

# **Continental Divide National Scenic Trail**

# **Scenic Character Descriptions**





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# **List of Acronyms**

BLM – Bureau of Land Management

CDT - Continental Divide National Scenic Trail

CDTC – Continental Divide Trail Coalition

 $NFSR-National\ Forest\ System\ Road$ 

NFST – National Forest System Trail

NPS - National Park Service

### **Section I: Introduction & Methods**

#### What is Scenic Character?

The concept of scenic character is the foundation of the Forest Service's <u>system for managing scenic resources</u> and a key component of sustainable recreation planning. The <u>2012 Planning Rule</u> includes direction to address sustainable recreation in two separate sections, Sustainability (36 CFR 219.8) and Multiple Uses (36 CFR 219.10). In both sections, direction is framed as, "Sustainable recreation: including recreation settings, opportunities, access, and scenic character".

The 2012 Planning Rule also requires that Land Management Plans include plan components, using standards or guidelines, for integrated resource management of scenic character (§ 219.10(b)(1)(i)). Scenic character is defined in the 2012 Planning Rule as:

A combination of the physical, biological, and cultural images that gives an area its scenic identity and contributes to its sense of place. Scenic character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity. (36 CFR 219.19)

By sustaining the scenic character of these landscapes, we can contribute to the sense of place for communities, offer opportunities to connect people with nature, and maintain and enhance scenic settings essential to quality of life for residents and visitors.

# Scenic Character Descriptions

Each landscape has a distinct set of characteristics that make it unique from other areas. The character of an area is the picture and feelings that come to mind when that area is named. Scenic character descriptions include a narrative of the physical, biological, and cultural images that give an area its scenic identity and contribute to its sense of place. They describe the appearance of the landscape and its attributes including landform, water, vegetation, disturbance patterns, and cultural elements. Scenic character descriptions provide a frame of reference from which to determine scenic attractiveness and to measure scenic integrity.

The scenic character descriptions are used as a reference for future site-specific projects, such as the affected environment section of a project-level scenery analysis. Descriptions are also used to develop desired conditions for the scenery resource and to describe natural disturbance patterns and the natural range of variability of scenery for a particular landscape. A mosaic of landscape patterns and conditions may occur within an area to achieve resilient landscapes and desired scenic conditions.

Scenic character descriptions include narratives, photographs, and maps of the area being described. Descriptions can be brief or detailed as illustrated in <u>Landscape Aesthetics A</u>

<u>Handbook for Scenery Management</u> (USDA Forest Service 1995, pages 1-11–1-13). Descriptions can vary from a couple of paragraphs to several pages for each scenic character unit.

#### Effects to Scenic Character

Management of multiple resources alters naturally evolving scenic character. The most obvious effects on scenic resources are from vegetation and landform alterations and constructed features

(such as roads, buildings, or structures). Cultural features and constructed features may contribute to scenic character when these elements have historical backgrounds, have nostalgic connotations, reflect the cultural legacy of an area, or create a visually pleasing complement to the natural character of the landscape.

Management activities affect scenic resources by altering the appearance of the landscape and include both short-term and long-term effects. Short-term and long-term timeframes vary depending on the potential effects of proposed activities. Short-term effects for scenery are usually noticeable after project completion and seen as contrasts to the surrounding natural landscape. Management activities, although they may have some short-term impacts on scenery, may also begin to move the landscape toward the desired scenic character. Effects that move the landscape toward the desired scenic character are often realized over a long period of time or cumulatively and lead to the lasting sustainability of valued scenery attributes.

The most common management activities altering scenic resources include but are not limited to vegetation management (such as timber harvest, mechanical treatments, and fuels treatments), fire management (fire suppression, prescribed fire, managed fire, and fire recovery), mineral extraction and energy development, range management, special use activities, transportation infrastructure, and recreation facilities. See Appendix A for additional descriptions of effects to scenic character from both management activities and natural disturbances.

# **Continental Divide Trail Scenic Character Overview**

The Continental Divide National Scenic Trail (CDT) follows the Continental Divide in the United States, the hydrologic divide between the Atlantic and Pacific watersheds. The CDT traverses approximately 3,100 miles between the U.S. borders with Canada and Mexico, crossing a large swath of diverse terrain in five western states (Montana, Idaho, Wyoming, Colorado, and New Mexico). The lead agency for CDT administration is the United States Forest Service (Forest Service) and the trail crosses lands managed by the National Park Service (NPS) and Bureau of Lands Management (BLM), as well as tribal, state, and private lands.

A special note that the entire Continental Divide landscape is the ancestral and current home to many indigenous people in addition to being the location of ancient and modern travel corridors for many other tribes. A separate cultural landscape assessment documenting historic and current indigenous connections is being prepared.

The National Trails System Act requires the Forest Service, as the administering agency, to identify the nationally significant scenic, historic, natural, or cultural qualities of the areas through which the trail passes. The 2009 Continental Divide National Scenic Trail Comprehensive Plan (pages 3-4) identifies the CDT's nature and purpose as:

The nature and purposes of the Continental Divide National Scenic Trail are to provide for high-quality scenic, primitive hiking and horseback riding opportunities and to conserve natural, historic, and cultural resources along the Continental Divide National Scenic Trail corridor.

# Continental Divide Trail Spatial Framework

The following methods were used to develop the spatial framework that is the foundation for the CDT scenic character inventory. The framework will also help organize the inventory of other CDT resources.

#### **Methods**

Two Forest Service Landscape Architects developed scenic character units for the CDT by merging spatial data for a land classification system developed by the Forest Service, the National Hierarchical Framework of Ecological Units (ECOMAP 1993), and the Continental Divide Trail Coalition's (CDTC) trail section breaks and break points. The CDTC worked with the Forest Service to finalize trail section breaks and is based upon control points such as official trailheads, land management agency administrative boundaries, and state boundaries.

While multiple natural resource spatial frameworks have been developed by different agencies, such as Major Land Resource Regions by the Natural Resources Conservation Service and ecoregions by the U.S. Environmental Protection Agency, the <a href="ECOMAP framework">ECOMAP framework</a> was chosen for delineating the CDT scenic character units because the framework was developed for the mission of the U.S. Forest Service, the administering agency of the CDT.

The ECOMAP framework provides a standardized method for classifying, mapping, and describing ecological units at various geographic planning and analysis scales. Ecological units are areas that exhibit similar patterns of biotic, abiotic, terrestrial, and aquatic components. Ecological subsections are the ecological unit most appropriate for this scale of analysis.

One CDT segment may pass entirely within one ecological subsection, while another segment may pass through several ecological subsections. Professional judgement was used to merge the two data sets to identify the scenic character units for the CDT. Scenic character units are spatially explicit, identified by a polygon or specified area. Lengthwise, the CDTC section breaks/control points (trail segments) are also used to delineate scenic character units. Several segments may be grouped together, while others may not, depending on the ecological subsections the CDT passes through. The widths of scenic character units vary, delineated by either the viewshed or another lateral distance from the CDT. For example, high elevation units have expansive widths that often extend into adjacent ecological subsections. Scenic character units, constrained by topography, such as valley bottoms, are comparatively narrow.

It is important to note that while graphically each scenic character unit is a neat discrete polygon, actual edges of units are fuzzy. Units erratically intergrade rather than abruptly transition into one another. Also, because units are scattered across the landscape, some units share similarities.

The CDT spatial framework identifies eight scenic character provinces (figure 1) and 37 scenic character units (see maps by province). The attached maps display the CDT and framework.

Scenic character provinces are major regions and will be used to display an overview and broad context for scenic character. It is important to note that the spatial extents of CDT scenic character provinces are modified to be specific to the CDT. Scenic character units are the fine scaled units used to write scenic character descriptions and subsequent analysis.

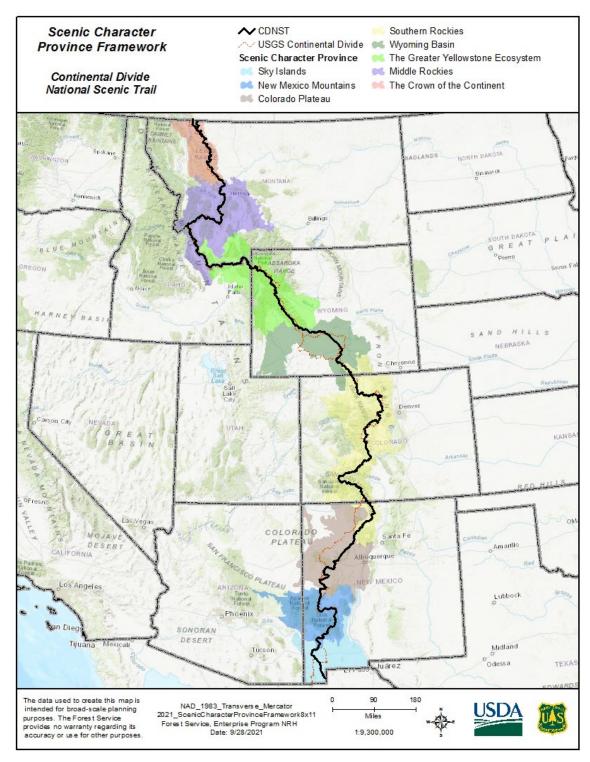


Figure 1. The CDT crosses eight scenic character provinces. Each province is classified into scenic character units.

#### **Data Sources**

The following data sources were used to develop scenic character descriptions. The trail was buffered by 0.5 mile on either side of the CDT centerline to create a one-mile-wide corridor. This corridor was the spatial extent of the assessment and is consistent with the Forest Service's Scenery Management System's foreground distance zone and Forest Service Manual 2353 direction for the CDT. At this distance, people can distinguish fine-scale details and other sensory messages such as sounds and touch.

#### Designated Areas<sup>1</sup>

Designated areas are noted for each scenic character unit. These areas are either designated administratively or by an act of Congress. Designated areas informed scenic character descriptions. These special areas have been identified to be managed to maintain its unique special character or purpose.

#### National Scenic and Historic Trails

Like the CDT, national scenic trails and national historic trails are designated by Congressional legislation and documented in the <u>National Trails System Act</u> as amended. National scenic trails, are extended trails that "provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass." National historic trails are "extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance."

#### Research Natural Areas

A <u>research natural area</u> is any tract of land or water which supports high quality examples of terrestrial or aquatic ecosystems, habitats, and populations of rare or endangered plant or animal species, or unique geological study of the features, and is managed in a way that allows natural processes to predominate, with minimal human intervention.

#### Wilderness

Designated wilderness is any area of land designated by Congress as part of the National Wilderness Preservation System that was established in the Wilderness Act of 1964. An area of wilderness is defined in the Wilderness Act to mean "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."

<sup>&</sup>lt;sup>1</sup> The CDT's proximity to <u>inventoried roadless areas</u> are mapped for each scenic character unit and not listed in the designated area section.

#### Wilderness Study Areas

Wilderness Study Areas are places that have wilderness characteristics - a minimum size, naturalness, and outstanding opportunities for recreation which make them eligible for designation as wilderness by Congress. In 1976, Congress directed the BLM and US Forest Service to evaluate all its land for the presence of wilderness characteristics, and identified areas became Wilderness Study Areas. The establishment of a Wilderness Study Area served to identify areas for Congress to consider for addition to the National Wilderness Preservation System. Until Congress decides to add or end consideration of a Wilderness Study Area, the administering agency manages the area to ensure its suitability for designation as wilderness is not impaired.

#### Wild and Scenic Rivers

Stream eligibility for designation as a wild and scenic river is also noted. To be eligible, a stream must be free-flowing and possess an outstandingly remarkable value, which can be a scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value.

While eligibility is a noteworthy attribute of a stream, it is not synonymous with designation, which must be done by an act of Congress or the Secretary of the Interior. If a stream is designated as a <u>Wild and Scenic River</u>, then it is listed in the designated area section of the description.

Rivers are classified as wild, scenic, or recreational.

**Wild River Areas** – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic River Areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

**Recreational River Areas** – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

#### Geographic Names Information System

The <u>Geographic Names Information System</u> is a geospatial dataset developed by the U.S. Geological Survey in cooperation with the U.S. Board on Geographic Names. The Geographic Names Information System contains the official names for places, features, and areas in the U.S. The system was queried to inform scenic character descriptions such as the location of mines, summits, gaps, and other features within the mile-wide CDT corridor.

#### Significant Scenic, Cultural, and Natural Features

The Geographic Names Information System was also queried to create a preliminary list of significant scenic, cultural, and natural features. It is a requirement of the National Trails System Act, Section 3 (a), to conserve these features. The list provided in this assessment is preliminary and should be further refined by the local unit in conjunction with the CDT Administrator.

#### Recommended Wilderness

Recommended Wilderness are those areas identified during the preparation or revision of Forest Plans that the Forest Service recommends to Congress as candidates for designation as Wilderness. Only Congress can designate wilderness. These areas are listed as significant scenic, cultural, and natural features.

#### Named Streams

Streams with names standardized by the <u>U.S. Board on Geographic Names</u> and that cross the CDT are listed for each scenic character description. Unnamed streams were not listed.

#### Audubon Important Bird Areas

The <u>National Audubon Society</u> has spatially identified areas that are the most important for birds. Where the CDT intersects an Important Bird Area, it is noted in the significant, scenic, cultural, and natural features section.

#### Other Attributes

In this section the recreation setting, current land uses, and existing scenic integrity are coarsely described. See Appendix A for further information on the Forest Service's Recreation Opportunity Spectrum and Scenery Management System.

#### Recreation Setting

The Forest Service uses recreation opportunity spectrum to describe differences in recreation opportunities from very undeveloped (primitive) to very developed (urban). The recreation setting is defined by the social, managerial, and physical characteristics of a place that, when combined, provide distinct recreation opportunities. These characteristics vary based on proximity to roads and other infrastructure, number of interactions with other people, and types of managerial controls.

#### Existing Scenic Integrity

Existing scenic integrity represents the current condition of a landscape. It is determined based on visual changes that detract from the scenic quality of an area. Existing scenic integrity descriptions were informed by the CDT's proximity to roads, forest activities information in the Forest Service's enterprise data warehouse, and designated areas such as designated wilderness.

# **Section II: Scenic Character Descriptions**

# The Crown of the Continent Province

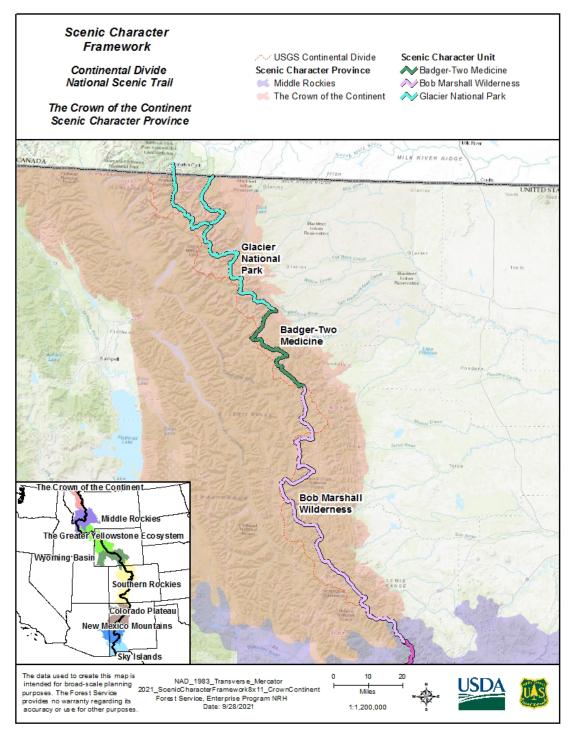


Figure 2. Map of Continental Divide Trail scenic character units in the Crown of the Continent province.

The Crown of the Continent scenic character province (figure 2) extends from Alberta and British Columbia, Canada into northern Montana. At its core lies Waterton-Glacier International Peace Park. The province consists of high, rugged mountains rising to more than 9,000 feet, with a local relief of more than 3,000 feet. East of the Continental Divide is the Rocky Mountain Front, where the Rocky Mountains abruptly uplift from the Northern Great Plains. Glaciers have sculpted most of the region.

In winter snowfall is heavy, but permanent snowfields and glaciers only cover small areas. Springs are wet with plentiful precipitation and deep snowpack. Summers are exceptionally short and dry. A distinct climatic gradient exists from north to south and east to west. West of the Continental Divide is greatly influenced by moist Pacific Ocean air masses. At lower elevations, plants of the temperate Pacific Northwest reach their most eastern extent, such as western red cedar, western hemlock, and western white pine. East of the Continental Divide is influenced more by continental and Artic air masses. Here montane coniferous forest transitions to the semi-arid grasslands of the Northern Great Plains. Melting snow and rainfall are abundant and increase with elevation. Precipitation is more frequent in northern reaches. Chinook winds occur periodically, mostly east of the Continental Divide.

The Crown of the Continent province is mostly ecologically intact with a complete suite of large carnivores such as lynx, wolverine, and grizzly bear. Congress has protected large areas of the region as designated wilderness to ensure the preservation of its scenery, wildness, solitude, and primitive character.

From Waterton Lake in Canada to Rogers Pass, the Continental Divide Trail meanders along high ridges and into lush valleys, favoring the east side of the Continental Divide. The following scenic character units occur within the Crown of the Continent province:

- Glacier National Park
- Badger-Two Medicine
- Bob Marshall Wilderness

# Glacier National Park Scenic Character Unit

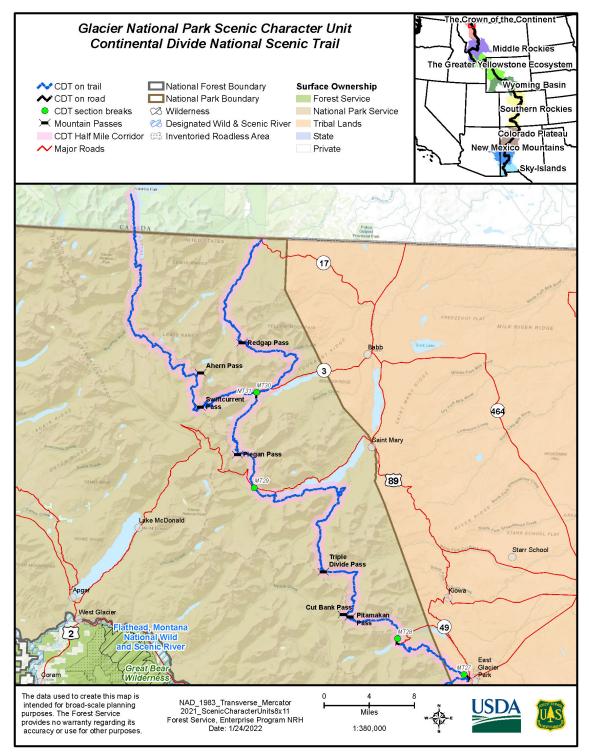


Figure 3. Map of Glacier National Park scenic character unit



Figure 4. The Continental Divide Trail passes through colorful meadows in the Glacier National Park scenic character unit. Photo Credit: Continental Divide Trail Coalition

#### **Scenic Character Attributes**

The scenery within Glacier National Park is distinctive. Here the CDT wanders through lush valleys and grassy foothills, skirts cold lakes, and traverses windswept ridges and high mountain passes within the rugged Lewis Range. Trail elevations range between 4,232 to 7,606 feet.

Glaciers once covered the mountains and have left behind large trough valleys, hanging valleys, steep headwalls, sheer cliffs, and cirque basins. Several small glaciers are still active in the park. Jackson Glacier is visible where the CDT crosses the Going-to-the-Sun Road. Extensive areas of rock cliffs, talus, and scree slopes occupy upper elevations.

Water is abundant. Numerous lakes dot the landscape. The largest are St. Marys and Waterton Lakes in long, narrow, glacial trough valleys. High-gradient streams exhibit impressive waterfalls. Triple Divide Peak is a unique hydrological high point that separates the watersheds of the Pacific Ocean, Atlantic Ocean, and Hudson Bay.

Montane coniferous forest is mostly Douglas-fir with lodgepole pine, and high elevation forest is subalpine fir, Engelmann spruce, and whitebark pine. At lower elevations, aspen groves intermix with grasslands to form vast parklands. Avalanche chutes with fast growing shrubs are common. Fire, insects, and disease affect the mosaic of vegetation. Striking meadows explode into color during the short growing season.

