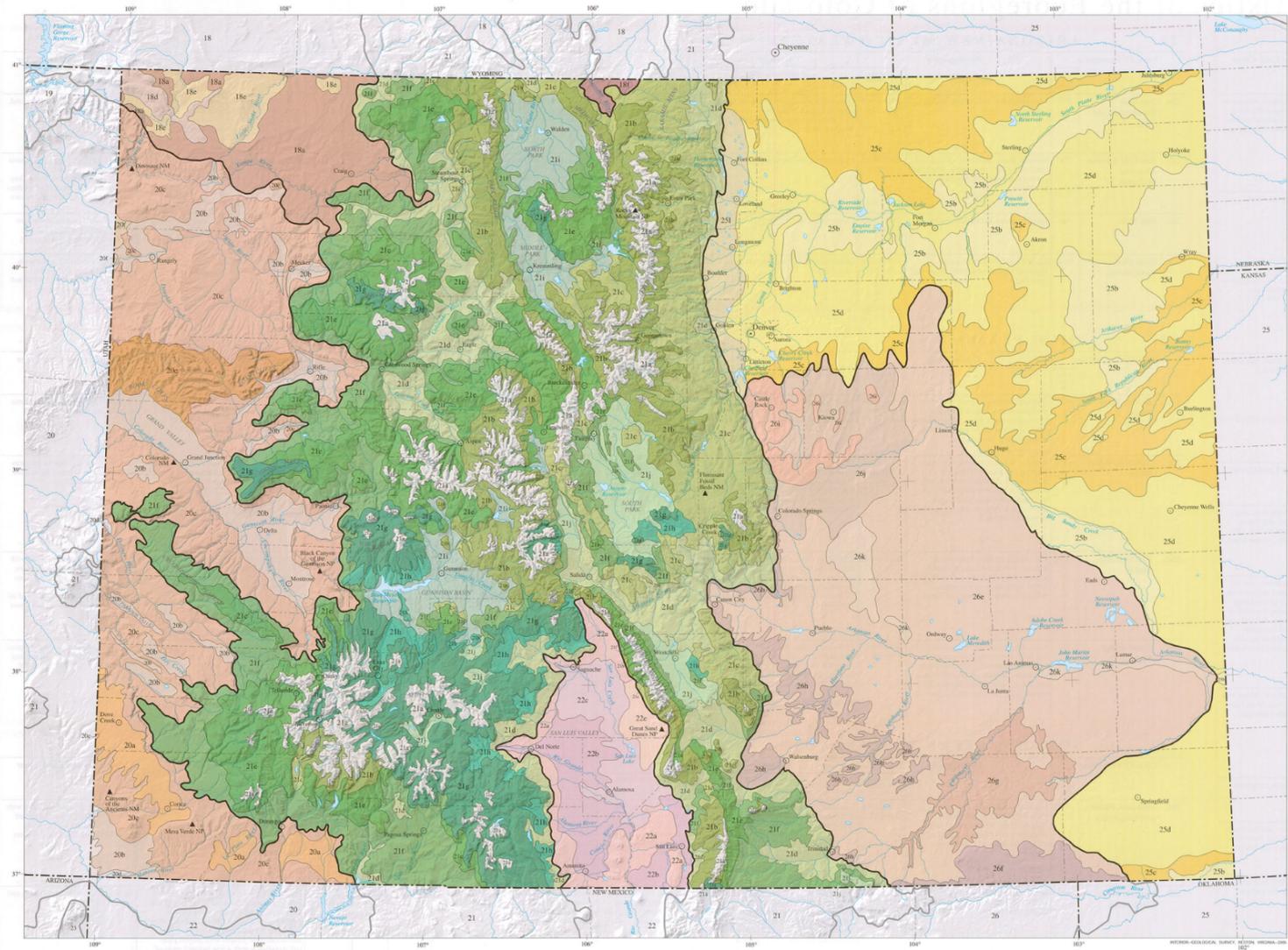


# Ecoregions of Colorado



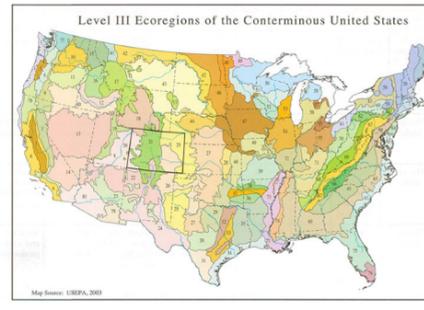
Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. By recognizing the spatial differences in the capacities and potentials of ecosystems, ecoregions stratify the environment by its probable response to disturbance (Byrce and others, 1999). These general-purpose regions are critical for structuring and implementing ecosystem management strategies across federal agencies, state agencies, and nongovernment organizations that are responsible for different types of resources within the same geographical areas (Omernik and others, 2000).

The approach used to compile this map is based on the premise that ecological regions can be identified through the analysis of the spatial patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wilken, 1986; Omernik, 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology.

The relative importance of each characteristic varies from one ecological region to another, regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I is the coarsest level, dividing North America into 15 ecological regions. Level II divides the continent into 52 regions (Commission for Environmental Cooperation Working Group, 1997). At level III, the continental United States contains 104 ecoregions and the conterminous United States has 84 ecoregions (United States Environmental Protection Agency (USEPA), 2003). Level IV is a further subdivision of level III ecoregions. Explanations of the methods used to define the USEPA's ecoregions are given in Omernik (1995), Omernik and others (2000), Griffith and others (1994), and Gallant and others (1989, 1995).

Colorado contains arid canyons, semiarid shrub- and grass-covered plains, alluvial valleys, lava fields and volcanic plateaus, woodland- and shrubland-covered hills,

- |   |  |   |
|---|--|---|
| <b>18 Wyoming Basin</b>                   | <b>21 Southern Rockies</b>               | <b>25 High Plains</b>                     |
| 18a Rolling Sagebrush Steppe              | 21a Alpine Zone                          | 25a Rolling Sand Plains                   |
| 18b Foothill Shrublands and Low Mountains | 21b Crystalline Subalpine Forests        | 25b Moderate Relief Plains                |
| 18c Salt Desert Shrub Basins              | 21c Crystalline Mid-Elevation Forests    | 25c Flat to Rolling Plains                |
| 18e Laramie Basin                         | 21d Foothill Shrublands                  | 25f Rolling Fans                          |
|   | 21e Sedimentary Subalpine Forests        |   |
|   | 21f Sedimentary Mid-Elevation Forests    |   |
|   | 21g Volcanic Subalpine Forests           |   |
|   | 21h Volcanic Mid-Elevation Forests       |   |
|   | 21i Sagebrush Parks                      |   |
|   | 21j Grassland Parks                      |   |
|   |  |   |
|   | <b>22 Arizona/New Mexico Plateau</b>     | <b>26 Western Tablelands</b>              |
|   | 22a San Luis Shrublands and Hills        | 26a Piedmont Plains and Tablelands        |
|   | 22b San Luis Alluvial Flats and Wetlands | 26b Mesa de Maya/Black Mesa               |
|   | 22c Salt Flats                           | 26c Purgatoire Hills and Canyons          |
|   | 22d Sand Dunes and Sand Sheets           | 26d Pinyon-Juniper Woodlands and Savannas |
|   |  | 26e Pin-Oak Woodlands                     |
|   |  | 26f Foothill Grasslands                   |
|   |  | 26g Sand Sheets                           |



**18. Wyoming Basin**  
This ecoregion is a broad intermontane basin, interrupted by high hills and low mountains, and dominated by relatively arid grasslands and shrublands. Nearly surrounded by forest-covered mountains, the region is semiarid to arid. The ecoregion consists of piñon-juniper woodland and the extensive piedmont of piñon-juniper woodland and steppe vegetation. The region contains major natural gas and petroleum producing fields. The Wyoming Basin also has extensive coal deposits along with areas of iron, bauxite, clay, and uranium mining.

**18a Rolling Sagebrush Steppe**  
This is a vast region of rolling plains, alluvial and highlands, and rolling alluvial fans. Ecoregion 18a includes the Foothill Shrublands and Low Mountains (18d) ecoregion. Annual precipitation of 10 to 20 inches varies with elevation and proximity to mountains. The sagebrush steppe natural vegetation includes western wheatgrass, needle-and-thread, blue grama, Sandberg bluegrass, junegrass, rabbitbrush, fringed sage, Wyoming big sagebrush, silver and black sagebrush in lowlands, and mountain big sagebrush in the higher elevations. Land use is mainly rangeland, with some areas cropped along the Yampa River in hay, wheat, barley, or corn. Oil, gas, and coal deposits are scattered throughout the region.