The predominant geology is rock composed of colorful sediments laid down under an ancient sea. The rock typically fractures into rectangular chunks. Mountains in the Two Medicine Lakes area have a vibrant red hue.

#### Other Attributes

Major land uses include wildlife habitat and recreation. The village of Waterton, Alberta, is nestled in the canopy of aspens and pines on the Canadian side of the International Peace Park where the CDT northern terminus is located. The CDT on the Blackfeet Nation reservation passes through working woodlands. Existing scenic integrity is very high.

There are two trail options between Canada and the Many Glacier Valley. The primary trail penetrates deeper into the mountains, ending in Waterton, Alberta, Canada. The alternate trail follows the Belly River Valley, ending just shy of the Canadian Border near Chief Mountain. Both trail sections coincide with sections of the Pacific Northwest National Scenic Trail.

The CDT crosses just three roads, two of which access large seasonal campgrounds with picnic areas, camp stores, cabins, and a rustic lodge. The third is the Going-to-the-Sun Road, a historic highway and major park thoroughfare. Away from roads, the recreational experience is managed to protect wilderness characteristics<sup>2</sup> and provide primitive recreation. In general, interactions between trail visitors decreases as the distance from roads increases.

#### **Feature Summary**

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Glacier National Park scenic character unit.

- MT31 (Alternate Route: Many Glacier to Port of Chief Mountain)
- MT30 (Many Glacier to Waterton)
- MT29 (Going-to-the-Sun Rd. to Many Glacier)
- MT28 (Two Medicine Campground to Going-to-the-Sun Rd.)
- MT27 (East Glacier to Two Medicine Campground)

#### Location

• Lewis Range in northwestern Montana

#### Length

- 28 miles alternate trail
- 103 miles primary trail
- 131 total miles

#### Percent on Road

• 0 percent

<sup>&</sup>lt;sup>2</sup> Glacier National Park, through a publicly involved environmental impact statement, was recommended for inclusion in the National Wilderness Preservation System in 1974. National Park Service policy requires that Glacier's wilderness character is not degraded until Congress decides on Glacier's wilderness status and is unimpaired for future use and enjoyment as wilderness. https://www.nps.gov/glac/planyourvisit/backcountry.htm

#### Percent on Trail

• 100 percent

#### Land Manager

- Predominantly Glacier National Park, National Park Service
- Parks Canada
- The Blackfeet Nation manages areas around East Glacier Park

#### Designated Areas

- Waterton-Glacier International Peace Park
- World Heritage Site
- International Biosphere Reserve
- Pacific Northwest National Scenic Trail

#### Significant Scenic, Cultural, and Natural Features

- There are seven mountain passes in the Glacier National Park unit: Ahern, Cut Bank, Piegan, Pitamakan, Redgap, Swiftcurrent, and Triple Divide
- Summits include Cataract Mountain, Mount Kipp, McClintock Peak, Mount Morgan, Seward Mountain, Swiftcurrent Mountain, Triple Divide Peak, Bald Hill, Scenic Point, and The Head
- Waterton, Canada
- Highline Trail
- Glacier National Park is as an Audubon Important Bird Area, with 275 species of birds documented in the park including Harlequin Ducks, White-tailed Ptarmigan, and Boreal Chickadees

#### Named Streams

- Ahern Creek
- Apikuni Creek
- Atlantic Creek
- Belly River
- Boundary Creek
- Camp Creek
- Cattle Queen Creek
- Cleveland Creek
- Dry Fork
- Fortymile Creek
- Fortyonemile Creek
- Hudson Bay Creek
- Kennedy Creek
- North Fork Cutbank Creek
- Midvale Creek
- Pass Creek
- Red Eagle Creek
- Reynolds Creek
- St Mary River
- Swift Current Creek
- Two Medicine Creek

- Virginia Creek
- Waterton River
- Wilbur Creek
- Windy Creek

# Badger-Two Medicine Scenic Character Unit

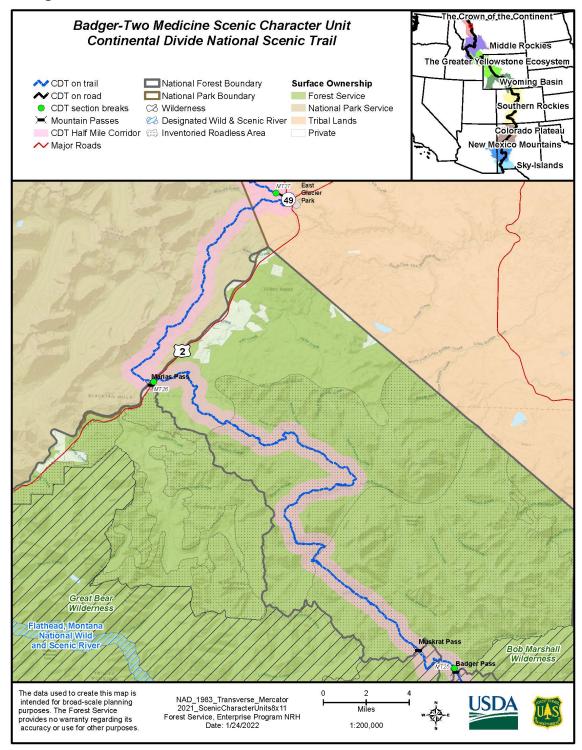


Figure 5. Map of Badger-Two Medicine scenic character unit



Figure 6. The Continental Divide Trail in the Badger-Two Medicine scenic character unit. Photo Credit: Ryan Choi

#### Scenic Character Attributes

The Badger-Two Medicine scenic character unit is the transition between the north and south halves of the Crown of the Continent province. Marias Pass separates the Lewis Range to the north and the Sawtooth Range to the south. Located on the ecotone between western temperate forests and colder eastern prairie, this pass is an important linkage in wildlife habitat connectivity. South of Marias Pass, the CDT follows the South Fork of the Two Medicine River Valley. Trail elevations range between 4,794 to 7,199 feet.

Faults have thrusted rock upwards into distinct patterns of mountains. Former glaciation is evident with numerous features such as U-shaped valleys and wetlands. Steep slopes have talus and rock outcrops. Montane forest is Douglas-fir and subalpine fir interspersed with meadows and avalanche chutes. High ridges are often above treeline with exposed rock. Foothills have prairie on the drier eastern slopes. A natural fire regime is evident with the largest most recent fire footprint occurring in 1910.

Between East Glacier and the North Badger Creek, the geology is mostly sedimentary mudstones with outcrops of limestone. South of North Badger Creek, the geology becomes predominantly carbonate rocks, such as limestone. Here, soils are dry and gravelly with little topsoil.

#### Other Attributes

Major land uses include recreation, wildlife habitat, inventoried roadless areas, and livestock grazing. The village of East Glacier Park has a large rustic lodge and low-density residential development. Highway 2 and the Hi Line railroad corridor bisect the unit at Marias Pass. South of

Marias Pass, the CDT traverses through inventoried roadless areas and dips into the Bob Marshall Wilderness Area. South of Marias Pass the CDT crosses through portions of the designated Badger Two Medicine Traditional Cultural District.

Existing scenic integrity is mostly very high and high. The recreational experience is managed to provide primitive recreation with high levels of challenge, self-reliance, and solitude. Access and travel are predominantly non-motorized.

#### **Feature Summary**

#### Continental Divide Trail Coalition Trail Segments:

The following trail segments comprise the Badger-Two Medicine scenic character unit.

- MT26 (Marias Pass to East Glacier)
- MT25 (Badger Pass to Marias Pass)

#### Location

• Lewis, Sawtooth, and Lewis & Clark Ranges in western Montana

#### Length

• 51 miles

#### Percent on Road

• 0 percent

#### Percent on Trail

• 100 percent

#### Land Manager

- Glacier National Park, National Park Service
- Blackfeet Nation
- Helena and Lewis & Clark National Forest

#### Designated Areas

- Bob Marshall Wilderness
- Rocky Mountain Front Conservation Area

#### Significant Scenic, Cultural, and Natural Features

- There are three mountain passes in the Badger Two Medicine unit: Badger, Marias, and Muskrat
- Summits include Elbow Mountain
- On Highway 2, an obelisk commemorates President Theodore Roosevelt
- North Badger Creek possesses outstanding remarkable values for fisheries and cultural resources and is classified as a wild river

#### Named Streams (streams with outstandingly remarkable values are in bold)

- Benson Creek
- Coonsa Creek

- Cox Creek
- Elbow Creek
- Kip Creek
- Lee Creek
- Lost Shirt Creek
- Midvale Creek
- Muskrat Creek
- North Badger Creek
- Pike Creek
- Railroad Creek
- South Badger Creek
- South Fork Two Medicine River
- Summit Creek
- Townsend Creek
- Whiterock Creek
- Woods Creek

# Bob Marshall Wilderness Scenic Character Unit

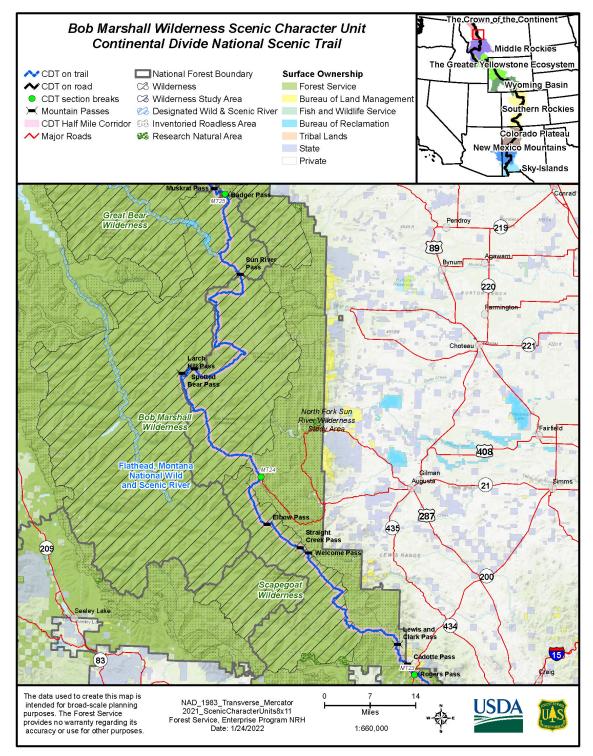


Figure 7. Map of Bob Marshall Wilderness scenic character unit



Figure 8. A hiker stands on top of the Chinese Wall, an escarpment that overlooks the Continental Divide Trail. Photo Credit: Steven Shattuck

#### **Scenic Character Attributes**

Badger Pass borders the Bob Marshall Wilderness Complex unit on the north, and Rogers Pass on the south. The unit is a vast area of designated wilderness and inventoried roadless areas. Trail elevations range between 5,038 and 8,330 feet.

The CDT travels across dry and wet forests, large grassland parks, stream valleys, and high ridges. High elevations exhibit areas of rock, low growing forbs, and pockets of wind-stunted whitebark pines. The lower foothills include extensive stands of limber pine. West of the Continental Divide, the ecology is noticeably wetter. A natural fire regime is evident with multiple seral stages of vegetation.

Streams are high gradient, with the North and South Forks of the Sun River carving broad valleys between the Sawtooth and Lewis and Clark Ranges. Dearborn Creek flows amongst exposed limestone cliffs.

The geology is predominantly carbonate rich rock such as limestone, with areas of karst. Some mountains are named reefs. The Sawtooth Range appears as ranks of parallel reefs. The Chinese Wall, a 1,000-foot tall, massive escarpment of limestone, towers over the CDT for approximately five trail miles.

#### Other Attributes

Major land uses include designated wilderness, inventoried roadless areas, recreation, and wildlife habitat. The existing scenic integrity level of the Bob Marshall Wilderness Complex is very high. The CDT passes through the Bob Marshall Wilderness Area and is managed to protect

wilderness characteristics and provide primitive recreation with high levels of challenge and solitude. Private and public lands are intermixed in the Cadotte Pass area, and Highway 12 crosses at Rogers Pass. Also located at the edge of the Bob Marshall Wilderness is Benchmark, a seasonally inhabited camping destination. The Lewis and Clark National Historic Trail intersects the CDT at Lewis and Clark Pass.

Three streams within the Bob Marshall Wilderness Complex have outstandingly remarkable values and are free-flowing. Additionally, Strawberry Creek is a tributary to the Middle Fork of the Flathead, a designated Wild and Scenic River.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Bob Marshall Wilderness scenic character unit:

- MT24 (Benchmark to Badger Pass)
- MT23 (Rogers Pass to Benchmark)

#### Location

• Sawtooth, and Lewis and Clark Ranges in western Montana

#### Length

• 142 miles

#### Percent on Road

• Less than 1 percent

#### Percent on Trail

• 99 percent

#### Land Manager

• Predominantly Helena and Lewis & Clark National Forest

#### Designated Areas

- Bob Marshall Wilderness
- Scapegoat Wilderness
- Lewis and Clark National Historic Trail
- Middle Fork of the Flathead Wild and Scenic River (wild classification)
  - Outstandingly Remarkable Values: Fish, Geologic, Historic, Recreation, Scenery, Wildlife, Botany, Traditional Cultural Use, Water Quality

#### Significant Scenic, Cultural, and Natural Features

- There are ten mountain passes in the Bob Marshall unit: Badger, Sun River, Cadotte, Elbow, Larch Hill, Lewis and Clark, Roger, Spotted Bear, Straight Creek, and Welcome.
- Summits include Caribou Peak, Cliff Mountain, Green Mountain, Larch Hill, Red Mountain, and Salt Mountain
- Chinese Wall

- The CDT crosses the following streams with outstandingly remarkable values that are eligible for wild and scenic designation- classified as wild rivers:
  - Dearborn (scenic outstandingly remarkable value)
  - Strawberry Creek (scenic outstandingly remarkable value)
  - South Fork Sun River (recreational outstandingly remarkable value)

#### Named Streams (streams with outstandingly remarkable values are in bold)

- Baldy Bear Creek
- Black Bear Creek
- Blacktail Creek
- Bowl Creek
- Burned Creek
- Burned Creek
- Burnt Creek
- Crown Creek
- Dearborn River
- Deer Creek
- East Fork Strawberry Creek
- Elbow Creek
- Fool Creek
- Grimsley Creek
- Hoxsey Creek
- Lookout Creek
- Lost Cabin Creek
- Miners Creek
- Moose Creek
- North Fork Lick Creek
- Open Creek
- Pear Creek
- Red Shale Creek
- Reef Creek
- South Fork Sun River
- Straight Creek
- Strawberry Creek
- Wapiti Creek
- Welcome Creek
- West Fork South Fork Sun River
- White Bear Creek

# **Middle Rockies Province**

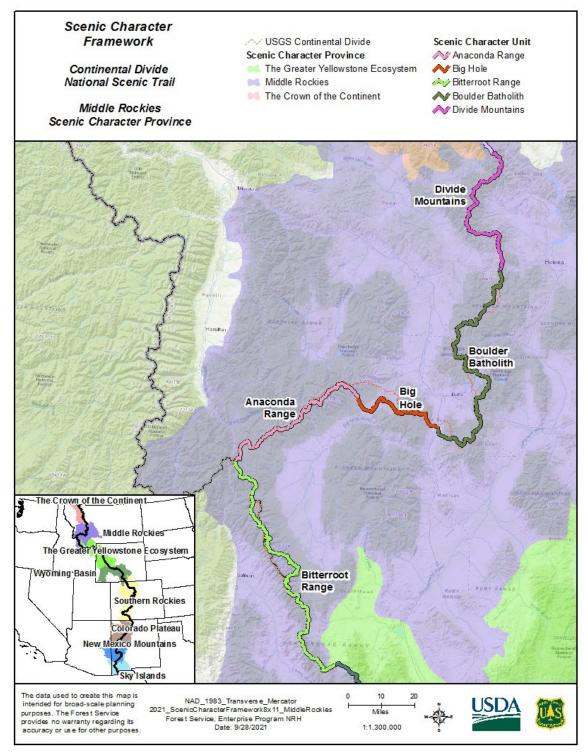


Figure 9. Map of Continental Divide Trail scenic character units in the Middle Rockies Province.

The Continental Divide Trail transects the Middle Rockies scenic character province (figure 9) from Rogers Pass to Bannock Pass. The basin and range topography consist of mountains with alluvial fans at their bases and floodplains along the streams that drain out of the valleys.

Vegetation in this province grows in distinct elevational bands. The highest elevations have been glaciated and contain alpine areas. Mountains are forested with Douglas-fir, subalpine fir, lodgepole pine and Engelmann spruce. Lower-elevations and warm areas contain ponderosa pine, while dry areas restrict trees to a narrow elevation belt. Foothill vegetation is a mosaic of woodlands, shrubs, and grasses. Broad valleys contain floodplains, terraces, and mostly treeless foothills. Cropland and pastureland occur on the valley floors.

Temperature inversions are common when warm air in the mountains trap cold air in the valleys. The growing season varies with location but is typically short. Higher elevations receive more precipitation than lower elevations, mostly as snow. Winds move predominantly from the west, with continental and Artic air masses influencing weather east of the Continental Divide.

In the northern section of the province, a rain shadow renders some areas semiarid, receiving less than 20 inches of precipitation annually. In the southern section of the province, high-elevation mountain ranges capture moisture laden air from the west, producing large amounts of snowfall, bringing as much as 100 inches in some years. The area has deep winter snowpack, and its meltwater significantly influences summer stream flow at lower elevations.

Recreation, logging, mining, and summer livestock grazing are common land uses, and many of the cold-water streams are renowned trout fisheries. Some areas have low existing scenic integrity due to extractive land uses.

The following scenic character units occur within the Middle Rockies province:

- Divide Mountains
- Boulder Batholith
- Big Hole
- Anaconda Range
- Bitterroot Range

## Divide Mountains Scenic Character Unit

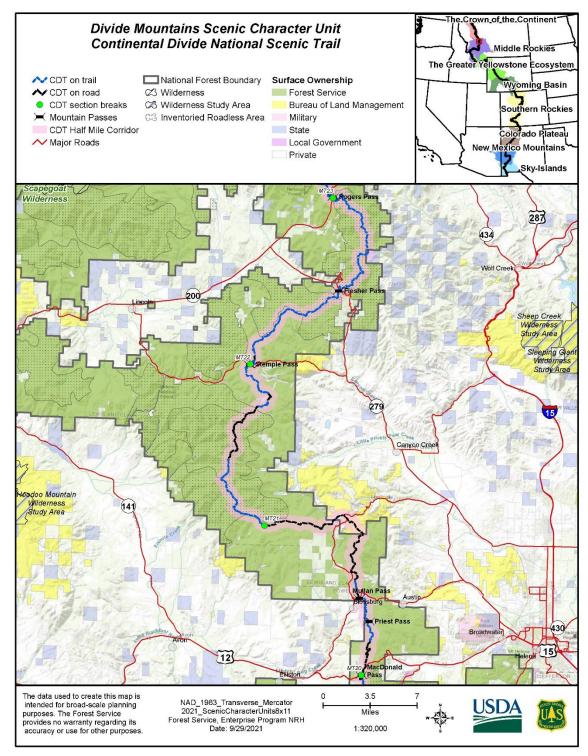


Figure 10. Map of Divide Mountains scenic character unit



Figure 11. Masses of arnica flowers bloom along the Continental Divide Trail in the Divide Mountains scenic character unit near Flesher Pass. Photo Credit: Dahn Pratt

The Divide Mountains are a dry, narrow, north to south running range. The range becomes narrower near MacDonald Pass. These mountains are unglaciated, low, and rounded, with trail elevations ranging between 5,587 and 8,172 feet.

This unit contains Douglas-fir and lodgepole pine forests that have a contiguous canopy with extensive areas of dead or dying trees from recent insect outbreaks. Large grassland parks break up the forests, and ponderosa pines grow in sheltered areas. The unit's ridgetop location and drier climate renders little flowing surface water. Seeps and springs dot the landscape between Danna Spring and MacDonald Pass. The geology of this unit is predominantly metasedimentary and volcanic rocks. Soils are thin without much organic layer, and granitic rock outcrops are localized.

## **Other Attributes**

Major land uses include dispersed recreation, inventoried roadless areas, mining, wildlife habitat, livestock grazing, and timber harvest. Logging and vegetation management is evident locally in areas with roads and typically has a moderate existing scenic integrity. Mineralized areas exist with evidence of mining, and residential development is a new land use on patented mining claims. Overall, the area is recovering from extensive anthropogenic disturbance.

The CDT is a network of trail, open road, and administrative road. Roads are frequent in this working landscape. Portions of the road system have been repurposed as winter cross-country skiing areas at Stemple and MacDonald Passes, and off-highway vehicle driving is a popular recreation activity. Additionally, a major west to east railroad crosses under the Continental Divide at Mullan Pass in a tunnel.

The recreation setting of this unit is influenced by the density of roads, which allow for easy access and interactions between visitors. Where the CDT is located on roads, motorized activity is a concurrent use.

Areas with higher existing scenic integrity are located within three inventoried roadless areas. These areas are between Rogers Pass and Flesher Pass, Flesher Pass and Stemple Pass, and Nevada and Black Mountains.

## **Feature Summary**

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Divide Mountains scenic character unit.

- MT22 (Stemple Pass to Rogers Pass)
- MT21 (Dana Spring to Stemple Pass)
- MT20 (MacDonald Pass to Dana Spring)

### Location

• Divide Mountains in western Montana

### Length

• 69 miles

## Percent on Road

• 38 percent

### Percent on Trail

• 62 percent

### Land Manager

- Helena and Lewis & Clark National Forest
- BLM Butte Field Office manages a small section in the Marysville area

#### Designated Areas

None identified

### Significant Scenic, Cultural, and Natural Features

- There are six mountain passes in the Divide Mountains unit: Flesher, MacDonald, Mullan, Priest, Rogers, and Stemple.
- Summits include Nevada Mountain, Black Mountain, Granite Butte, Greenhorn Mountain, Meyers Hill, and Roundtop Mountain
- Abandoned railroad trestle in vicinity of Mullan Pass

• Granite Butte Lookout Tower

## Named Streams

• Pass Creek

## Boulder Batholith Scenic Character Unit

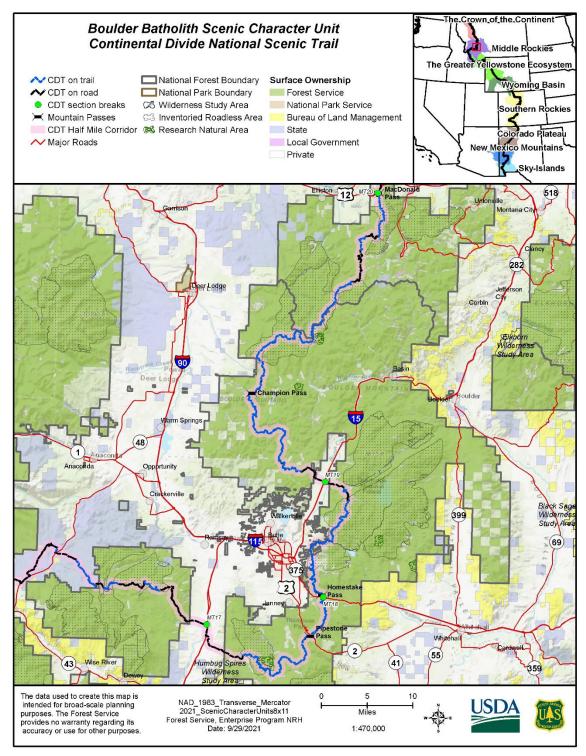


Figure 12. Map of Boulder Batholith scenic character unit



Figure 13. The Continental Divide Trail in the Boulder Batholith scenic character unit. Photo Credit: Valerie Mann

In the Boulder Batholith unit, the CDT winds over rolling, rounded, partially glaciated mountains with cliffs and talus slopes from MacDonald Pass to Interstate 15 south of Butte, Montana. Trail elevations range between 5,679 and 8,404 feet.

The forest is predominantly lodgepole pine with Engelmann spruce, subalpine fir, and whitebark pine. The understory is low growing with beargrass and whortleberry. Recent insect and disease disturbance is evident within a closed canopy forest. Aspen stands often thrive when conifers are killed by disturbances. Wet, boggy areas with wetland plants are intermittent, and open grassland parks, such as Elk Park, are prominent features. The unit's southern area is a dry, sagebrush dominated, intermontane valley.

The CDT encounters two Research Natural Areas. In the Thunderbolt Research Natural Area, forest, cliffs, and talus slopes surround wet sedge meadow communities and meandering streams. In the Basin Creek Research Natural Area, Engelmann spruce and lodgepole pine forest surround riparian, shrub, and herbaceous communities with beaver ponds.

Streams are high and moderate gradient with meandering glides and riffle pools. Lower gradient streams have beaver impoundments with willows and sedges. The geology of the Boulder Batholith unit is mostly igneous, extrusive rocks. Areas of unique looking, boulder-strewn terrain are distinctive, such as around Pitchstone Pass area. Granitic rock outcrops are erosion prone and include andesitic rock.

### Other Attributes

Major land uses include dispersed recreation, inventoried roadless areas, mining, wildlife habitat, livestock grazing, and timber harvest. Logging and vegetation management are evident locally in areas with roads and typically have a moderate existing scenic integrity. Most of the major known deposits of copper, zinc, lead, silver, and gold in Montana are associated with the Boulder Batholith. Residential development associated with patented mining claims is a new land use. Overall, the area is recovering from extensive anthropogenic disturbance.

Research Natural Areas are high quality examples of terrestrial or aquatic ecosystems with very high existing scenic integrity.

Roads cross this unit in many locations including Interstate 15 (twice) and Interstate 90. The recreation setting is influenced by the density of roads, which allow for easy access and more interactions between visitors. Trail systems, such as in the Pitchstone Pass area, are popular during all seasons with recreationists from nearby Helena and Butte, Montana.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Boulder Batholith scenic character unit.

- MT19 (I-15/Elk Pass to MacDonald Pass)
- MT18 (Homestake Pass to 1-15/Elk Pass)
- MT17 (Interstate 15 to Homestake Pass)

### Location

• Deerlodge Mountains in western Montana

### Length

• 137 miles

### Percent on Road

• 18 percent

### Percent on Trail

• 82 percent

### Land Manager

- Helena and Lewis & Clark National Forest
- Beaverhead-Deerlodge National Forest
- Private lands near Interstate 15 and Interstate 90 crossings and north of Homestake Pass

### Designated Areas

- Thunderbolt Mountain Research Natural Area
- Basin Creek Research Natural Area

## Significant Scenic, Cultural, and Natural Features

- There are five mountain passes in the Boulder Batholith Mountains unit: Pipestone, Champion, Elk Park Pass, MacDonald, and Homestake.
- Summits include Bison Mountain, Blizzard Hill, Electric Peak, Limekiln Hill, Thunderbolt Mountain, and O'Keefe Mountain
- Our Lady of the Rockies
- Electric Peak Recommended Wilderness Area
- Elk Park

### Named Streams

- Bison Creek
- Divide Creek
- East Fork Divide Creek
- Haney Creek
- Jericho Creek
- Lowland Creek
- Nez Perce Creek
- North Fork Moose Creek
- Ontario Creek
- Powderhorn Creek
- Telegraph Creek
- Thunderbolt Creek
- Wissikihon Creek

# Big Hole Scenic Character Unit

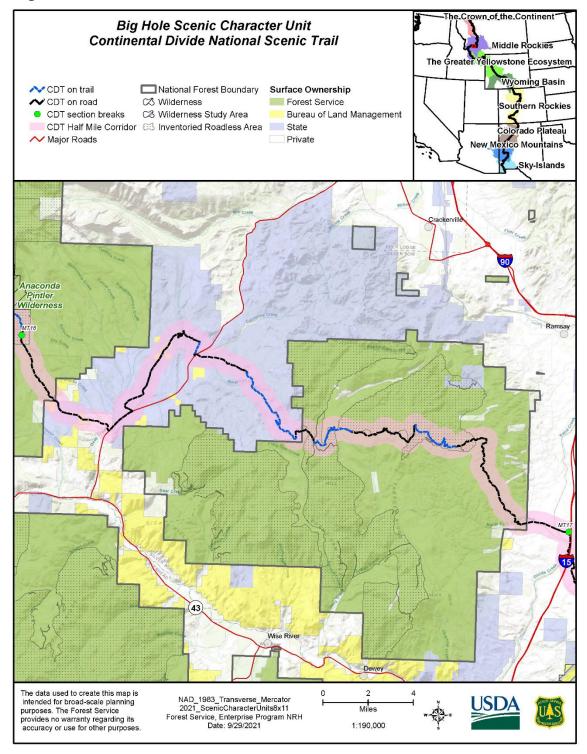


Figure 14. Map of Big Hole scenic character unit



Figure 15. The Continental Divide Trail in the Big Hole scenic character unit. Photo Credit: Continental Divide Trail Coalition

The Big Hole unit is an area of transition. Within a short distance, the CDT crosses through four distinct ecological zones, some multiple times. These include intermontane valley, Anaconda Range, eastern sedimentary Pioneer Mountains, and the Big Hole Valley. The mountains have been sculpted by alpine glaciation, and there are no named mountain passes in the Big Hole unit. Trail elevations ranges between 5,769 and 8,532 feet.

At the heart of the unit, is the Big Hole, a high elevation, cold, wet, low-relief valley containing meadows, extensive wetlands, floodplains, swampy creeks, many springs, and broad stream terraces. Sagebrush steppe is the predominant vegetation of valley bottoms. Foothills are grassy with pockets of forest. Forest is primarily lodgepole pine, subalpine fir, and Douglas-fir, in which recent insect infestation and disease is evident.

The mountains are underlain by sedimentary and igneous rock. Granitic intrusions occur causing areas of mineralization, such as Hungry Hill. The Big Hole Valley has extensive areas of boulders, gravel, and sandy outwash.

## Other Attributes

Major land uses include livestock grazing, wildlife habitat, motorized recreation, rural residential development, inventoried roadless areas, and timber harvest. Numerous roads cross the unit, and

the CDT is mostly located on roads. Interstate 15 is located on the unit's east side, and Montana Highway 569 intersects the CDT in the Big Hole Valley. The density of roads increases near Seymour Lake. Areas around roads have more developments and management activities, such as logging. Ditches have altered the hydrology of the Big Hole Valley.

The recreation setting is influenced by the density of roads, which allows for easy access, and interactions between visitors. Where the CDT is located on roads, motorized activity is a concurrent use.

## **Feature Summary**

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Big Hole scenic character unit.

• MT16 (Lower Seymour Lake to Interstate 15)

### Location

• Big Hole Valley and Fleecer Ridge in southwestern Montana

### Length

• 43 miles

#### Percent on Road

• 74 percent

### Percent on Trail

• 26 percent

### Land Manager

- Beaverhead Deerlodge National Forest
- Mount Haggin State Wildlife Management Area, State of Montana Fish, Wildlife, and Parks
- BLM Butte Field Office

### Designated Areas

None identified

### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Big Hole unit
- Summits include Burnt Mountain
- Big Hole Valley

### Named Streams

- American Creek
- California Creek
- Deep Creek
- Little American Creek
- North Fork Divide Creek
- Sixmile Creek

## Anaconda Range Scenic Character Unit

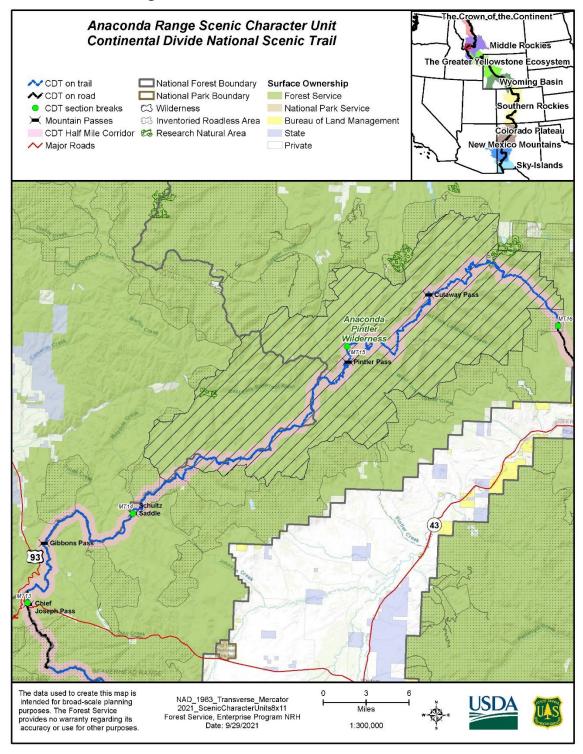


Figure 16. Map of Anaconda Range scenic character unit



Figure 17. The Continental Divide Trail in the Anaconda Range scenic character unit. Photo Credit: Whitney LaRuffa

In the Anaconda Range, the CDT traverses rugged mountains carved by alpine glaciation. Mountain summit elevations stretch up to 10,893 feet on West Goat Peak. Trail elevations range between 6,811 and 9,360 feet. The range displays a spectacular array of glacially carved landforms including tarn-pocked cirques, huge U-shaped valleys, knife-edged ridges, and moraines. The alpine zone is exposed and contains jagged peaks, tarns, rocklands, and talus deposits. Lakes occur in a few high elevation cirques basins.

Vegetation consists of alpine tundra, subalpine fir, or Douglas-fir forests depending on elevation. Wet meadows, aspen, and riparian areas add variety to these vegetation types. Along the crest of the divide, bare rock, alpine tundra, and snowfields occur. Mixed high elevation forests include subalpine fir, aspen, whitebark pine, and subalpine larch. A natural fire regime is evident with numerous footprints of former fires.

The Anaconda Mountains are block faulted mountains of volcanic origin. Geologically, the Anacondas include limestones, sandstones, and other sedimentary layers struck with igneous intrusions. Drainage patterns for the Anacondas are complex, reflecting the complex geology.

### Other Attributes

Major land uses include dispersed recreation, designated wilderness, inventoried roadless areas, and livestock grazing. Outside of the wilderness area, the unit has active restoration, fuels reduction, or timber harvest projects on going. Past logging and vegetation management is evident locally in areas with roads and typically has moderate existing scenic integrity.

The CDT passes through the Anaconda Pintler Wilderness Area and numerous inventoried roadless areas throughout most of this unit. The Anaconda Pintler Wilderness Area is managed to protect wilderness characteristics and to provide primitive recreation with high levels of challenge and solitude in a remote alpine setting. Numerous inventoried roadless areas flank the CDT adjacent to the wilderness area. Wilderness areas and inventoried roadless areas exhibit very high existing scenic integrity and natural scenic character.

Protection of historic resources is also important to the management of this unit. The concentration of nationally designated features with highway access contributes to the popularity of various motorized and non-motorized activities. Three nationally designated trails cross the landscapes of this unit and intersect near Gibbons Pass just north of Chief Joseph Pass: the CDT, the Nez Perce Nee-Mee-Poo National Historic Trail, and the Lewis and Clark National Historic Trail.

At the northeastern end of the wilderness, the CDT traverses the Goat Flat Research Natural Area. The site contains populations of eleven plant species listed by the Montana Natural Heritage Program as species of special concern, six of which are Forest Service Northern Region sensitive plant species. The Research Natural Area contains alpine communities and subalpine larch/subalpine fir habitat type that fill a niche in the Research Natural Area system in the Northern Region.

Consistent deep snows with permanent plowed access on Highway 43 at Chief Joseph Pass make this unit a high value winter sports area, providing access to popular groomed trails, snowmobiling, backcountry skiing, and other winter uses.

## **Feature Summary**

### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Anaconda Range scenic character unit.

- MT15 (Johnson Lake to Lower Seymour Lake)
- MT14 (Schultz Saddle to Johnson Lake)
- MT13 (Chief Joseph Pass to Schultz Saddle)

#### Location

• Crest of the Anaconda Range in southwestern Montana

### Length

• 84 miles

### Percent on Road

2 percent

### Percent on Trail

• 98 percent

## Land Manager

- Beaverhead-Deerlodge National Forest
- Bitterroot National Forest

## Designated Areas

- Anaconda Pintler Wilderness
- Nez Perce Nee-Me-Poo National Historic Trail
- Lewis and Clark National Historic Trail
- Goat Flat Research Natural Area

## Significant Scenic, Cultural, and Natural Features

- There are five named mountain passes in the Anaconda Range unit: Chief Joseph, Cutaway, Gibbons, Pintler, and Schultz.
- Summits include: McGlaughlin Peak

### Named Streams

- East Fork Rock Creek
- Falls Fork Rock Creek
- Hell Roaring Creek
- Page Creek
- Pintler Creek
- Schultz Creek
- Seymour Creek
- West Fork Fishtrap Creek
- West Fork La Marche Creek

## Bitterroot Range Scenic Character Unit

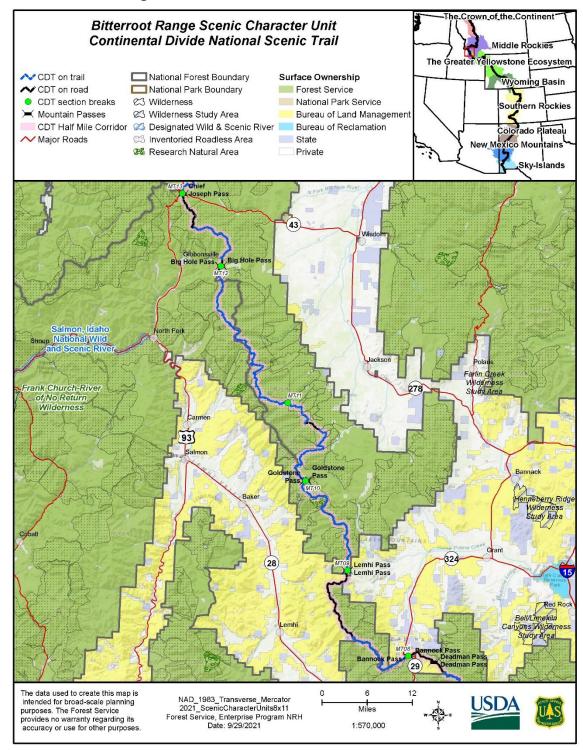


Figure 18. Map of Bitterroot Range scenic character unit



Figure 19. The Continental Divide Trail intersects the Lewis and Clark National Historic Trail at Lemhi Pass. Photo Credit: Continental Divide Trail Coalition

In the Bitterroot Range, the CDT crosses the spine of the southern end of these rugged, north to south running mountains along the political boundary between the states of Idaho and Montana. As the trail descends south, its character becomes increasingly drier. Trail elevation ranges between 5,719 and 9,715 feet.

The Bitterroot Range exhibits high elevation, glaciated mountains with steep slopes, ridges, peaks, high mountain lakes, and cirque basins. The Bitterroot Mountains are fault block mountains that formed in Belt metasedimentary rocks. The geology is mostly metamorphic rock of sedimentary origin with glacial deposits where the CDT traverses lower elevations, such as near Miner Lakes Trailhead. Drainage patterns are complex, reflecting the complex geology.

Vegetation consists predominantly of subalpine fir and Douglas-fir forests. Wet meadows, aspen, riparian areas, and sagebrush grasslands occur throughout the unit, and high-elevation, alpine tundra, and mixed coniferous forests of subalpine fir, whitebark pine, and subalpine larch are distinctive. South of Lemhi Pass, grasslands are more common, especially on south facing aspects and at lower elevations. Grasslands often extend from the valley floors to the mountain tops. Overall, fire exclusion has caused some deviation from historic conditions, such as denser forested areas and parks with encroaching woody plants. Fire is a more common occurrence in the drier southern portion of the unit.

The CDT skirts the northeastern edge of two glaciated basins that contain Kenney Creek Research Natural Area. The cirque basins harbor gentle to steep-gradient streams, seep springs, ponds, and wet meadows. The Research Natural Area is an exemplary forest of whitebark pine and mountain pine beetle infested lodgepole with Douglas-fir and subalpine fir.

### Other Attributes

Major land uses include dispersed recreation, livestock grazing, mining, wildlife habitat, inventoried roadless areas, and timber harvest. Most of this unit is managed to protect its undeveloped, roadless character, to provide challenging recreation opportunities in a remote alpine setting, and to provide secure wildlife habitat. The recreation setting over much of the area is semi-primitive non-motorized with natural appearing scenery. Numerous inventoried roadless areas flank the CDT throughout the unit.