**18b Foothill Shrublands and Low Mountains**  
This ecoregion includes isolated dry mountain ranges and foothill slopes, and in Colorado includes Cold Spring Mountain, Bishop Peak, Diamond Peak, and Lookout Mountain. The topography of this region is more rugged than the Rolling Sagebrush Steppe (18a). Tertiary sedimentary rocks of sandstone and conglomerate are extensive, but shale, siltstone, and limestone also occur. Big sagebrush, rabbitbrush, fringed sage, blue grama, and needle-and-thread are the dominant vegetation. The rolling, high elevation valley of grama and shrubland is used primarily for seasonal livestock grazing. Some hay is produced along the Laramie River.

**18c Salt Desert Shrub Basins**  
This ecoregion includes disjoint playas and isolated sand dunes and salt flats. The region is generally low to mid elevation. The region is generally low to mid elevation. The region is generally low to mid elevation.

**18e Laramie Basin**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**20. Colorado Plateaus**  
Canyons, mesas, plateaus, and mountains of the Colorado Plateaus expose a long geological history of rock formations in Colorado. Rugged tableland topography is typical of the ecoregion. Precipitous slope may change in local relief, often of 1000 to 2000 feet or more. The region contains more piñon-juniper and Gambel oak woodlands than the Wyoming Basin (18) to the north. However, the Colorado Plateaus ecoregion also has large low-lying areas containing sagebrush and grasswood (footprint of higher, drier areas) which are generally not found in the Arizona/New Mexico Plateau (22) to the south where grasslands are more common.

**20a Monticillo-Cortez Uplands and Sagebrush Valleys**  
Parts of the gently sloping Monticillo-Cortez Uplands and Sagebrush Valleys ecoregion are covered by eolian material. Deep, silty soils are typical and retain enough moisture to naturally support Wyoming big sagebrush and associated grasses. These soils may sustain dryland farming, with more irrigated agriculture to the east. Crops include pinto beans, Amaranth, corn, winter wheat, oats, and alfalfa. Shallow or stony soils occur along the rims of benches and inner escarpments, supporting piñon-juniper woodland.

**20b Arid Shale Deserts and Sedimentary Basins**  
This ecoregion consists of nearly level basins and valleys, low rounded hills, and badlands. Rock outcrops occur. It is a semiarid to arid region. The region is generally low to mid elevation. The region is generally low to mid elevation.

**20c Escarpments**  
This ecoregion is characterized by extensive, deep-dissected, cliff-bench complexes that ascend dramatically from Ecoregions 20b or 20c to the forested mountains. The region is generally low to mid elevation. The region is generally low to mid elevation.

**20f Uinta Basin Floor**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**21. Southern Rockies**  
The Southern Rockies are composed of high elevation, steep, rugged mountains. Although coniferous forests cover much of the region, as in most of the mountainous regions in the western United States, vegetation is, as well as soil and land use, follows a pattern of elevational banding. The lowest elevations are generally grass or shrub covered and heavily grazed. Low to middle elevations are also grazed and covered by a variety of vegetation types including Douglas-fir, ponderosa pine, aspen, and pine-grass-covered woodlands. Middle to high elevations are largely covered by coniferous forests and have little grazing activity. The highest elevations have alpine characteristics. The region includes the Colorado Mineral Belt, a broad area stretching northeast from the San Juan Mountains in southwestern Colorado to the Colorado Front Range near Boulder. Most of the historic mining camps of Colorado lie in this area.