Two other nationally designated trails also cross this unit's landscapes. County Highway 324 over Bannock Pass coincides with the Nez Perce Nee-Me-Poo National Historic Trail. Between Goldstone Pass and Miner Lakes Trailhead, the CDT is again within one-half mile of the Nez Perce Nee-Me-Poo National Historic Trail. The CDT also crosses the Lewis and Clark National Historic Trail at Lemhi Pass.

Historic preservation is also important to the management of this unit. Historic mine sites are present. The Big Hole Pass area has a long history of use associated with travel across the Continental Divide, mining, private property in-holdings, and timber production. Mining is a historic and contemporary use in Ruby Creek and Big Hole Pass area. The Lemhi Pass National Historic Landmark was designated for its significance to the Lewis and Clark expedition and interprets that era.

## **Feature Summary**

### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Bitterroot Range scenic character unit.

- MT12 (Big Hole Pass to Chief Joseph Pass)
- MT11 (Miner Lake TH to Big Hole Pass)
- MT10 (Goldstone Pass to Miner Lakes TH)
- MT09 (Lemhi Pass to Goldstone Pass)
- MT08 (Bannock Pass to Lemhi Pass)

### Location

 Bitterroot Range and western Beaverhead Mountains on the boundary between southwestern Montana and central Idaho

### Lenath

• 122 miles

### Percent on Road

• 20 percent

### Percent on Trail

• 80 percent

## Land Manager

- Beaverhead-Deerlodge National Forest
- Salmon-Challis National Forest
- BLM Salmon Field Office

## Designated Areas

- Lemhi Pass National Historic Landmark
- Lewis and Clark National Historic Trail
- Nez Perce Nee-Me-Poo National Historic Trail
- Kenney Creek Research Natural Area
- May Creek National Recreation Trail near Chief Joseph Pass

## Significant Scenic, Cultural, and Natural Features

- There are five mountain passes in the Bitterroot Range unit: Chief Joseph, Bannock, Big Hole, Goldstone, and Lemhi Passes.
- Summits include Grizzly Hill

### Named Streams

- Berry Creek
- Big Swamp Creek
- Hamby Creek
- Miner Creek
- North Fork Pioneer Creek
- North Fork Sheep Creek
- Pioneer Creek
- Slag-a-melt Creek
- South Fork Sheep Creek

# The Greater Yellowstone Ecosystem Province

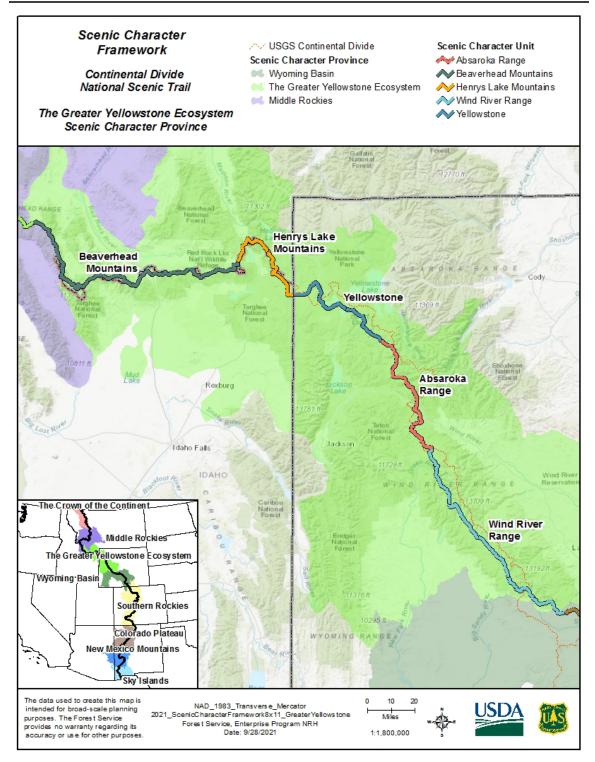


Figure 20. Map of Continental Divide Trail scenic character units in the Greater Yellowstone Ecosystem province.

### Continental Divide Trail Scenic Character Descriptions

The CDT crosses through the heart of the Greater Yellowstone Ecosystem province (figure 20) from Bannock Pass to the southern end of the Wind River Range. The Greater Yellowstone Ecosystem is a complex region, encompassing a vast mountainous area. Weather varies greatly across steep elevational changes, bringing snowfall to some areas, and warm, dry conditions to others. Yellowstone National Park forms the core of the Greater Yellowstone Ecosystem, which is one of the largest nearly intact temperate-zone ecosystems on Earth. Greater Yellowstone's diversity of natural wealth includes hydrothermal features, wildlife, vegetation, lakes, and geologic wonders. It boasts the largest free-roaming, wild herd of bison in the United States, and one of the few grizzly populations in the contiguous United States.

The Centennial and Beaverhead Mountains connect Yellowstone Park to the mountain ranges of the Middle Rockies Province to the north. The Wind River Range connects the park to the high desert of the Great Basin scenic character Province to the south.

Landform consists of high elevation plateaus with large cold lakes to rugged mountain peaks with cirque basins and glaciers. Geology is predominantly of volcanic origin. The terrain is covered with snow for much of the year and supports forests dominated by lodgepole pine and interspersed with alpine meadows. Sagebrush steppe and grasslands on the lower-elevation ranges provide essential winter forage for elk, bison, and bighorn sheep.

The following scenic character units occur within the Greater Yellowstone Ecosystem province:

- Beaverhead Mountains
- Henrys Lake Mountains
- Yellowstone
- Absaroka Range
- Wind River Range

## Beaverhead Mountains Scenic Character Unit

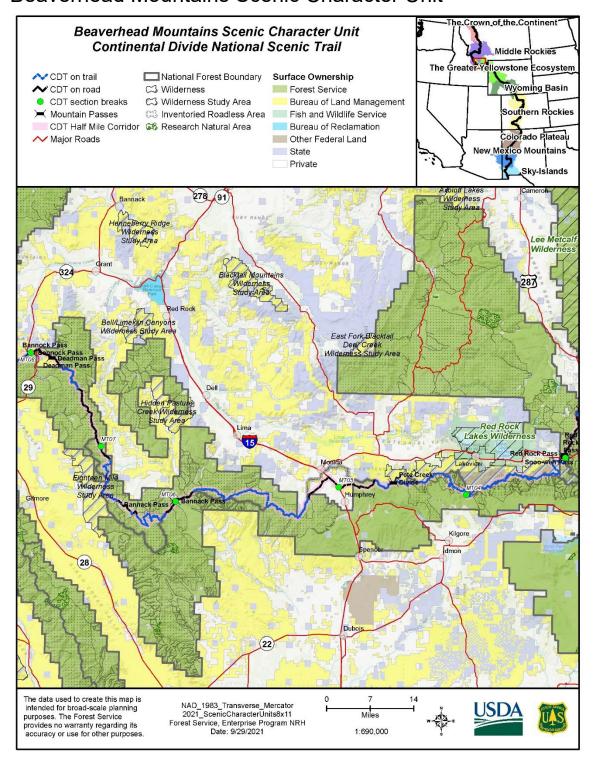


Figure 21. Map of Beaverhead Mountains scenic character unit



Figure 22. The Continental Divide Trail crosses grassy mountains in the Beaverhead Mountains scenic character unit. Photo Credit: Matt Berger

The Beaverhead Mountains unit is comprised of two subranges of the Bitterroot Range: Centennial Mountains east of Monida Pass and the Beaverhead Mountains west of Monida Pass. It is positioned between the Centennial Valley to the north, the Snake River Plain to the south, and the Lemhi Valley to the west. This section of the Continental Divide contains one of the tallest groups of mountain peaks in the region. Trail elevations range between 6,641 and 10,102 feet.

The area exhibits high elevation glaciated mountains with steep slopes, ridges, peaks, and alpine lakes and cirque basins. The geology of the unit is complex and varied with block faulted mountains that formed in a variety of igneous, metamorphic, and sedimentary rocks. Limestone, shale, and volcanic materials occur as well as rock outcrops. Alpine glaciation and mass wasting have altered the landscape.

The alpine zone is severely exposed and glaciated, containing jagged peaks, rockland, talus deposits, and mixed high elevation vegetation. In cirques, vegetation is mixed high elevation forests of subalpine fir and whitebark pine. Above timberline vegetation is alpine tundra, grassland, meadows, and wetlands.

Below the alpine zone, forests are limited to a narrow elevational band and are most widespread on north-facing slopes. Open-canopied Douglas-fir-lodgepole pine-subalpine fir forests, aspen

groves, sagebrush, mountain brush, and grasses occur throughout. Forests have a grass understory and curl-leaf mountain mahogany occurs over limestone. Barren and sparsely vegetated areas are common.

At lower elevations, such as Monida Pass and north of Italian Peak, the CDT crosses largely treeless, unglaciated, semiarid hills, and alluvial fans. Vegetation consists of sagebrush steppe and foothills prairie with Wyoming and mountain big sagebrush, bunchgrasses, scattered pinyon pine, Utah juniper and some Douglas-fir-spruce stands.

The Centennial Mountains are one of only a few ranges within the Rocky Mountains that trend west to east and are considered an important corridor for wildlife movement, connecting the Yellowstone Ecosystem with the rest of the northern Rocky Mountains. Recent severe insect outbreaks have occurred in the Centennial Mountains and killed swaths of trees. The primary natural disturbances are fire and mass wasting, such as slumps or slides.

### Other Attributes

Major land uses include livestock grazing, dispersed recreation, inventoried roadless areas, and wildlife habitat. Several wilderness study areas and recommended wilderness areas occur along the CDT in this unit. Numerous inventoried roadless areas flank the CDT throughout the unit. The Nez Perce Nee-Me-Poo National Historic Trail and the CDT cross each other at Bannock Pass.

Much of the area supports livestock grazing. Areas in the Centennial Mountains have active restoration, fuels reduction, or timber harvest. Some portions of the Beaverhead Mountains have mining and oil and gas exploration.

## Feature Summary

### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Beaverhead Mountains scenic character unit.

- MT07 (Morrison Lake to Bannock Pass)
- MT06 (Bannack Pass to Morrison Lake)
- MT05 (Interstate 15 to Bannack Pass)
- MT04 (Aldous Lake TH to Interstate 15)
- MT03 (Red Rocks Pass to Aldous Lake TH)

### Location

 Beaverhead Mountains and Centennial Mountains, subranges of the Bitterroot Range in eastern Idaho and southwestern Montana

#### Lenath

• 165 miles

#### Percent on Road

• 34 percent

## Percent on Trail

• 66 percent

## Land Manager

- Caribou-Targhee National Forest
- USDA Agricultural Research Station (Sheep Experiment Station)
- BLM Dillon Field Office
- Beaverhead-Deerlodge National Forest
- Salmon-Challis National Forest
- Private Lands near Monida Pass have no public land access

### Designated Areas

- Nez Perce Nee-Me-Poo National Historic Trail
- Centennial Mountain Wilderness Study Area
- Eighteenmile Wilderness Study Area

### Significant Scenic, Cultural, and Natural Feature:

- There are five mountain passes in the Beaverhead Mountains unit: Bannock, Deadman, Bannack, Red Rock Passes, and Pete Creek Divide.
- Summits include Taylor Mountain, Big Table Mountain, Horse Prairie Mountain, Elk Mountain, Taylor Mountain, and Little Table Mountain
- Garfield Mountain Recommended Wilderness Management Area
- Italian Peak Recommended Wilderness Management Area
- Morrison Lake
- Deadman Creek is an eligible Wild and Scenic River with recreational, cultural, historic, and wildlife Outstandingly Remarkable Values

## Named Streams (streams with outstandingly remarkable values are in bold)

- Bear Creek
- Buffalo Creek
- Ching Creek
- Cole Creek
- Cottonwood Creek
- Coyote Creek
- Crystal Creek
- Deadman Creek
- Hell Roaring Creek
- Little Beaver Creek
- Little Deadman Creek
- Nicholia Creek
- Sawmill Creek
- Shineberger Creek
- Simpson Creek
- Spring Creek
- Tendoy Creek
- Tex Creek

## Henrys Lake Mountains Scenic Character Unit

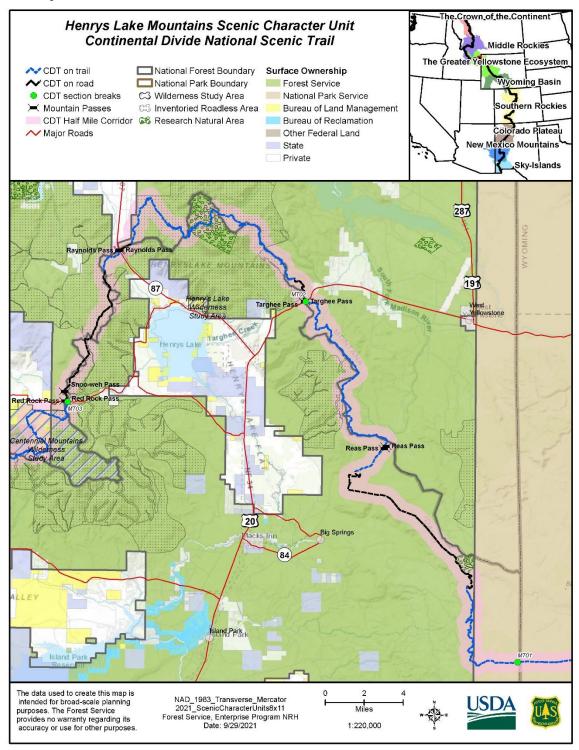


Figure 23. Map of Henrys Lake Mountains scenic character unit



Figure 24. The Continental Divide Trail crosses sagebrush grasslands in the Henrys Lake scenic character unit. Photo Credit: Matt Berger

At the Idaho-Montana border, the CDT travels near the edge of the Pitchstone Plateau, traverses the Moose Creek Plateau, then straddles the Idaho-Montana border in the Henrys Lake Mountains, a small mountain range northwest of the town of West Yellowstone. Along these segments the CDT has a diverse scenic character created by straddling the borders of eight ecological subsections.

The landscape is characterized by high, rugged mountains with rounded ridges, cirques at higher elevations, broad valleys below the CDT, and a high plateau in the eastern segment. Several subalpine lakes sit in high cirques in the higher reaches of the Henrys Lake Mountains, and several peaks, such as Targhee Peak and Bald Peak, top 10,000 feet within one-half mile of the CDT. Trail elevations range between 6,792 to 10,012 feet.

South- and west-facing slopes have sparser trees and tend to sharply contrast with more densely conifer-covered north- and east-facing slopes, especially at lower elevations. Subalpine fir, spruce, lodgepole, and Douglas-fir are commonly found throughout the area, with some whitebark pine in higher elevations. Grassy openings in the lower areas are often contiguous with sagebrush steppe. High elevations harbor extensive mature forests of whitebark pine. Mountain pine beetle has caused large swaths of dead trees.

The CDT passes through two Research Natural Areas. Targhee Creek contains exemplary alpine barrens with krummholz whitebark pine, limestone cliffs and ridges, two glaciated basins with lakes, streams and wet meadows, and rare plants. Moose Creek Plateau contains exemplary open forests of lodgepole pine on poorly developed obsidian sand soils where early seral communities have resulted from severe fire in 1988.

Much of the area has been glaciated. Rocks are of volcanic origin and consist of rhyolites, tuffs, and mafic basalts. The geology of the eastern Henrys Lake Mountains is mostly igneous rock of

volcanic origin with alluvium, colluvium, outwash deposits, and glacial till. Many lakes and wet meadows are associated with areas above 6,000 feet.

## Other Attributes

Major land uses include recreation, wildlife habitat, livestock grazing, inventoried roadless areas, and some logging. The unit is within views of travelers, residences, and businesses along Highway 20 between West Yellowstone and Targhee Pass. Highway 20 over Targhee Pass is also the Nez Perce Nee-Me-Poo National Historic Trail-Auto Tour Route that follows the 1877 flight of the Nez Perce on their way towards Yellowstone National Park. Between Raynolds Pass and Red Rocks Pass, there is a western ranching atmosphere from grazing cattle, water tanks, fences, and rider's cabins.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Henrys Lake scenic character unit.

- MT02 (Targhee Pass to Red Rocks Pass)
- MT01 (Idaho Border to Targhee Pass)

#### Location

• Moose Creek Plateau and Henrys Lake Mountains in southwestern Montana and eastern Idaho

### Length

• 70 miles

## Percent on Road

• 33 percent

### Percent on Trail

• 67 percent

### Land Manager

- Caribou-Targhee National Forest
- Custer Gallatin National Forest
- Beaverhead-Deerlodge National Forest
- Yellowstone National Park

### Designated Areas

- Nez Perce Nee-Me-Poo National Historic Trail
- Targhee Creek Research Natural Area
- Moose Creek Plateau Research Natural Area

### Significant Scenic, Cultural, and Natural Features

- There are five mountain passes in the Henry Lake Mountains unit: Raynolds, Reas, Red Rock, Snoo-weh, and Targhee Passes.
- Summits include Lionhead(s), Bald Peak(s), Targhee Peak

## Continental Divide Trail Scenic Character Descriptions

- Lionhead Recommended Wilderness Area
- Yellowstone Geothermal Area

## Named Streams

- Anthill Creek
- East Fork Denny Creek
- Mile Creek
- North Fork Split Creek
- Reas Pass Creek
- Targhee Creek

## Yellowstone Scenic Character Unit

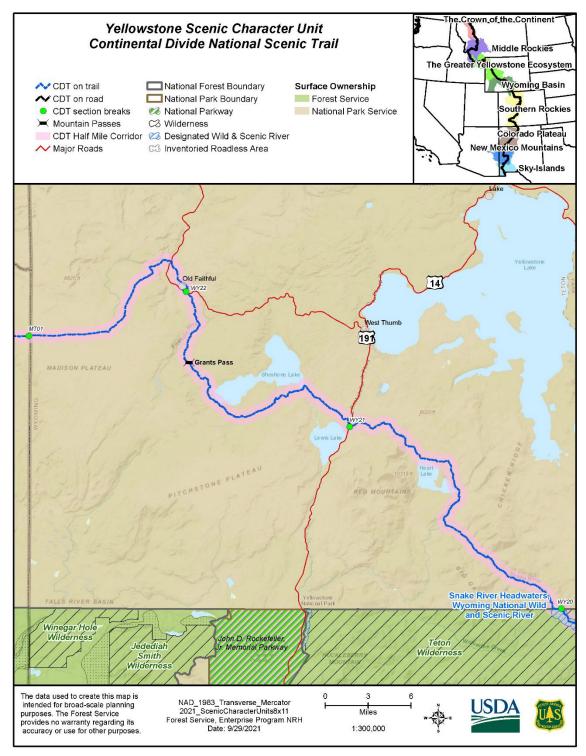


Figure 25. Map of Yellowstone scenic character unit



Figure 26. The Continental Divide wanders through geyser basins within the Yellowstone scenic character unit. Photo Credit: Mike Henrick

In the Yellowstone unit, the CDT crosses the southwest corner of the volcanically active Yellowstone National Park. The Henry Lakes Mountains lie to the west, and the Absaroka Range lies to the southeast. The CDT traverses massive, high-elevation plateaus and otherworldly geyser basins, which are the highest concentration of geysers, mudpots, fumaroles, and hot springs in the world. The glaciated plateau tops have gentle relief, and the unit has less elevation change than surrounding mountainous units. Trail elevations range between 7,278 and 8,622 feet.

Vegetation varies from dense to open lodgepole pine forest, with open areas of sagebrush and shrubs. Wetlands and meadows create vast complexes. Geothermal influence from geyser basins provides habitat for plant, animal, and invertebrate species uniquely adapted to extreme temperatures.

Streams have high to moderate gradients. The Firehole River crosses through geyser basins and is influenced by the influx of geothermal water. At the southern end of the unit, the CDT follows the upper reaches of the Snake River as it drains off the Two Ocean Plateau. The CDT touches the shores of the remote and cold Shoshone and Heart Lakes. The geology of the unit is predominantly extrusive igneous rocks that are mostly rhyolite, basalt, and tuff.

### Other Attributes

Major land uses include tourism, recreation, and wildlife habitat. Most of the unit is remote within a primitive setting and very high existing scenic integrity. Areas around US Highway 191 have high traffic and frequent interaction between visitors. In the Old Faithful area, the setting is urban with large numbers of visitors and buildings. The unit has a rich history of indigenous use,

American exploration, scientific research, and National Park management. The Firehole River possesses outstandingly remarkable values and is eligible for Wild and Scenic River designation.

## Feature Summary

### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Yellowstone scenic character unit.

- WY22 (Howard Eaton TH to Idaho Border)
- WY21 (Heart Lake TH (Hwy 287) to Howard Eaton TH)
- WY20 (Fox Park to Heart Lake TH Hwy 287)

#### Location

 Yellowstone Plateau (smaller plateaus that make up the greater Yellowstone Plateau - the CDT crosses the Madison, Pitchstone, and Two Ocean Plateaus) in eastern Idaho and northwest Wyoming

### Length

• 68 miles

### Percent on Road

• 0 percent

#### Percent on Trail

• 100 percent

### Land Manager

• Yellowstone National Park, National Park Service

### Designated Areas

- Yellowstone National Park
- International Biosphere Reserve
- World Heritage Site

### Significant Scenic, Cultural, and Natural Features

- There is one mountain pass in the Yellowstone unit: Grants Pass.
- Summits include Geyser Hill
- The Firehole River is an eligible Wild and Scenic River that possesses Outstandingly Remarkable Values for Fish, Geologic, Historic, Recreational, Scenic, Wildlife, and other values. It is classified as scenic and wild.
- Yellowstone National Park is an Audubon Important Bird Area. Notable species are American White Pelicans, Trumpeter Swans, Bald Eagles, Osprey, Peregrine Falcons, Harlequin Ducks, Great Gray Owls, and Barrow's Goldeneyes
- Numerous geysers and geothermal features including Shoshone Geyser Basin, Upper Geyser Basin, Biscuit Basin, Black Sand Geyser Basin, Heart Lake Geyser Basin, Old Faithful Geyser, Chromatic Pool, and Morning Glory Pool Group.
- Old Faithful Inn
- Shoshone Lake

## • Heart Lake

## Named Streams (streams with outstandingly remarkable values are in bold)

- Beaver Creek
- Cascade Creek
- Cold Mountain Creek
- Dogshead Creek
- Firehole River
- Heart River
- Lewis River
- Little Firehole River
- Moose Creek
- Shoshone Creek
- Sickle Creek
- Snake River
- Summit Creek
- Surprise Creek
- Witch Creek

## Absaroka Range Scenic Character Unit

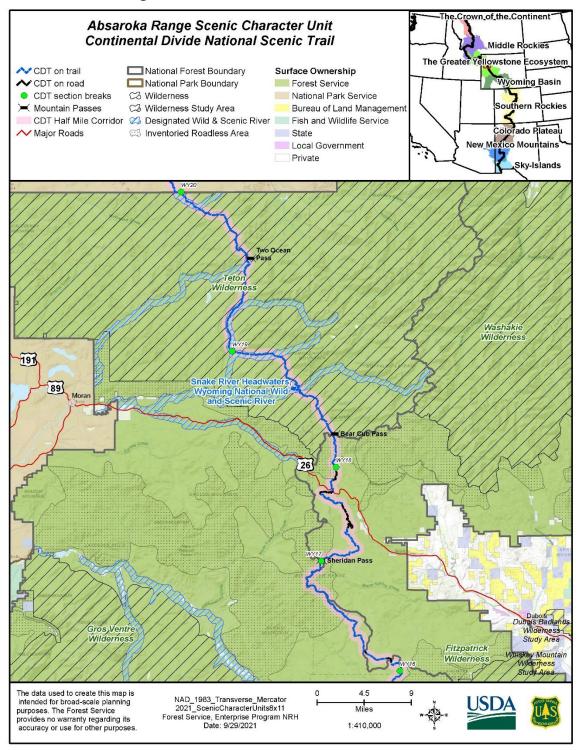


Figure 27. Map of Absaroka Range scenic character unit



Figure 28. The Continental Divide Trail passes cliffs in the Absaroka Range scenic character unit. Photo Credit: Rachel Franchina

In the Absaroka Range unit, the CDT winds its way through the southwestern Absaroka Range and the northern fringes of the Wind River Range. North of the unit is the Yellowstone Plateau, and south is the Wind River Range. The unit is ecologically diverse with over six distinct ecological zones. Trail elevations range between 7,364 and 10,082 feet.

Terrain consists of glaciated, steep mountains and plateaus with deeply cut valleys. Alpine areas display jagged peaks with glacial features including tarns, moraines, U-shaped valleys, and cirques. Lower elevation forest is Douglas-fir with lodgepole pine. Higher elevation forest is spruce and fir. Grasslands, shrublands, and meadows create vast complexes. Fire and natural disturbances affect the mosaic of vegetation.

The headwaters of the Snake and Yellowstone Rivers originate from the northern area of the unit. At Two Ocean Pass, Two Ocean Creek splits to send water to both the Atlantic and the Pacific Oceans. In the northern areas, the geology is volcanic with very erodible andesitic rock, and moderate to high gradient perennial streams are prone to high sediment loading, especially after storm events and during spring snowmelt. In the southern area, the foothills of the Wind River range are mostly sedimentary rock.

### Other Attributes

Major land uses include designated wilderness, inventoried roadless areas, timber production, livestock grazing, wildlife habitat, hunting, and recreation. The only major road crossing is US Highway 26 at Togwotee Pass. This road is a scenic byway, recognized for its spectacular scenery. North of Bear Cub Pass in the Teton Wilderness, the recreation setting is remote and primitive with a high degree of solitude and self-reliance. Existing scenic integrity is very high. South of Togwotee Pass, the recreation setting is intermittently influenced by the presence of roads with a moderate degree of solitude. Areas adjacent to roads have more developments and management activities.

## Feature Summary

### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Absaroka Range scenic character unit.

- WY19 (North Fork Buffalo River to Fox Park)
- WY18 (Brooks Lake TH to North Fork Buffalo River)
- WY17 (Sheridan Pass to Brooks Lake TH)
- WY16 (Union Pass to Sheridan Pass)

### Location

• Southwest Absaroka Range and foothills to the Wind River Range in west central Wyoming

### Length

• 86 miles

## Percent on Road

• 6 percent

### Percent on Trail

• 94 percent

### Land Manager

- Bridger-Teton National Forest
- Shoshone National Forest

## Designated Areas

- Teton Wilderness
- Snake River Headwaters, Wyoming National Wild and Scenic River. The following streams are crossed by the CDT in this unit, all are classified as wild.
  - ♦ North Buffalo Fork scenic, recreational, ecological, wildlife, fish, geologic outstandingly remarkable values
  - ◆ Pacific Creek recreational, ecological, wildlife, fish, geologic outstandingly remarkable values
  - ♦ Snake River recreational, ecological, wildlife, and fish outstandingly remarkable values
  - ♦ South Buffalo Fork scenic, recreational, ecological, wildlife, fish, geologic outstandingly remarkable values

• US Highway 26 is a portion of the Wyoming Centennial Scenic Byway (state designation)

## Significant Scenic, Cultural, and Natural Features

- There are three mountain passes in the Absaroka Range unit: Bear Cub, Sheridan, and Two Ocean Passes.
- There are no summits within 0.5 mile of the CDT in the Absaroka Range unit.
- Brooks Lake

## Named Streams (streams with outstandingly remarkable values are in bold)

- Brooks Lake Creek
- Bullmoose Creek
- Cub Creek
- Evermann Creek
- Lava Creek
- Leeds Creek
- Mink Creek
- North Buffalo Fork
- North Two Ocean Creek
- Pacific Creek
- Pelham Lake Creek
- Plateau Creek
- Salt Creek
- Sheridan Creek
- Snake River
- Soda Fork
- South Buffalo Fork
- Trail Creek
- Wind River

# Wind River Range Scenic Character Unit

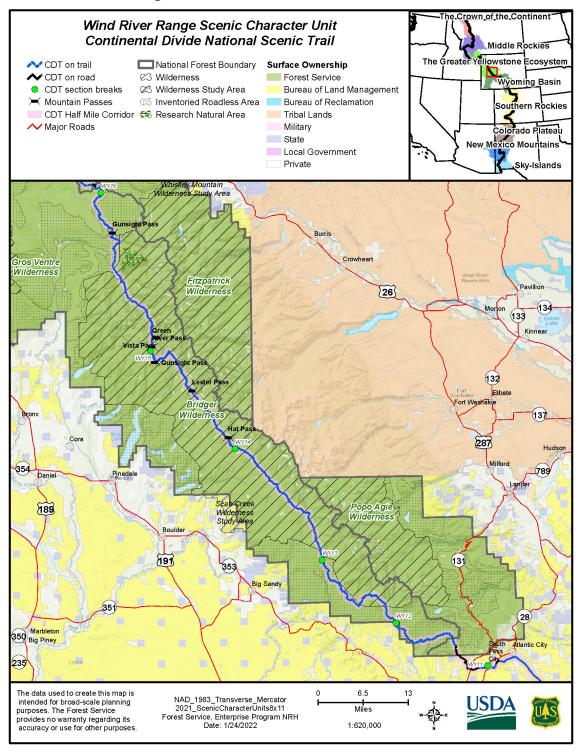


Figure 29. Map of Wind River Range scenic character unit



Figure 30. The Continental Divide Trail crosses through monolithic granitic mountains in the Wind River scenic character unit. Photo Credit: Tom Gathman

The Wind River Range is a southeast-northwest running extension of the Greater Yellowstone Ecosystem Province, which lies to the north. To the south, west, and east lie the Wyoming Basin Province. In this unit the CDT crosses through colossal mountains and an expansive high-country landscape of rock, lakes, and glacial basins. Trail elevations range between 7,813 and 11,107 feet. Mountain summit elevations exceed 13,000 feet.

The Wind River Range has a granitic core with broad glacial basins and spectacular jagged peaks. Glaciers have sculpted the mountains and continue to do so. The range contains the largest system of glaciers in the U.S. Rockies. The granitic core is fringed by sedimentary mountains that are eroding away. The CDT traverses these sedimentary mountains on the north and south ends of the range, and the geology changes with elevation. Within the core Wind River Range, soils are granitic and porous, but the bedrock is shallow and impervious. Thousands of glacial tarns dot the range.

Forests are predominantly lodgepole pine at lower elevations, and spruce-fir at higher elevations. The understory is sparse. The alpine zone is characteristically exposed rock, talus, tundra, and glacial tarn basins. Above 10,000 feet, krummholz vegetation clings to windswept areas above a mosaic of meadow and subalpine forest. Alpine tundra plants, including forbs, sedges, and grasses, support nomadic groups of mountain bighorn sheep and mountain goats.

Wind River Range snowpack spawns numerous high-gradient streams within the unit. In the northern section of the unit, CDT follows the upper Green River as it flows through the Green River Lakes and monolithic mountains. South of Green River Pass, Pine Creek flows into a deep,

classic glacial valley. At the southern end, the CDT crosses the headwaters of the Sweetwater River.

## **Other Attributes**

Major land uses include recreation, inventoried roadless areas, designated wilderness, hunting, livestock grazing, and wildlife habitat. On the far north and south ends, areas adjacent to roads have moderate existing scenic integrity with more developments and management activities. The recreation setting has a moderate degree of solitude and self-reliance.

The interior of the unit is mostly designated wilderness with a remote, primitive recreation setting and a high degree of self-reliance and challenge. During the summer months, interaction between visitors is moderate but low at other times of the year. The existing scenic integrity is very high.

At the southern end, the CDT crosses a historic transportation corridor, which contains the Oregon, Mormon, California, and Pony Express National Historic Trails, in addition to the use of indigenous people for travel for thousands of years.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Wind River Range scenic character unit.

- WY15 (Summit Lake to Union Pass)
- WY14 (North Fork Lake to Summit Lake)
- WY13 (Big Sandy to North Fork Lake)
- WY12 (Sweetwater Guard Station to Big Sandy)
- WY11 (South Pass City to Sweetwater Guard Station)

#### Location

Wind River Range in west central Wyoming

## Length

• 131 miles

#### Percent on Road

• 6 percent

#### Percent on Trail

• 94 percent

## Land Manager

- Bridger-Teton National Forest
- Shoshone National Forest
- BLM Rock Springs Field Office
- BLM Lander Field Office
- State of Wyoming

## Designated Areas

- Bridger Wilderness
- The CDT crosses the following National Historic Trails north of the Sweetwater River.
  - Pony Express National Historic Trail
  - California National Historic Trail
  - ♦ Mormon Pioneer National Historic Trail
  - Oregon National Historic Trail

## Significant Scenic, Cultural, and Natural Features

- There are six mountain passes in the Wind River Range unit: Gunsight, Lester, Green River, Gunsight (in Bridger Wilderness), Hat, and Vista Passes.
- Summits include Crows Nest and Halls Butte.
- There are four streams with outstandingly remarkable values (ORV) and eligible for Wild and Scenic River designation, all are classified as wild:
  - ♦ Green River: Fish, Historic, Recreational, Scenic, Wildlife outstandingly remarkable values
  - Roaring Fork Creek: Scenic outstandingly remarkable values
  - Pine Creek: Geologic, Recreational, Scenic outstandingly remarkable values
  - Sweetwater River: Scenic, Recreational, Wild, Historic outstandingly remarkable values
- The CDT briefly enters the Audubon Little Sandy Important Bird Area. The Little Sandy Landscape is a largely intact sagebrush-steppe ecosystem. Notable species Greater Sage-Grouse, Loggerhead Shrike, Burrowing Owl, Short-eared Owl, Ferruginous Hawk, Bald Eagle, and sagebrush obligate species such as Sage Sparrow, Brewer's Sparrow and Sage Thrasher.
- Green River Lakes
- Views of Squaretop Mountain

## Named Streams (streams with outstandingly remarkable values are in bold)

- Big Sandy River
- Blair Creek
- Clear Creek
- Corral Creek
- Dads Creek
- Dead Ox Creek
- Donald Creek
- Dream Creek
- Dutch Joe Creek
- East Fork River
- East Fork Squaw Creek
- East Sweetwater River
- Elbow Creek
- Falls Creek
- Fish Creek
- Fremont Creek
- Green River
- Halls Creek
- Larsen Creek

- Little Fall Creek
- Little Sandy Creek
- Little Sweetwater River
- Lookout Creek
- Marten Creek
- Middle Fork Boulder Creek
- Middle Fork Squaw Creek
- Mill Creek
- North Fork Boulder Creek
- North Fork Silver Creek
- Pine Creek
- Pipestone Creek
- Pixley Creek
- Pole Creek
- Raid Creek
- Roaring Fork
- Sheep Creek
- South Fork Boulder Creek
- South Fork Fish Creek
- South Temple Creek
- Sweetwater River
- Trail Creek
- West Fork Squaw Creek
- Willow Creek

# **Wyoming Basin Province**

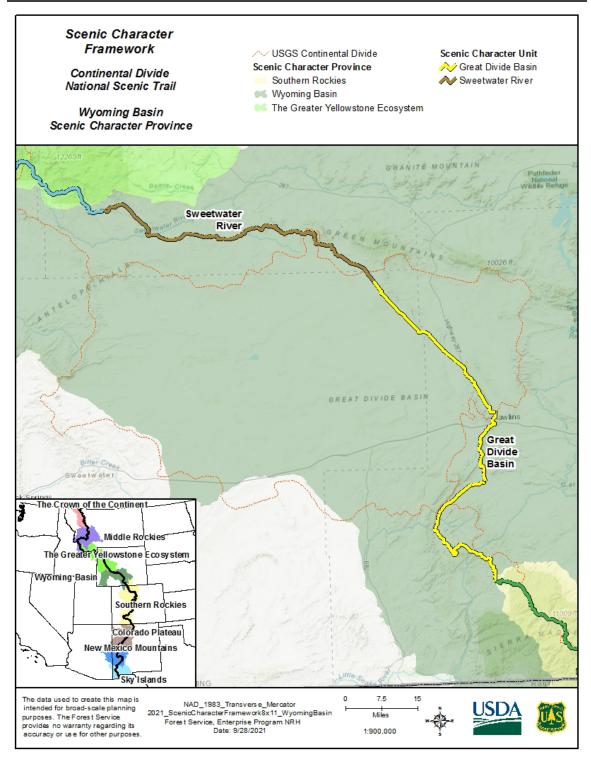


Figure 31. Map of Continental Divide Trail scenic character units in the Wyoming Basin province.

#### Continental Divide Trail Scenic Character Descriptions

Lying between the Greater Yellowstone and the Southern Rockies provinces, the Wyoming Basin province is an elevated depression within the Rocky Mountains. The terrain is characterized by unglaciated, rolling, flat plains punctuated with islands of low mountains, barren hills, hogbacks, cuestas, and numerous basins. Vegetation is predominantly sagebrush steppe with grasslands and shrublands. Foothills and low mountains contain seeps and springs, and are forested with juniper, lodgepole pine, limber pine, aspen, and Douglas-fir. Mountain mahogany woodlands surround rock outcrops, and basins are dominated by alkaline tolerant desert shrubs and grasses.

The province is in the rain shadow of the surrounding forested mountains, rendering the climate arid to semi-arid. The region is a cold desert with long, very cold winters and short, moderately hot summers. Foothills and low mountains receive slightly more precipitation than lower elevation plains to support trees. Basins receive less precipitation than the plains.

The Red Desert is located within the northern portions of the province which is the largest unfenced area in the contiguous U.S. and home to wild horses. This unique habitat harbors seasonal ponds and wetlands. Migratory pronghorn and desert-adapted elk herds also roam the area.

Much of the region is used for livestock grazing. The region also contains major natural gas and petroleum producing fields. The Wyoming Basin has extensive coal deposits along with areas of trona, bentonite, clay, and uranium mining.

The following scenic character units occur within the Wyoming Basin province:

- Sweetwater River
- Great Divide Basin

## Sweetwater River Scenic Character Unit

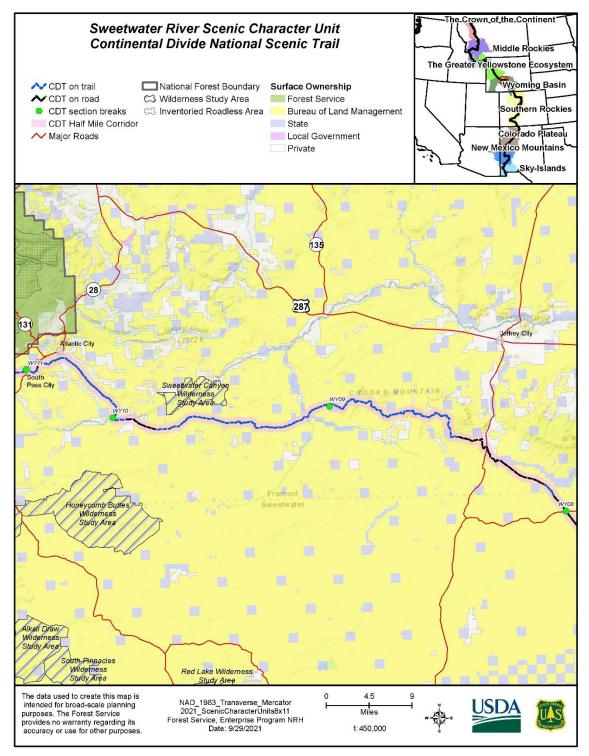


Figure 32. Map of Sweetwater River scenic character unit



Figure 33. The Continental Divide Trail crosses the Sweetwater River within a semi-arid desert environment in the Sweetwater River scenic character unit. Photo Credit: Ken Lund

The Sweetwater River unit connects the Wind River Range to the north with the Great Divide Basin to the south. In the north, the CDT traverses the foothills of the Wind River Range. In the south, the CDT enters the Red Desert. Trail elevations range between 6,754 and 8,250 feet.

The foothills of the Wind River Range are unglaciated with alluvial fans, hills, ridges, and valleys. Upland vegetation is mostly sagebrush, rabbitbrush, and grass. Alluvial fans occur near the mountains. Wetlands, willows, and riparian habitat grow adjacent to streams and create green corridors in the desert environment. Coniferous trees grow in the upper elevations. Geology is mostly sedimentary with granitic rocks that have tumbled down from the nearby mountains.

The Red Desert is an expanse of sagebrush-grassland steppe with intermittent islands of hills, buttes, ridges, and low mountains that contain springs and seeps. The higher elevation islands have woodland of limber pine and aspen with an understory of deciduous shrubs. Seasonal wetlands support wildlife in the sagebrush-grassland steppe.