**21a Alpine Zone**  
This ecoregion occurs on mountain tops above treeline, beginning at about 10500 to 11000 feet. It includes alpine meadows as well as steep, exposed rock and glaciated peaks. Annual precipitation ranges from about 35 to greater than 70 inches, falling mostly as snow. Vegetation includes low shrubs, cushion plants, and wind-pollinated and sedges in wet sand dunes. The forest-tundra interface is usually colonized by stunted, prostrate, mat-forming vegetation, subnival fir, and limber pine (dwarfed vegetation). Rocky Mountain bristlecone pines are also found here, some of the oldest recorded trees in North America. Land use is limited by difficult access, is mostly wildlife habitat and recreation. Ecoregion 21a is a snow-free zone 5 to 10 weeks annually. Snow cover is a major source of water for lower, more arid ecoregions.

**21b Crystalline Subalpine Forests**  
This ecoregion occupies a narrow elevational band on the western flanks of the mountainous Southern Rockies, becoming more extensive on the north-facing slopes. The elevation range of the region is 8500 to 12000 feet, just above the Alpine Zone (21a). The lower elevation limit is higher in the south, starting at 9000 to 9500 feet. The dense forests are dominated by Engelmann spruce and subalpine fir; aspen and pockets of lodgepole pine locally dominate some areas. Subnival meadows also occur. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic. Soils are weathered from a variety of crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusions. Recreation, logging, mining, and wildlife habitat are the major land uses. Grazing is limited by climatic conditions. Lack of forage, and lingering snowpack.

**21c Crystalline Mid-Elevation Forests**  
This ecoregion is found mostly in the 7000 to 9000 feet elevation range on crystalline and metamorphic substrates. Most of the region occurs in the eastern half of the Southern Rockies (21). Natural vegetation includes aspen, ponderosa pine, Douglas-fir, and areas of lodgepole pine and limber pine. A diverse understory of shrubs, grasses, and wildflowers occurs. The variety of food sources supports a diversity of bird and mammal species. Forest stands have become denser in many areas due to decades of fire

**21d Foothill Shrublands**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**21e Sedimentary Subalpine Forests**  
This ecoregion occupies much of the western half of the Southern Rockies, becoming more extensive on the north-facing slopes. The elevation range of the region is 8500 to 12000 feet, just above the Alpine Zone (21a). The lower elevation limit is higher in the south, starting at 9000 to 9500 feet. The dense forests are dominated by Engelmann spruce and subalpine fir; aspen and pockets of lodgepole pine locally dominate some areas. Subnival meadows also occur. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic. Soils are weathered from a variety of crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusions. Recreation, logging, mining, and wildlife habitat are the major land uses. Grazing is limited by climatic conditions. Lack of forage, and lingering snowpack.

**21f Sedimentary Mid-Elevation Forests**  
This ecoregion is found mostly in the 7000 to 9000 feet elevation range on crystalline and metamorphic substrates. Most of the region occurs in the eastern half of the Southern Rockies (21). Natural vegetation includes aspen, ponderosa pine, Douglas-fir, and areas of lodgepole pine and limber pine. A diverse understory of shrubs, grasses, and wildflowers occurs. The variety of food sources supports a diversity of bird and mammal species. Forest stands have become denser in many areas due to decades of fire

**21g Volcanic Subalpine Forests**  
This ecoregion occupies much of the western half of the Southern Rockies, becoming more extensive on the north-facing slopes. The elevation range of the region is 8500 to 12000 feet, just above the Alpine Zone (21a). The lower elevation limit is higher in the south, starting at 9000 to 9500 feet. The dense forests are dominated by Engelmann spruce and subalpine fir; aspen and pockets of lodgepole pine locally dominate some areas. Subnival meadows also occur. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic. Soils are weathered from a variety of crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusions. Recreation, logging, mining, and wildlife habitat are the major land uses. Grazing is limited by climatic conditions. Lack of forage, and lingering snowpack.

**21h Volcanic Mid-Elevation Forests**  
This ecoregion is found mostly in the 7000 to 9000 feet elevation range on crystalline and metamorphic substrates. Most of the region occurs in the eastern half of the Southern Rockies (21). Natural vegetation includes aspen, ponderosa pine, Douglas-fir, and areas of lodgepole pine and limber pine. A diverse understory of shrubs, grasses, and wildflowers occurs. The variety of food sources supports a diversity of bird and mammal species. Forest stands have become denser in many areas due to decades of fire