Streams originating in the Wind River Range and foothill springs have steep gradients with riffles and plunge pools. Their substrates are generally comprised of limestone or granite cobble and boulders. Streams originating from within the basin are more incised, lower gradient, and contain finer gravel substrates. Small streams are ephemeral and intermittent with sandy substrates. The

Sweetwater River contains dense willow and shrub riparian habitat with many braided channels. Water is a cherished resource in the desert environment.

#### Other Attributes

Major land uses include livestock grazing, wildlife habitat, timber production, and oil and gas production. A gold mining district is located near South Pass City. South Pass City is a historic area with restored original structures from the 1860s period. An interpretive center educates visitors about the gold producing methods that have been used in the area.

The recreation setting is rural in areas. Areas adjacent to roads have moderate existing scenic integrity with more developments and management activities. The Sweetwater River corridor has higher existing scenic integrity and a recreation setting with a moderate degree of solitude and self-reliance. South of Sweetwater River, the CDT crosses a historic transportation corridor and the California National Historic Trail.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Sweetwater River scenic character unit.

- WY10 (Sweetwater Bridge to South Pass City)
- WY09 (Bison Basin Rd to Sweetwater Bridge)
- WY08 (CR 22 AP to Bison Basin Rd)

#### Location

• Wind River Range foothills and north Wyoming Basin in west central Wyoming

## Length

• 75 miles

#### Percent on Road

• 25 percent

#### Percent on Trail

• 75 percent

#### Land Manager

- BLM Lander Field Office
- BLM Rawlins Field Office
- State of Wyoming

#### Designated Areas

• South of the Sweetwater River, the CDT crosses the California National Historic Trail

## Significant Scenic, Cultural, and Natural Features

- There are no gaps or summits within the Sweetwater River unit.
- South Pass City

- The Sweetwater River is eligible for Wild and Scenic River designation for possessing Scenic, Recreational, Wild, Historic Outstandingly Remarkable Values.
- There are two Audubon Important Bird Areas in this unit.
  - Red Desert is a large expanse of relatively intact sagebrush habitat. Notable species are sagebrush obligates: Greater Sage-grouse, Sage Thrasher, Sage Sparrow, and Brewer's Sparrow.
  - ♦ The Nature Conservancy, Sweetwater River Project Area includes an uninterrupted stretch of the Sweetwater River and is particularly important for migrating birds.

## Named Streams (streams with outstandingly remarkable values are in bold)

- Alkali Creek
- Bare Ring Slough
- Granite Creek
- Harris Slough
- Haypress Creek
- Long Slough
- Mormon Creek
- Rock Creek Ditch
- Spring Creek
- Sweetwater River
- West Fork Crooks Creek
- Willow Creek

## Great Divide Basin Scenic Character Unit

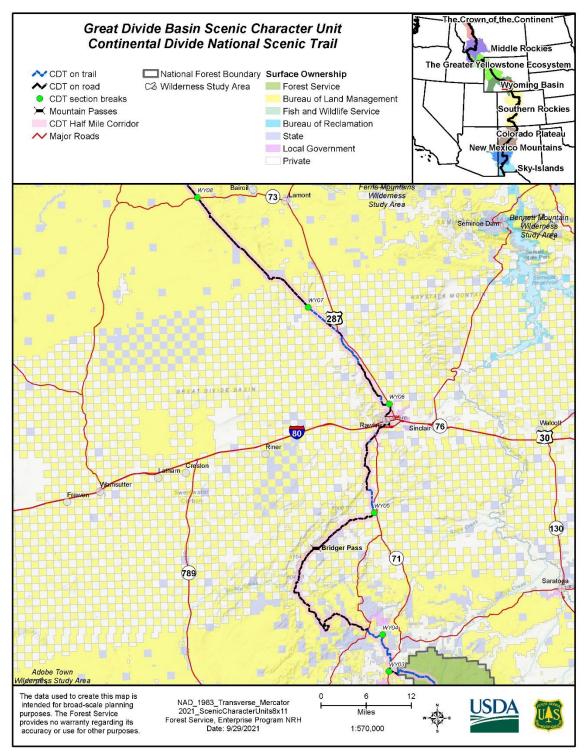


Figure 34. Map of Great Divide Basin scenic character unit



Figure 35. The Continental Divide Trail crosses an arid expanse of semi-desert in the Great Divide Basin scenic character unit. Photo Credit: Matt Berger

The Great Divide Basin unit is an area of transition between the lower elevations of the Wyoming Basin to the north and the high country of the Southern Rockies to the south. Here, the CDT traverses rolling plains, basins, and foothills. Trail elevations range between 6,516 and 8,177 feet.

The CDT crosses the Great Divide Basin, where the physical Continental Divide splits in two and forms a hydrologically closed basin. Water neither flows into nor out of the basin. Streams are typically incised, ephemeral or intermittent with sand or shale substrates. Sagebrush is the predominant vegetation with grasses and shrubs. Lower elevation basins have a sparse cover of arid and alkaline tolerant shrubs. The geology is predominantly sedimentary rock.

The northern portion of the unit is in the Red Desert. In the southern portion, the CDT traverses the semi-arid foothills of the Sierra Madre Range. Grassland is interspersed with sagebrush and mountain mahogany shrublands. Patches of aspen, limber pine, and Douglas-fir grow on some north-facing slopes. Streams that originate from the nearby mountains support willows and cottonwood and have gravelly cobble substrates. The geology is metasedimentary and metavolcanic rock.

## Other Attributes

Major land uses include livestock grazing, wildlife habitat, gas and coal production, and uranium mining. The recreation setting is influenced by roads with easy access, motorized use, and a moderate degree of interaction with people. In areas, a checkerboard ownership renders existing scenic integrity moderate. Oil and gas, mining operations, and associated roads render some areas with low existing scenic integrity which does not meet the CDT's nature and purposes. The setting is urban as the CDT passes through the town of Rawlins, where Interstate 80 crosses.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Great Divide Basin scenic character unit.

- WY07 (CR 63 to CR 22 AP)
- WY06 (US 287 to CR 63)
- WY05 (Bridger Pass Road Access to US 287)
- WY04 (BLM 3328 to Bridger Pass Road Access)
- WY03 (CR 401 to BLM 3328)

#### Location

Great Divide Basin and Sierra Madre Range foothills in south central Wyoming

#### Length

• 102 miles

## Percent on Road

• 78 percent

#### Percent on Trail

• 22 percent

## Land Manager

- BLM Rawlins Field Office
- State of Wyoming

## Designated Areas

• None identified

#### Significant Scenic, Cultural, and Natural Features

- There is one mountain pass in the Great Divide Basin unit: Bridger Pass
- Summits include: Ninemile Hill and Willow Hill
- Emigrant Trail
- Rawlins
- There are two Audubon Important Bird Areas in this unit.
  - Red Desert (described in the Sweetwater River scenic character unit)
  - ♦ Shamrock Hills Raptor Concentration Area is the largest breeding grounds for Ferruginous Hawks in the Western U.S. Other notable species are Lark Bunting, Sage Sparrow, Sage Thrasher, Say's Phoebe, Mountain Bluebird, Golden Eagle, Burrowing

## Continental Divide Trail Scenic Character Descriptions

Owl, Northern Harrier, Prairie Falcon, American Kestrel, Great Horned Owl, and Redtailed Hawks. Mountain Plovers are also found in the area but in very low numbers.

## Named Streams

- Coal Creek
- Emigrant Creek
- Little Sage Creek
- North Fork Savery Creek
- Sugar Creek
- Truckdrivers Creek

## **Southern Rockies Province**

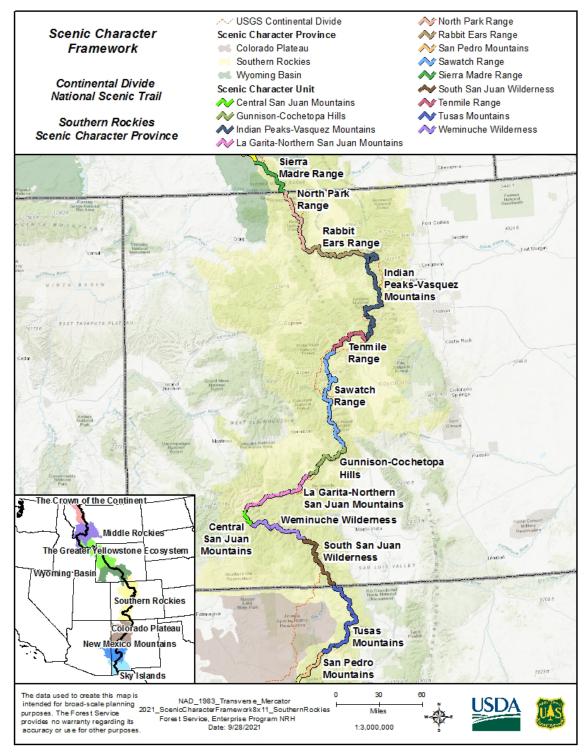


Figure 36. Map of Continental Divide Trail scenic character units in the Southern Rockies province.

The Southern Rockies province is formed by massive mountains, plateaus, and mesas. It is the most continuous stretch of high country and largest scenic character province that the CDT travels through. It extends from the Wyoming Basin south through western Colorado to the San Pedro Mountains in northern New Mexico (figure 36).

High-elevation mountain ranges are north-south trending with large treeless parks in between. Elevations range between 6,500 to 14,400 feet, and more than 50 peaks have elevations over 14,000 feet. Local relief ranges between 3,000 and 7,000 feet. Numerous high-gradient streams dissect the mountain ranges carving narrow, steep stream valleys and steep-walled canyons. The headwaters of many major rivers on the High Plains and the Colorado Plateau originate from this province.

Prevailing west winds render east slopes drier than west slopes. At higher elevations, annual precipitation increases to 40 inches and average temperatures are lower. Foothills and lower elevation plains to the east and west receive less precipitation. Winter snow varies considerably with altitude. In the highest mountains, deep snowpack accumulates throughout the winter and persists into the spring and early summer. Summer rainfall commonly occurs as high intensity thunderstorms.

Vegetation grows in pronounced patterns of elevational bands, dictated by slope, aspect, and altitude. The alpine zone is characterized by alpine tundra and the absence of trees. Directly below the alpine is the subalpine zone, dominated in most places by Engelmann spruce and subalpine fir. Below this area lies the montane zone, characterized by Douglas-fir. Aspen or lodgepole pine dominate after fire in the subalpine zone and in the upper part of the montane zone. Below the montane belt is the foothill (woodland) zone. Dry rocky slopes in this zone often have a growth of shrubs in which mountain mahogany and Gambel oak are conspicuous components.

Ponderosa pine grows in lower, drier, bands between 6,000 and 9,000 feet, generally in the southern areas of the province. Open parks are a conspicuous feature of this province. Parks are large, mostly treeless depressions in the mountains dominated by grasses. Some parks are covered largely by sagebrush and other shrubs, such as antelope bitterbrush.

The federal government manages approximately 70 percent of the land in this province. Grazing, forestry, recreation, wildlife habitat, and conservation are the major land uses. The large areas of public land provide excellent opportunities for outdoor recreation, particularly hunting, fishing, skiing, camping, trail uses, boating, and sightseeing. Spectacular mountain scenery in many parts of the province contributes to the popularity of these activities and attracts tourists from all over the world. Recreation supports a significant tourism industry upon which many local economies are dependent. The CDT coincides with the Colorado Trail for over 300 miles.

The province includes the Colorado Mineral Belt, a broad area stretching northeast from the San Juan Mountains in southwestern Colorado to the Colorado Front Range. Most of the historic mining camps of Colorado lie in this area.

The following scenic character units occur within the Southern Rockies province:

- Sierra Madre Range
- Park Range
- Rabbit Ears Range

## Continental Divide Trail Scenic Character Descriptions

- Indian Peaks-Vasquez Mountains
- Tenmile Range
- Sawatch Range
- Gunnison-Cochetopa Hills
- La Garita-Northern San Juan Mountains
- Central San Juan Mountains
- Weminuche Wilderness
- South San Juan Wilderness
- Tusas Mountains
- San Pedro Mountains

# Sierra Madre Range Scenic Character Unit

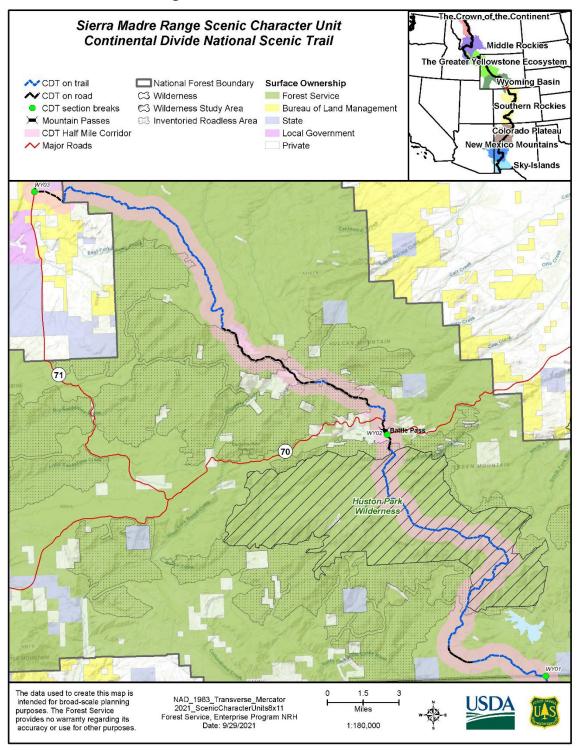


Figure 37. Map of Sierra Madre Range scenic character unit

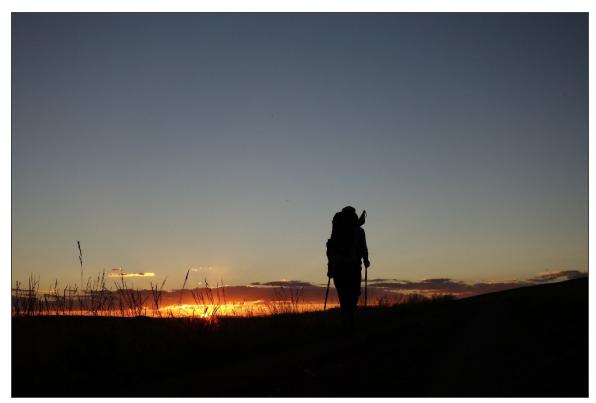


Figure 38. The Continental Divide Trail crosses Battle Pass within the Sierra Madre scenic character unit. Photo Credit: Johnny Carr

In the Sierra Madre Range, the CDT traverses rounded, forested mountains as it transitions between foothills and the high country of the Southern Rockies. The Great Basin lies to the north and rugged, high mountains of the Southern Rockies lie to the south. The range captures moisture laden air from the west, producing large amounts of snowfall. The high country endures long, cold winters and short-lived summers. Trail elevations range between 7,714 and 10,952 feet.

In the foothills, forests are lodgepole pine and Douglas-fir. Subalpine fir and Engelmann spruce grow along the high ridges and steep crests of glaciated mountains. Whitebark and limber pines occur in localized areas. Aspen stands are common, especially on west-facing slopes. Open, wet, and brushy parks of forbs and grasses are common throughout the unit. Recent insect outbreaks and fire exclusion affect the mosaic of vegetation.

Perennial streams are moderate to high gradient with boulder, cobble, and bedrock substrates. Drainages contribute headwaters to the Encampment and Little Snake Rivers. The geology is mostly granitic rock with some metamorphic rock of sedimentary and volcanic origin and pockets of glacial deposits.

## Other Attributes

Major land uses include wildlife habitat, inventoried roadless areas, designated wilderness, livestock grazing, logging, recreation, and mineral extraction (copper, silver, and gold mining). A legacy of mining is evident with traces scattered throughout the area.

Wyoming Highway 70 bisects the unit at Battle Pass and is a state designated scenic byway. Areas adjacent to roads have more developments and management activities, and moderate existing scenic integrity. The recreation setting has a moderate degree of solitude and high degree of self-reliance.

Locally known as the Huston Park Trail, the CDT passes through the Huston Park Wilderness. Within the wilderness, the CDT lacks tread and is located by rock cairns and tree blazes. Here the recreation setting is primitive, remote, with a high degree of solitude and self-reliance. Existing scenic integrity is very high.

In some areas, federal ownership is interspersed with privately owned inholdings. The Battle Townsite Overlook interprets the historic mining era. Some areas exhibit very low existing scenic integrity from this era, which does not meet the CDT's nature and purposes.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Sierra Madre Range scenic character unit.

- WY01 (Colorado border to Battle Pass)
- WY02 (Battle Pass to County Road 401)

#### Location

• Sierra Madre Range in south central Wyoming

## Length

• 45 miles

## Percent on Road

• 26 percent

## Percent on Trail

• 74 percent

#### Land Manager

- Medicine Bow-Routt National Forest
- BLM Rawlins Field Office

## Designated Areas

- Huston Park Wilderness
- Battle Pass State of Wyoming Scenic Byway

## Significant Scenic, Cultural, and Natural Features

- There is one pass in the Sierra Madre Range unit: Battle Pass
- Summits include Bridger Peak, Divide Peak, Doane Peak, Red Mountain, and McCormick Peak
- Historic Battle Townsite
- Huston Park

• Long Park

## Named Streams

- Hartt Creek
- North Fork Little Snake River
- South Fork Encampment River
- West Branch North Fork Little Snake

# Park Range Scenic Character Unit

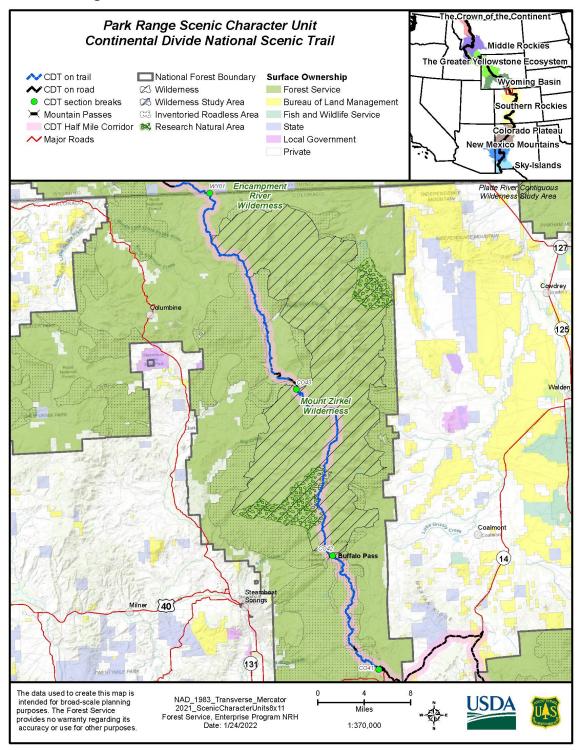


Figure 39. Map of the Park Range scenic character unit



Figure 40. The Continental Divide Trail crosses a grassy park in the Park Range scenic character unit. Photo Credit: Mike Henrick

The Park Range scenic character unit is a glaciated landscape with cirque basins and areas of exposed rock. Snowy mountains, glacial lakes, meadows, and swift flowing streams form distinctive scenery. Trail elevation ranges between 8,040 and 11,880 feet.

In this unit the CDT passes through a box canyon, open grassland parks, aspen groves, and coniferous forest. Disturbances such as blowdown, insect outbreaks, fire, and avalanches create a mosaic of vegetation. The heart of the unit is the Mount Zirkel Wilderness where the CDT enters the tundra and rugged peaks of the alpine zone. South of the wilderness, landform becomes undulating plateau with forest and grassland. Large snowfields persist into the summer months.

Near Buffalo Pass, the CDT skirts the eastern boundary of the Mad Creek Research Natural Area, an exemplary glaciated landscape. Here, the CDT is in subalpine grasslands of tufted hairgrass and old-growth subalpine forest. Deep snow and wind create patterns of subalpine forest and meadow that resemble ribbons about twenty to thirty feet apart.

The unit encompasses the headwaters of the Elk River. Soils are predominantly weathered from a variety of crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusive rocks. Soils of sedimentary origin are less common.

## Other Attributes

Major land uses include recreation, logging, mining, Colorado roadless areas, designated wilderness, livestock grazing, and wildlife habitat. At higher elevations, the recreation setting is

predominantly primitive and challenging in an alpine environment. Recreation use is high north of Buffalo Pass and in some sections of the wilderness. The Mount Zirkel Wilderness and adjacent Colorado roadless areas lack much human modification, and existing scenic integrity is mostly very high and high. North, Middle and South Fork of Elk River have been found eligible for wild and scenic designation, possessing outstandingly remarkable values for fish, recreation, scenic, and other values.

Areas adjacent to roads, such as Buffalo Pass and Rabbit Pass, exhibit moderate existing scenic integrity with more developments and management activities. These areas are easier to access and have more interactions between visitors.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Park Range scenic character unit.

- CO43 (North Lake to Wyoming Border)
- CO42 (Buffalo Pass to North Lake)
- CO41 (Rabbit Ears Pass to Buffalo Pass)

#### Location

• Park Range in northwest Colorado

#### Length

• 61 miles

#### Percent on Road

• 5 percent

#### Percent on Trail

• 95 percent

## Land Manager

Medicine Bow-Routt National Forest

#### Designated Areas

- Mount Zirkel Wilderness
- Mad Creek Research Natural Area

## Significant Scenic, Cultural, and Natural Features

- There are two mountain passes in the Park Range unit: Buffalo Pass and Rabbit Ears Pass.
- Summits include Lost Ranger Peak and Mt. Zirkel
- Box Canyon
- The CDT crosses the following streams with Outstandingly Remarkable Values (ORV) that are eligible for Wild and Scenic designation and classified as scenic and wild
  - North Fork of the Elk River (creek), ORV: fish, recreation, scenic, other
  - Middle Fork of the Elk River, ORV: fish, recreation, scenic, other

## Named Streams (streams with outstandingly remarkable values are in bold)

- English Creek
- Fishhook Creek
- Lost Dog Creek
- Middle Fork Elk River
- Middle Fork Little Snake River
- Muddy Creek
- North Fork Elk Creek
- North Fork Fish Creek
- North Fork Mad Creek
- North Three Island Creek
- Trail Creek

# Rabbit Ears Range Scenic Character Unit

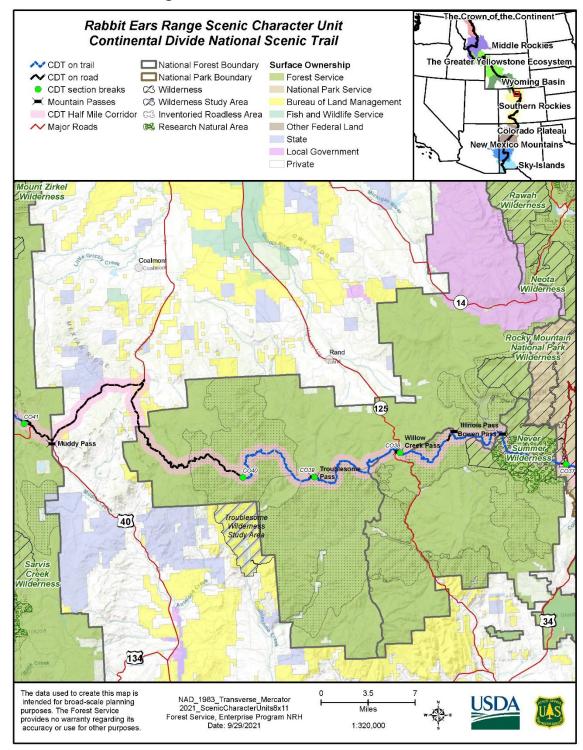


Figure 41. Map of Rabbit Ears Range scenic character unit



Figure 42. The Continental Divide Trail crosses the Never Summer Wilderness in the Rabbit Ears Range scenic character unit. Photo Credit: Mike Henrick

The Rabbit Ears unit is an area of ecological diversity, where the CDT passes through five distinct ecological zones. The CDT traverses the Rabbit Ears Mountain Range that connects the Park Range in the west to the Never Summer Mountains in the east. The landforms are diverse with rolling uplands, craggy peaks, talus slopes, basalt outcrops, and glacial features. The eastern reach of this unit enters the western part of Rocky Mountain National Park, where the CDT crosses the upper Colorado River within the glacial Kawuneeche Valley. Trail elevation ranges between 8,350 and 12,290 feet.

In this unit, the CDT passes through dense coniferous forest, bright aspen groves, wet meadows, open grasslands, sagebrush steppe, riparian areas, alpine tundra, and exposed rock. Bowen Gulch contains ancient old-growth Engelmann spruce/subalpine fir forest and is designated a Research Natural Area. Recent insect damage affects the mosaic of vegetation. Soils range in texture and are weathered from sedimentary, glacial, alluvial, and igneous rocks.

#### Other Attributes

Major land uses include recreation, designated wilderness, Colorado roadless areas, logging, wildlife habitat, mining, and livestock grazing. The recreation setting changes from more developed to less developed as it moves west to east.

In the west, the CDT coincides with roads through a patchwork of federal, private, and state land. Some areas have a rural setting. Areas adjacent to road, such as Willow Creek Pass, US Highway 40, and Colorado Highway 14, have moderate existing scenic integrity with more developments and management activities.

In the east, the recreation setting is primitive and remote with a high degree of solitude. The Bowen Gulch Research Natural Area, Never Summer Wilderness, and Rocky Mountain National Park (before Highway 34/Trail Ridge Road) have little evidence of human modification and very high existing scenic integrity.

## **Feature Summary**

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Rabbit Ears scenic character unit.

- CO40 (FR 104 to Rabbit Ears Pass)
- CO39 (Troublesome Pass to FR 104)
- CO38 (Willow Creek Pass to Troublesome Pass)

• CO37 (Bowen Gulch to Willow Creek Pass)

#### Location

• Park Range, Rabbit Ears Range, and Never Summer Mountains in North Central Colorado

## Length

• 72 miles

#### Percent on Road

• 43 percent

#### Percent on Trail

• 57 percent

## Land Manager

- Medicine Bow-Routt National Forest
- BLM Kremmling Field Office
- Colorado State Land
- Arapaho and Roosevelt National Forest
- Rocky Mountain National Park

## Designated Areas

- Never Summer Wilderness
- Bowen Gulch Research Natural Area
- Rocky Mountain National Park (UNESCO World Biosphere Reserve)

## Significant Scenic, Cultural, and Natural Features

- There are five mountain passes in the Rabbit Ears Range unit: Muddy, Troublesome, Illinois, Willow Creek, and Bowen Passes.
- Summits include Chimney Rock, Sheep Mountain, Hyannis Peak, Parkview Mountain, Haystack Mountain, and Ruby Mountain
- Rocky Mountain National Park is an Audubon Important Birding Area. Observers have documented 260 species of birds in the park, including White-tailed Ptarmigan, and other species of high conservation concern.
- The Colorado River is eligible for wild and scenic river designation and classified as recreational and scenic, with Outstandingly Remarkable Values of historic, recreational, scenic, and wildlife.

## Named Streams (streams with outstandingly remarkable values are in bold)

- Colorado Creek
- Colorado River
- Fancher Creek
- Grizzly Creek
- Illinois River
- Indian Creek
- Middle Fork Arapaho Creek
- Parkview Creek
- Trout Creek
- Wilset Creek

# Indian Peaks-Vasquez Mountains Scenic Character Unit

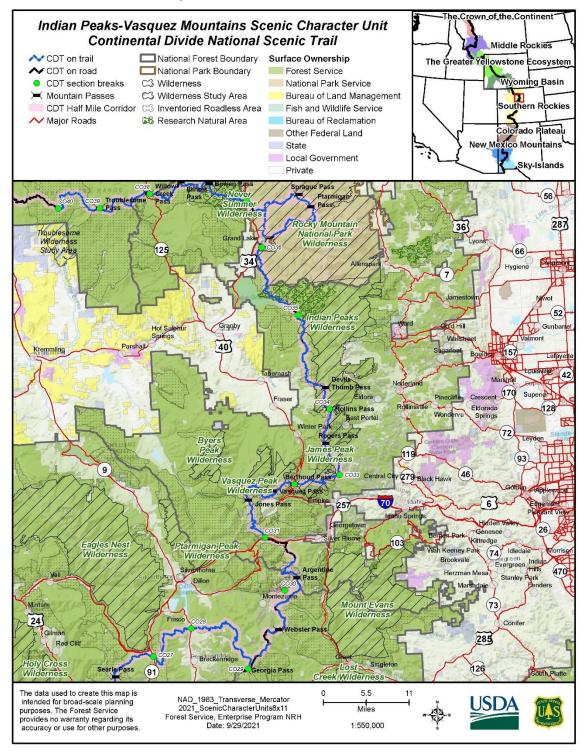


Figure 43. Map of Indian Peaks-Vasquez Mountains scenic character unit



Figure 44. The Continental Divide Trail crosses over rocky ridges and peaks within the Vasquez Wilderness in the Indian Peaks-Vasquez Mountains scenic character unit. Photo Credit: Mike Henrick

The Indian Peaks-Vasquez Mountains unit is one of the longest and highest elevation scenic character units. The Kawuneeche Valley is the northern extent of the unit and Georgia Pass is the southern. The CDT climbs into the high, glaciated, rugged peaks of two subranges of the Front Range. Most of the southern unit resides in the alpine zone across rolling tundra and mountain summits with unobstructed views. At Grays Peak, the CDT and physical Continental Divide achieve their highest point at 14,267 feet. The lowest trail elevation is 8,288 feet.

Vegetation is a diverse mix of coniferous forest, wetlands, meadows, and alpine tundra. Insects and disease and other natural disturbances affect the mosaic of vegetation. Hell Canyon Research Natural Area is an exemplary glaciated landscape of peaks, high-elevation cirques, and U-shaped valleys typical of the Front Range in Colorado. In the southern reaches, Rocky Mountain bristlecone pines begin to appear. This species boasts some of the oldest recorded trees in North America.

The CDT traces the edge of Shadow Mountain Lake and Lake Granby. Between Rollins and Berthoud Passes, frequent lakes dot the high-country landscape. The geology is mostly igneous granite and metamorphic gneiss with areas of glacial drift in valley bottoms. Granitic soils are erosive and porous. In the alpine zone, soils are thin or non-existent with little organic material and exposed rock.

## Other Attributes

Major land uses include recreation, designated wilderness, Colorado roadless areas, wildlife habitat, mining, and livestock grazing. As the CDT moves south, it enters the Colorado Mineral Belt, an area of mineralized ore deposits where many metal mining districts are located.

The Colorado River is impounded into a series of reservoirs for water diversion. In the south, numerous mines occur within the CDT's vicinity. South of the James Peak Wilderness, patented mining claims create a fragmented ownership. Mining and private inholdings are also concentrated in the Argentine Pass area. In areas, the utilization of natural resources has affected the existing scenic integrity.

Within Rocky Mountain National Park, the CDT forks into two different opportunities. Both trail segments converge near the town of Grand Lake, which sits on the shores of Colorado's largest natural lake. The unit's location near the Denver Metropolitan area renders it very popular for recreation. Within Rocky Mountain National Park Wilderness, Indian Peaks Wilderness, Vasquez Peak Wilderness, and James Peak Wilderness, the recreation setting is primitive with a high degree of self-reliance and challenge, and existing scenic integrity is very high. Some parts of Rocky Mountain National Park, Indian Peaks Wilderness, and James Peak Wilderness see high amounts of recreation use; Rocky Mountain National Park and Indian Peaks Wilderness have an overnight use permit system.

The Arapaho National Recreation Area was designated to preserve and protect the natural, scenic, historic, pastoral, and wildlife resources of the area and to enhance the recreational opportunities provided. The CDT crosses through this designated area mostly in a recreation setting that is semi-primitive, with a moderate degree of self-reliance, solitude, and challenge.

The CDT crosses three major roads in the unit. US Highway 34 crosses the CDT within Rocky Mountain National Park. US Highway 40 crosses at Berthoud Pass. The CDT passes under Interstate 70 and parallels the corridor for a few miles on a paved trail. The recreation setting adjacent to roads has moderate scenic integrity with more management activities and developments. The recreation setting is urban where the CDT passes through the town of Grand Lake.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Indian Peaks-Vasquez Mountains scenic character unit.

- CO36 (Grand Lake to Bowen Gulch)
- CO35 (Monarch Lake to Grand Lake)
- CO34 (Rollins Pass to Monarch Lake)
- CO33 (Rainbow Road to Rollins Pass)
- CO32 (Berthoud Pass to Rainbow Road)
- CO31 (Herman Gulch to Berthoud Pass)
- CO30 (Argentine Pass to Herman Gulch)
- CO29 (Georgia Pass to Argentine Pass)

#### Location

• Front Range in central Colorado

## Length

• 142 miles

#### Percent on Road

• 12 percent

## Percent on Trail

• 88 percent

## Land Manager

- Rocky Mountain National Park
- Arapaho and Roosevelt National Forest
- Pike and San Isabel National Forest
- White River National Forest

#### Designated Areas

- Rocky Mountain National Park (UNESCO World Biosphere Reserve) Wilderness
- Indian Peaks Wilderness
- James Peak Wilderness
- James Peak Protection Area
- Vasquez Peak Wilderness
- Arapaho National Recreation Area
- Hell Canyon Research Natural Area

## Significant Scenic, Cultural, and Natural Features

- There are eleven mountain passes in the Indian Peaks- Vasquez Mountains unit: Sprague, Ptarmigan, Rollins, Devils Thumb, Jones, Vasquez, Berthoud, Rogers, Webster, Georgia, and Argentine Passes.
- Summits include Green Mountain, Knobtop Mountain, Ptarmigan Point, Mount Adams,
  Stanley Mountain, Colorado Mines Peak, Vasquez Peak, Breckinridge Peak, Mount Flora,
  Haystack Mountain, James Peak, Grays Peak, Mount Edwards, Kelso Mountain, Handcart
  Peak, Radical Hill, Teller Mountain, Red Cone, Geneva Peak, Landslide Peak, Sullivan
  Mountain, Collier Mountain, Santa Fe Peak, Morgan Peak, Argentine Peak, Glacier Peak,
  Whale Peak, Sheep Mountain, and Flattop Mountain
- Grays Peak is the highest peak on the CDT and in the national trails system.
- Rocky Mountain National Park is an Audubon Important Birding Area. Observers have documented 260 species of birds in the park, including White-tailed Ptarmigan, and other species of high conservation concern.
- Colorado River
- Grand Lake
- Tyndall Glacier
- Devils Thumb

#### Named Streams

- Arapaho Creek
- August P Gumlick Tunnel
- Berthoud Pass Ditch
- Cabin Creek

## Continental Divide Trail Scenic Character Descriptions

- Clear Creek
- Columbine Creek
- Fall River
- Grouse Creek
- Hallett Creek
- Hamilton Creek
- Harbison Ditch
- Harold D Roberts Tunnel
- Irving Hale Creek
- Meadow Creek
- Mill Creek
- North Inlet
- Onahu Creek
- Peru Creek
- Pole Creek
- Ptarmigan Creek
- Quayle Creek
- Ranger Creek
- Roaring Fork Arapaho Creek
- Tonahutu Creek
- Twin Creek
- Vasquez Tunnel
- Woods Creek

# Tenmile Range Scenic Character Unit

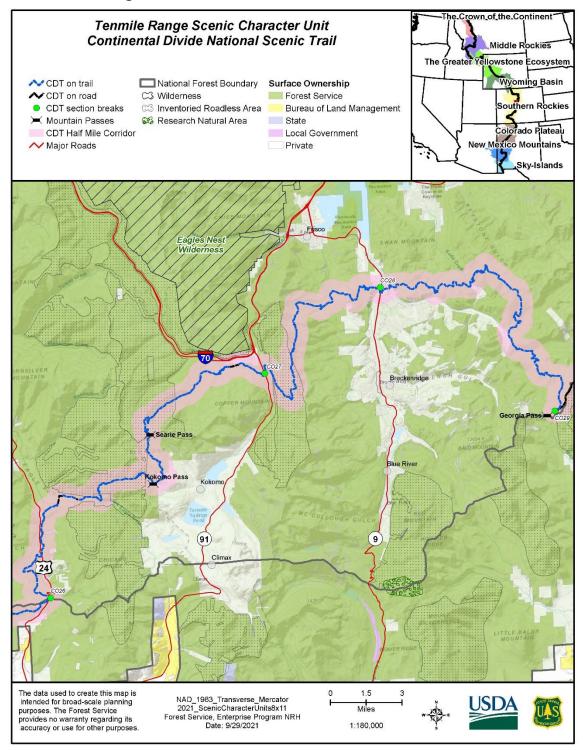


Figure 45. Map of Tenmile Range scenic character unit



Figure 46. The Continental Divide Trail crosses Kokomo Pass in the Tenmile Range scenic character unit. Photo Credit: Continental Divide Trail Coalition

In the Tenmile Range unit, the CDT crosses over partially glaciated, high peaks. The Colorado Front Range lies to the east and the Sawatch Range lies to the west. Trail elevation ranges between 9,180 and 12,480 feet.

The Tenmile Range is steep and avalanche prone. Tenmile Creek has carved a deep canyon between the mountains. Within the unit, the CDT passes through subalpine coniferous forest, alpine meadows, colorful aspen groves, and rich riparian areas. The upper reaches of the Blue River display fast-flowing whitewater. In the center of the unit, The CDT follows the crest of the Tenmile Range with low growing alpine plants and rock outcrops.

#### Other Attributes

Major land uses include recreation, mining, Colorado roadless areas, wildlife habitat, logging, and livestock grazing. The unit is located within the Colorado Mineral Belt, and traces of historic mining are scattered throughout. In places, patented mining claims render a fragmented ownership. Mining features, such as tailings and tailing ponds, can lower existing scenic integrity.

The mountainous terrain and plentiful snowfall support a vibrant mountain ski resort economy. The CDT passes through Breckenridge and Copper Mountain, both large, international destinations for mountain sports. Arapahoe Basin and Keystone ski resorts are also located nearby. The linear openings of ski runs, and associated infrastructure modify the natural appearance of the scenery. Recreation use is high to very high in both summer and winter across this unit and several sections of the CDT accommodate multiple uses.

Three Colorado roadless areas buffer the CDT with high existing scenic integrity. In these areas the recreation setting is semi-primitive with high degree of self-reliance and solitude. The CDT crosses three major roads: Colorado Highway 9, Colorado Highway 91, and US Highway 24. In areas around roads, the existing scenic integrity is moderate to low with more developments and management activities, which does not meet the CDT's nature and purposes.

The Colorado Trail joins the CDT at Gold Pass and then coincides with the CDT until the Beartown to Stony Pass Continental Divide Trail Coalition segment CO09 in the Central San Juan Mountains scenic character unit.

# Feature Summary

# Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Tenmile Range scenic character unit.

- CO28 (Gold Hill to Georgia Pass)
- CO27 (Copper Mountain to Gold Hill)
- CO26 (Tennessee Pass to Copper Mountain)

#### Location

• Tenmile Range in central Colorado

#### Length

• 58 miles

#### Percent on Road

• 2 percent

#### Percent on Trail

• 98 percent

# Land Manager

• White River National Forest

# Designated Areas

• None identified

#### Significant Scenic, Cultural, and Natural Features

- There are four mountain passes in the Tenmile Range unit: Georgia, Kokomo, Searle, and Tennessee Passes.
- Summits include: Tenmile Range Peaks 5, 6 and 7, Elk Mountain, Corbett Peak, North Sheep Mountain

#### Named Streams

- Blue River
- Cataract Creek
- East Fork Eagle River
- Fiddler Creek

# Continental Divide Trail Scenic Character Descriptions

- Guller Creek
- Jacque Creek
- Middle Fork Swan River
- Miners Creek
- North Fork Swan River
- Soda Creek
- South Fork Eagle River
- Swan River
- Tenmile Creek

# Sawatch Range Scenic Character Unit

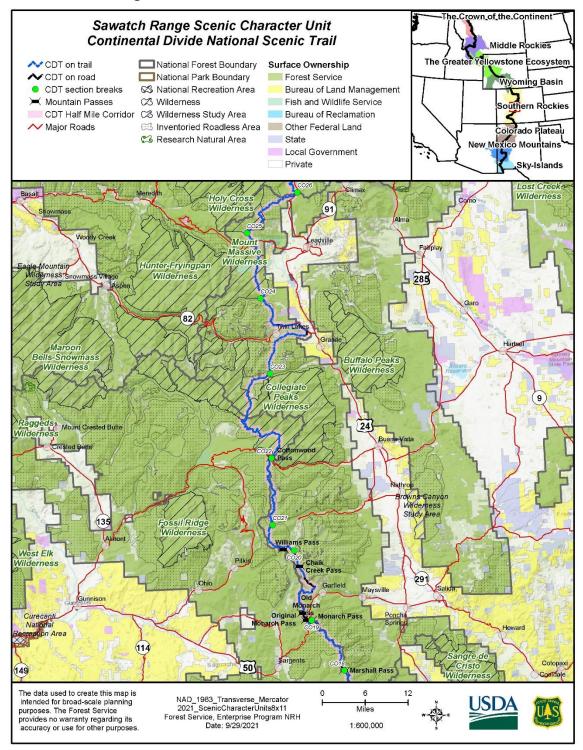


Figure 47. Map of Sawatch Range scenic character unit



Figure 48. The Continental Divide Trail looks out onto a sea of mountain summits in the Sawatch Range scenic character unit. Photo Credit: Mike Fuhrmann

The Sawatch Range unit stretches from Tennessee Pass south to Marshall Pass. This range is known for steep, high-relief mountains with steep approaches. It is characterized by high elevation, spectacular mountain scenery of glaciated peaks, ridges, wide and steep valleys, rugged terrain, cliffs, and talus slopes and a diversity of alpine areas, subalpine forest, and meadow vegetation. Trail elevations range from 9,210 to 12,839 feet.