**21i Sagebrush Parks**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**21j Grassland Parks**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**22. Arizona/New Mexico Plateau**  
The Arizona/New Mexico Plateau represents a large transitional region between the semiarid grasslands and low relief tablelands of the Southwestern Tablelands (26) ecoregion in the east, the drier shrublands and woodland-covered higher relief tablelands of the Colorado Plateaus (20) in the north, and the lower, less vegetated Mojave Basin and Range (14) in the west and the Sonoran Desert (24) in the south. Higher, forested mountains ecoregions border the region on the north and south. The region in Colorado known as the San Luis Valley forms part of the upper end of the Rio Grande Valley. It is flanked by the Sangre de Cristo Range on the east and the San Juan Mountains on the west. The average elevation is 7000 to 9000 feet. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22a San Luis Shrublands and Hills**  
This ecoregion includes the higher relief foothill ecoregion, as well as grasslands of western wheatgrass, big sagebrush, blue grama, and needle-and-thread. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22b San Luis Alluvial Flats and Wetlands**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**22c Salt Flats**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**22d Sand Dunes and Sand Sheets**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**25. High Plains**  
Higher and drier than the Central Great Plains (27) to the east, and in contrast to the irregular, mostly grassland or grazing land of the Northwestern Great Plains (43) to the north, most of the High Plains consists of smooth to irregularly flat prairie with a high percentage of cropland. Grama-buffalo grass is the potential natural vegetation in this region as compared to mostly wheatgrass-rangeland in the High Plains (25). Land use is mostly rangeland. Irrigated agriculture occurs along the Arkansas River, and dryland farming is found primarily in the north half of the region.

**25a Grass- stabilized sand plains, sand dunes and sand sheets of the Rolling Sand Plains**  
This ecoregion is a divergence from the mostly less-covered plains of adjacent ecoregions. Sandy soils, formed from eolian deposits, supported a sagebrush steppe with vegetation types different from the shortgrass and mixed-grass prairie of other neighboring level IV ecoregions in the High Plains (25). Sand sagebrush, subnival fir, and limber pine were typical of the natural vegetation type. Land use is primarily rangeland, although a few scattered areas have been developed for irrigated cropland using deep wells.

**25b Moderate Relief Plains (25c)**  
This ecoregion is a divergence from the mostly less-covered plains of adjacent ecoregions. Sandy soils, formed from eolian deposits, supported a sagebrush steppe with vegetation types different from the shortgrass and mixed-grass prairie of other neighboring level IV ecoregions in the High Plains (25). Sand sagebrush, subnival fir, and limber pine were typical of the natural vegetation type. Land use is primarily rangeland, although a few scattered areas have been developed for irrigated cropland using deep wells.

**25c Flat to Rolling Plains**  
This ecoregion is a divergence from the mostly less-covered plains of adjacent ecoregions. Sandy soils, formed from eolian deposits, supported a sagebrush steppe with vegetation types different from the shortgrass and mixed-grass prairie of other neighboring level IV ecoregions in the High Plains (25). Sand sagebrush, subnival fir, and limber pine were typical of the natural vegetation type. Land use is primarily rangeland, although a few scattered areas have been developed for irrigated cropland using deep wells.

**26. Southwestern Tablelands**  
The Southwestern Tablelands flank the High Plains (25) with red badland grassland, mesas, badlands, and dissected river benches. Unlike most adjacent Great Plains ecological regions, the extensive cropland within the High Plains (25) is the generally low to less vegetated land within the Southwestern Tablelands (26) ecoregion. The natural vegetation in this region is a mosaic of grass-buffalograss, with some juniper-scrub oak savanna on escarpment bluffs.

**26a Piedmont Plains and Tablelands**  
This ecoregion is a dissected plain with dense oakbrush and deciduous oak woodlands containing ponderosa pine woodlands. The southern portion is known locally as the Blackfoot Forest. Although woodlands dominate, the region is a mosaic of woodlands and grasslands. It is somewhat more dissected than the surrounding ecoregions. The region is generally low to mid elevation. The region is generally low to mid elevation.

**26b Mesa de Maya/Black Mesa**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

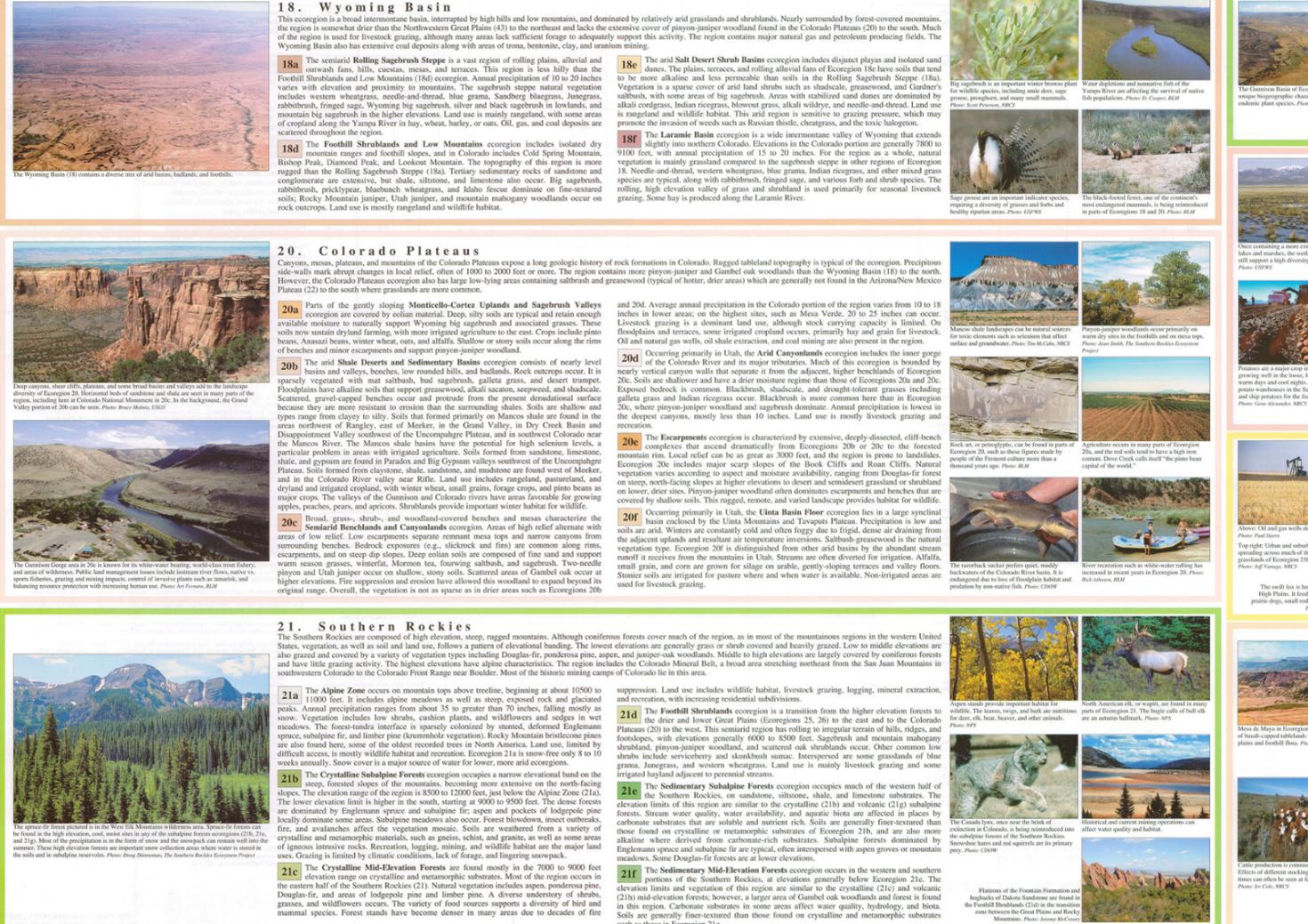
**26c Purgatoire Hills and Canyons**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**26d Pinyon-Juniper Woodlands and Savannas**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**26e Pin-Oak Woodlands**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**26f Foothill Grasslands**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**26g Sand Sheets**  
This ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.



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**21. Southern Rockies (continued)**  
**21g** The steep, mountainous Volcanic Subalpine Forests ecoregion is composed of volcanic and igneous rocks, predominantly andesite, with areas of granite. The region is found mainly in the San Juan Mountains, which have the most rugged terrain and the harshest winters in the Southern Rockies of Colorado. Smaller areas are found in the West Elk Mountains, Grand Mesa, Flat Tops, and in the Front Range. The area is highly mineralized, and gold, silver, lead, and copper have been mined. Relatively young geologically, the mountains are among the highest and most rugged of North America and still contain some of the finest intact habitat. Englemann spruce, subnival fir, and aspen forests support a variety of wildlife.

**21h** The Volcanic Mid-Elevation Forests ecoregion occurs at elevations of 7000 to 9000 feet. It is composed of subalpine forests of aspen and limber pine. The region is found in the San Juan Mountains, the West Elk Mountains, and in a small area of the Front Range. Forests of ponderosa pine, Douglas-fir, and aspen occur. Land use includes wildlife habitat, livestock grazing, logging, recreation, and mineral extraction of silver and gold.

**21i** The Sagebrush Parks ecoregion contains the large, semiarid, high intermontane valleys that support sagebrush shrubland and steppe vegetation. The ecoregion includes North Park, Middle Park, and the Gunnison Basin, and is slightly drier than the Grassland Parks (21j). Semiarid prairie to desert basin. The region is very arid and supports a diverse, but mostly rangeland and wildlife habitat, with some hay production near streams. The region produces a variety of forage and habitat for wildlife. Sandy loess soils are formed in residual from crystalline and sedimentary rocks, glacial outwash, and colluvial or alluvial materials.

**21j** The Grassland Parks ecoregion also consists of high intermontane valleys similar in elevation to the drier Sagebrush Parks (21i); however, water availability is greater in 21j and the region supports grasslands rather than the sagebrush shrubland and steppe found in 21i. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22. Arizona/New Mexico Plateau**  
The Arizona/New Mexico Plateau represents a large transitional region between the semiarid grasslands and low relief tablelands of the Southwestern Tablelands (26) ecoregion in the east, the drier shrublands and woodland-covered higher relief tablelands of the Colorado Plateaus (20) in the north, and the lower, less vegetated Mojave Basin and Range (14) in the west and the Sonoran Desert (24) in the south. Higher, forested mountains ecoregions border the region on the north and south. The region in Colorado known as the San Luis Valley forms part of the upper end of the Rio Grande Valley. It is flanked by the Sangre de Cristo Range on the east and the San Juan Mountains on the west. The average elevation is 7000 to 9000 feet. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22a** The San Luis Shrublands and Hills ecoregion includes the higher relief foothill ecoregion, as well as grasslands of western wheatgrass, big sagebrush, blue grama, and needle-and-thread. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22b** The San Luis Alluvial Flats and Wetlands ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**22c** Salt Flats

**22d** Sand Dunes and Sand Sheets

**25. High Plains**  
Higher and drier than the Central Great Plains (27) to the east, and in contrast to the irregular, mostly grassland or grazing land of the Northwestern Great Plains (43) to the north, most of the High Plains consists of smooth to irregularly flat prairie with a high percentage of cropland. Grama-buffalo grass is the potential natural vegetation in this region as compared to mostly wheatgrass-rangeland in the High Plains (25). Land use is mostly rangeland. Irrigated agriculture occurs along the Arkansas River, and dryland farming is found primarily in the north half of the region.

**25a** Grass- stabilized sand plains, sand dunes and sand sheets of the Rolling Sand Plains

**25b** Moderate Relief Plains (25c)

**25c** Flat to Rolling Plains

**26. Southwestern Tablelands**  
The Southwestern Tablelands flank the High Plains (25) with red badland grassland, mesas, badlands, and dissected river benches. Unlike most adjacent Great Plains ecological regions, the extensive cropland within the High Plains (25) is the generally low to less vegetated land within the Southwestern Tablelands (26) ecoregion. The natural vegetation in this region is a mosaic of grass-buffalograss, with some juniper-scrub oak savanna on escarpment bluffs.

**26a** Piedmont Plains and Tablelands

**26b** Mesa de Maya/Black Mesa

**26c** Purgatoire Hills and Canyons

**26d** Pinyon-Juniper Woodlands and Savannas

**26e** Pin-Oak Woodlands

**26f** Foothill Grasslands

**26g** Sand Sheets



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**21. Southern Rockies (continued)**  
**21g** The steep, mountainous Volcanic Subalpine Forests ecoregion is composed of volcanic and igneous rocks, predominantly andesite, with areas of granite. The region is found mainly in the San Juan Mountains, which have the most rugged terrain and the harshest winters in the Southern Rockies of Colorado. Smaller areas are found in the West Elk Mountains, Grand Mesa, Flat Tops, and in the Front Range. The area is highly mineralized, and gold, silver, lead, and copper have been mined. Relatively young geologically, the mountains are among the highest and most rugged of North America and still contain some of the finest intact habitat. Englemann spruce, subnival fir, and aspen forests support a variety of wildlife.

**21h** The Volcanic Mid-Elevation Forests ecoregion occurs at elevations of 7000 to 9000 feet. It is composed of subalpine forests of aspen and limber pine. The region is found in the San Juan Mountains, the West Elk Mountains, and in a small area of the Front Range. Forests of ponderosa pine, Douglas-fir, and aspen occur. Land use includes wildlife habitat, livestock grazing, logging, recreation, and mineral extraction of silver and gold.

**21i** The Sagebrush Parks ecoregion contains the large, semiarid, high intermontane valleys that support sagebrush shrubland and steppe vegetation. The ecoregion includes North Park, Middle Park, and the Gunnison Basin, and is slightly drier than the Grassland Parks (21j). Semiarid prairie to desert basin. The region is very arid and supports a diverse, but mostly rangeland and wildlife habitat, with some hay production near streams. The region produces a variety of forage and habitat for wildlife. Sandy loess soils are formed in residual from crystalline and sedimentary rocks, glacial outwash, and colluvial or alluvial materials.

**21j** The Grassland Parks ecoregion also consists of high intermontane valleys similar in elevation to the drier Sagebrush Parks (21i); however, water availability is greater in 21j and the region supports grasslands rather than the sagebrush shrubland and steppe found in 21i. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22. Arizona/New Mexico Plateau**  
The Arizona/New Mexico Plateau represents a large transitional region between the semiarid grasslands and low relief tablelands of the Southwestern Tablelands (26) ecoregion in the east, the drier shrublands and woodland-covered higher relief tablelands of the Colorado Plateaus (20) in the north, and the lower, less vegetated Mojave Basin and Range (14) in the west and the Sonoran Desert (24) in the south. Higher, forested mountains ecoregions border the region on the north and south. The region in Colorado known as the San Luis Valley forms part of the upper end of the Rio Grande Valley. It is flanked by the Sangre de Cristo Range on the east and the San Juan Mountains on the west. The average elevation is 7000 to 9000 feet. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22a** The San Luis Shrublands and Hills ecoregion includes the higher relief foothill ecoregion, as well as grasslands of western wheatgrass, big sagebrush, blue grama, and needle-and-thread. The region is generally low to mid elevation. The region is generally low to mid elevation.

**22b** The San Luis Alluvial Flats and Wetlands ecoregion is a wide intermontane valley of Wyoming that extends slightly into northern Colorado. Elevations in the Colorado portion are generally 7000 to 9100 feet, with annual precipitation of 15 to 20 inches. For the region as a whole, natural vegetation is mainly grassland compared to the sagebrush steppe in other regions of Ecoregion 18. Needle-and-thread, western wheatgrass, blue grama, Indian ricegrass, and other mixed grass species are typical, along with rabbitbrush, fringed sage, and various herb and shrub species.

**22c** Salt Flats

**22d** Sand Dunes and Sand Sheets

**25. High Plains**  
Higher and drier than the Central Great Plains (27) to the east, and in contrast to the irregular, mostly grassland or grazing land of the Northwestern Great Plains (43) to the north, most of the High Plains consists of smooth to irregularly flat prairie with a high percentage of cropland. Grama-buffalo grass is the potential natural vegetation in this region as compared to mostly wheatgrass-rangeland in the High Plains (25). Land use is mostly rangeland. Irrigated agriculture occurs along the Arkansas River, and dryland farming is found primarily in the north half of the region.

**25a** Grass- stabilized sand plains, sand dunes and sand sheets of the Rolling Sand Plains

**25b** Moderate Relief Plains (25c)

**25c** Flat to Rolling Plains

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