Above timberline are alpine meadows and steep, exposed rock and glaciated peaks, rocky slopes, alpine lakes, and glacial cirques. Vegetation includes low shrubs and wildflowers and sedges in wet meadows and forest tundra with contorted krummholz vegetation. Subalpine forests include Engelmann spruce and subalpine fir; aspen and pockets of lodgepole pine. Forests are interspersed with willow, grassy parks, and wildflower meadows. The southern Sawatch Range gradually tapers off in elevation the further south one travels. From Monarch Pass to Marshall Pass the CDT has little elevation gain and landforms become more rounded with lodgepole pine being more dominant. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic.

The predominant geology is composed of crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusive rocks. The southern Sawatch Range includes more volcanic and igneous influence east of the CDT.

Water is abundant on this unit and numerous lakes dot the landscape. The largest lakes are Turquoise Lake and Twin Lakes Reservoir. These areas and the National Fish Hatchery area are on sandstone, siltstone, shale, and limestone substrates.

# Other Attributes

Major land uses include designated wilderness, recreation, Colorado roadless areas, and wildlife habitat with more livestock grazing, timber harvest, and mining along southern segments. A wide range of recreation opportunities exist.

Very high and high existing scenic integrity and natural appearing scenic character occurs in much of the Sawatch unit. The CDT passes through three wilderness areas (Holy Cross, Mount Massive, and Collegiate Peaks) and numerous Colorado roadless areas. Collegiate Peaks Wilderness has eight peaks exceeding 14,000 feet (Fourteeners). The CDT also passes in the vicinity of Mount Massive and Mount Elbert, the highest point in Colorado. Recreation settings vary from primitive and challenging in alpine settings and unmodified landscapes to more developed areas with easy access and modified natural environments. Although the more primitive areas have natural appearing scenic character, opportunities for solitude are less frequent since the Fourteener trails are very popular.

The CDT crosses multiple main and secondary roads, two of which access large recreation areas at Turquoise Lake and Twin Lakes Reservoirs with campgrounds, picnic areas, and other recreation sites. These areas and other main road crossings have more developments and moderate or low existing scenic integrity. Major road crossings occur at US Highway 24 at Tennessee Pass, County Road 4 near Turquoise Lake, Colorado Highway 82 near Twin Lakes Reservoir, Cottonwood Pass Road (County Road 209), and US Highway 50 at Monarch Pass. Motorized use occurs along some trail segments outside designated wilderness.

Ski Cooper is located near Tennessee Pass in the north, and Monarch Ski Area is adjacent to the CDT near Monarch Pass in the south. These types of developments often have highly modified landscapes dominated by resort infrastructure.

The CDT passes the Alpine Tunnel Historic District which protects and interprets the first railroad tunnel constructed through the Continental Divide along the railbed from Quartz to Hancock. Remnants of the late 1800s ghost town of Hancock that served the Alpine Tunnel are near the CDT. The area has a long history of mining with more evidence of historic mining activity north of Collegiate Peaks in the vicinity of Clear Creek and near segment breaks at Tincup Pass Road and Hancock and around Monarch Pass.

The western side of Colorado Trail Collegiate Loop is coincident with the CDT. The northernmost point of the Loop is along Twin Lakes Reservoir and the southernmost point is south of Monarch Pass.

# **Feature Summary**

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Sawatch Range scenic character unit.

- CO25 (Timberline Lake to Tennessee Pass)
- CO24 (Halfmoon Creek to Timberline Lake)
- CO23 (Sheep Gulch to Halfmoon Creek)
- CO22 (Cottonwood Pass Rd to Sheep Gulch)
- CO21 (Tincup Pass Rd to Cottonwood Pass Rd)
- CO20 (Hancock to Tincup Pass Rd)

- CO19 (Monarch Pass to Hancock)
- CO18 (Marshall Pass to Monarch Pass)

#### Location

• Central and southern subranges of the Sawatch Range in central Colorado

# Length

• 128 miles

#### Percent on Road

• 19 percent

#### Percent on Trail

• 81 percent

# Land Manager

- Pike and San Isabel National Forest
- Grand Mesa, Uncompange, and Gunnison National Forest
- Leadville National Fish Hatchery, U.S. Fish and Wildlife Service

# Designated Areas

- Holy Cross Wilderness
- Mount Massive Wilderness
- Collegiate Peaks Wilderness

# Significant Scenic, Cultural, and Natural Features

- There are seven mountain passes in the Sawatch Range unit: Tennessee Pass, Cottonwood Pass, Chalk Creek Pass, Williams Pass, Monarch Pass, Original Monarch Pass, Marshall Pass
- Fourteener Summits within 4 miles: Mount Massive, Mount Elbert (highest point in Colorado), La Plata Peak, Huron Peak (closest to the CDT), Mount Belford, Mount Oxford, Missouri Mountain, Mount Yale
  - ♦ Other summits include Sugarloaf Mountain, Twin Mounds, Quail Mountain, Mount Kreutzer, Emma Burr Mountain, Sewanee Peak, Syncline Hill, Bald Mountain, Banana Mountain, Sawmill Hill, Mount Peck, Peel Point, and Mount Helmers
- Alpine Tunnel Historic District and Historical Populated Places: Stonewall, Hancock
- Turquoise Lake, Twin Lakes Reservoir, Clear Creek Falls near the Three Apostles (North Apostle, Ice Mountain, and West Apostle)

#### Named Streams

- Arlington Ditch
- Box Creek
- Busk Creek
- Chalk Creek
- Charles H Boustead Tunnel
- Elbert Creek
- Flume Creek
- Glacier Creek

# Continental Divide Trail Scenic Character Descriptions

- Halfmoon Creek
- Homestake Tunnel
- Illinois Creek
- Lake Creek
- Lake Fork
- Larkspur Ditch
- Middle Fork South Arkansas River
- Mill Creek
- North Fork Chalk Creek
- North Fork Clear Creek
- North Fork West Tennessee Creek
- North Texas Creek
- North Willow Creek
- Rock Creek
- South Fork Clear Creek
- South Willow Creek
- Texas Creek
- West Tennessee Creek
- Willow Creek
- Wurts Ditch

# Gunnison-Cochetopa Hills Scenic Character Unit

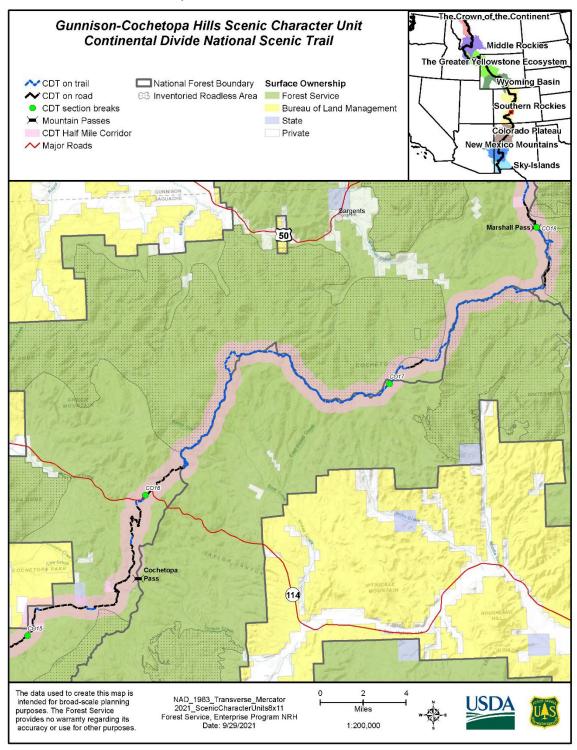


Figure 49. Map of Gunnison-Cochetopa Hills scenic character unit



Figure 50. The Continental Divide Trail crosses rolling hills in the Gunnison-Cochetopa Hills scenic character unit. Photo Credit: Mike Henrick

The Gunnison-Cochetopa Hills unit passes through the Cochetopa Hills in the southern Gunnison Basin from Marshall Pass to Saguache Park Road. Broad valleys, rounded hills, mesas, buttes, and rolling terrain characterize the area. Vegetation consists of subalpine fir, lodgepole pine, aspen, bristlecone pine, Gambel oak, and sagebrush. Sargents Mesa has rolling hills with interspersed open parks. Trail elevations range from 9,352 to 11,768 feet.

Geology is composed of volcanic rocks, predominately andesitic with areas of basalt and sedimentary terrain. The effect of weathering has resulted in moderate relief and rounded landforms. Water is not a major feature of the landscape.

#### Other Attributes

The CDT passes through a working landscape that has been considerably modified. Historic and current land use renders some areas with low to moderate existing scenic integrity and does not meet the nature and purposes of the CDT. Major land uses include livestock grazing, Colorado roadless areas, timber harvest, dispersed recreation, and historic uses.

Recreation settings vary from semi-primitive backcountry settings to more modified natural environments where interactions between visitors is common.

The CDT crosses several minor roads and one major road, Colorado Highway 114 near North Pass. High existing scenic integrity occurs in Colorado roadless areas. Moderate existing scenic integrity occurs due to a variety of vegetation management activities. Low existing scenic

integrity occurs between Marshall Pass and Sargents Mesa where vegetation management activities have noticeable form, edge, and texture changes, usually involving regeneration prescriptions.

The Old Spanish National Historic Trail intersects the CDT near Colorado Highway 114. It follows the route of mule pack trains across the Southwest between Santa Fe, New Mexico, and Los Angeles, California. Marshall Pass is a prominent historic railroad crossing of the Denver and Rio Grande Railroad. The Colorado Trail is coincident with the CDT throughout the Gunnison-Cochetopa Hills.

# Feature Summary

# Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Gunnison-Cochetopa Hills scenic character unit.

- CO17 (Sargents Mesa to Marshall Pass)
- CO16 (Highway 114 to Sargents Mesa)
- CO15 (Saguache Park Road to Highway 114)

#### Location

• Gunnison Basin in central Colorado

#### Length

• 48 miles

#### Percent on Road

• 33 percent

#### Percent on Trail

• 67 percent

# Land Manager

- Grand Mesa, Uncompangre, and Gunnison National Forests
- Rio Grande National Forest
- Pike-San Isabel National Forest

# Designated Areas

• Old Spanish National Historic Trail including high potential segment

# Significant Scenic, Cultural, and Natural Features

- There are two mountain passes in the Gunnison-Cochetopa Hills unit: Marshall Pass and Cochetopa Pass
- Summits include: Sargents Mesa, Middle Baldy, Long Branch Baldy, Windy Peak, Headwaters Hill
- Monchego Park

#### Named Streams

Archuleta Creek

# Continental Divide Trail Scenic Character Descriptions

- Los Creek
- Lujan Creek
- Monchego Creek
- Pine Creek
- Razor Creek
- Tank Seven Creek
- Texas Creek

# La Garita-Northern San Juan Mountains Scenic Character Unit

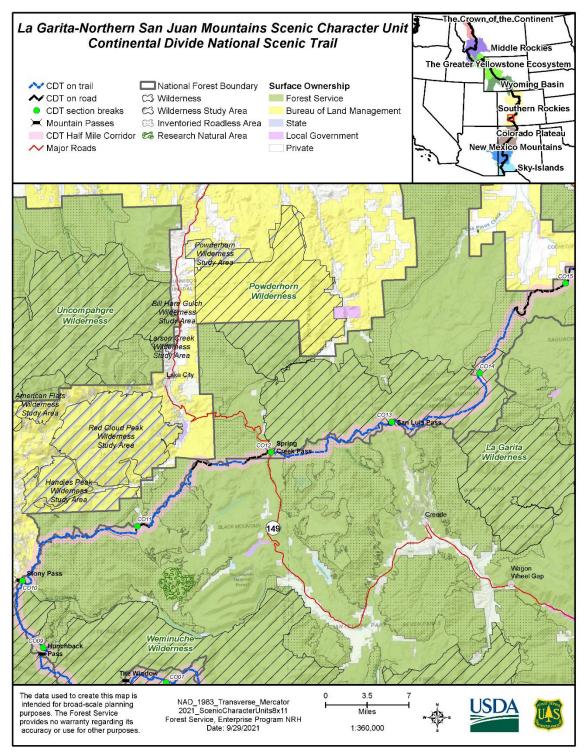


Figure 51. Map of La Garita-Northern San Juan Mountains scenic character unit



Figure 52. Large expanses of alpine tundra characterize the high country of the La Garita-Northern San Juan Mountains scenic character unit. Photo Credit: Mike Henrick

The La Garita-Northern San Juan Mountains unit passes through the San Juan Range in southern Colorado from Saguache Park Road to Stony Pass. Here, the CDT enters the San Juan Range, which overall is a series of high mountain peaks rising more than 13,000 feet. Steep, high-relief mountains, rugged terrain, steep walled, V shaped canyons, and large expanses of high elevation alpine tundra characterize the area. The CDT passes just south of San Luis Peak (14,014 feet) in the La Garita Wilderness. Trail elevations range from 9,532 to 13,236 feet.

Above timberline are alpine meadows and steep, exposed rock and mountain peaks. Large expanses of alpine tundra and wildflower meadows are amidst mountain peaks and ridges. Vegetation includes low shrubs, wildflowers and sedges in wet meadows and forest tundra with stunted krummholz vegetation. Subalpine forests occur on the eastern segments and around Spring Creek Pass. Subalpine forests include diverse vegetation with large, open grassland parks fringed with spruce-fir and aspen, aspen and Douglas-fir, pockets of limber pine, bristlecone pine, and some areas of open ponderosa pine park-like stands. Aspen intermixed with these species provides strong contrasting color in the fall. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic.

The predominant geology is composed of extrusive volcanic and igneous rocks, predominately andesitic with areas of basalt. Water is limited to snowpack, several streams, and small lakes.

# Other Attributes

Major land uses include designated wilderness, Colorado roadless areas, recreation, wildlife habitat, and historic uses.

Very high and high existing scenic integrity and natural appearing scenic character occurs in much of the scenic character unit. The CDT passes through the La Garita Wilderness and numerous Colorado roadless areas. The Colorado Trail is coincident with the CDT throughout this unit.

The CDT crosses multiple roads. Recreation settings vary from primitive and challenging in wilderness settings and unmodified landscapes to more developed areas with easy access where the CDT crosses Colorado Highway 149 at Spring Creek Pass, and other secondary roads. Colorado Highway 149 is the Silver Thread Scenic and Historic Byway that goes from Blue Mesa Reservoir through Lake City over to South Fork. Areas around road crossings have moderate existing scenic integrity with more developments and management activities. Portions of the unit are highly mineralized, and gold, silver, lead, and copper have been mined with mining activity occurring near Stoney Pass.

# **Feature Summary**

# Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the La Garita-Northern San Juan Mountains scenic character unit.

- CO14 (Eddiesville to Saguache Park Road)
- CO13 (San Luis Pass to Eddiesville)
- CO12 (Spring Creek Pass to San Luis Pass)
- CO11 (Carson Saddle to Spring Creek Pass)
- CO10 (Stony Pass to Carson Saddle)

#### Location

La Garita Mountains subrange and northern San Juan Range in southwestern Colorado

# Length

• 74 miles

# Percent on Road

• 19 percent

#### Percent on Trail

• 81 percent

# Land Manager

- Grand Mesa, Uncompange, and Gunnison National Forests
- Rio Grande National Forest
- BLM Gunnison Field Office for small sections

# Designated Areas

- La Garita Wilderness
- Silver Thread Scenic and Historic Byway (Colorado Highway 149) a National Forest Scenic Byway and Colorado State Scenic and Historic Byway

# Significant Scenic, Cultural, and Natural Features

- There are three mountain passes in the La Garita Mountains-Northern San Juan Mountains unit: San Luis Pass, Spring Creek Pass, Stony Pass
- Summits include: Seventyone Mountain, Canby Mountain, Carson Peak, Jarosa Mesa
- San Luis Peak (14,014 feet) is in the heart of the La Garita Wilderness and the San Juan's most eastern peak

#### Named Streams

- Ant Creek
- Cochetopa Creek
- Mesa Creek
- Middle Mineral Creek
- Nutras Creek
- Quemado Creek
- Rio Grande
- Rito Hondo Creek
- Spring Creek
- Stewart Creek
- Sunshine Creek
- Willow Creek

# Central San Juan Mountains Scenic Character Unit

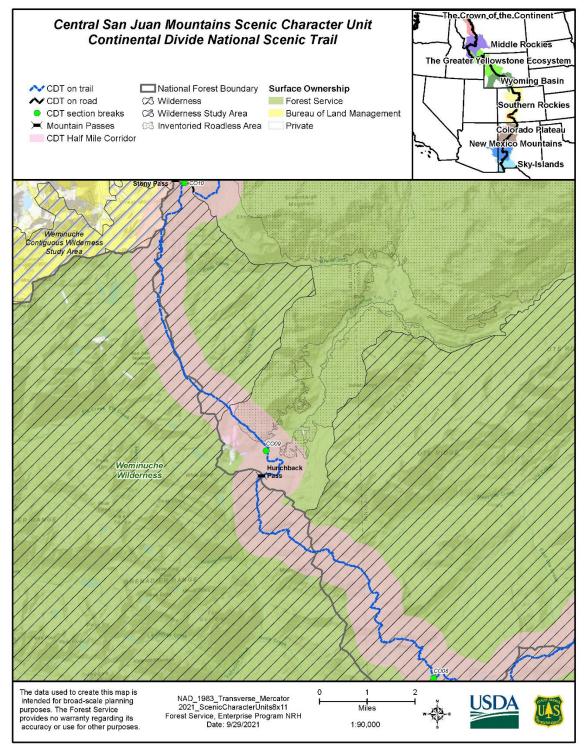


Figure 53. Map of Central San Juan Mountains scenic character unit



Figure 54. The Continental Divide Trail in the Central San Juan Mountains scenic character unit Photo Credit: Continental Divide Trail Coalition

The Central San Juan Mountains unit passes through the San Juan range in southwestern Colorado from Stony Pass to Beartown in northern portions of the Weminuche Wilderness, Colorado's largest wilderness. Steep, high-relief mountains, rugged terrain, and large expanses of high elevation alpine tundra characterize the area. The CDT has views of scenic mountains in the Grenadier Range and Needle Mountains. Trail elevations range from 11,520 to 12,694 feet.

Above timberline are alpine meadows and steep, exposed rock and glaciated peaks. Large expanses of alpine tundra and wildflower meadows are amidst towering mountain peaks. Vegetation includes low shrubs, wildflowers, and sedges in wet meadows and forest tundra with windswept krummholz vegetation. Subalpine forests occur in some locations.

The predominant geology differs some from the geology of other units in the San Juan Mountains and is composed of metamorphic, gneiss and metamorphic, sedimentary clastic. Water is abundant; lakes and wet meadows dot the landscape.

# Other Attributes

Major land uses include designated wilderness, Colorado roadless area, recreation, and wildlife habitat. Portions are highly mineralized, and gold, silver, lead, and copper have been mined. Mining activity occurs near Stoney Pass and Beartown.

Very high existing scenic integrity occurs across the scenic character unit. The CDT passes through the Weminuche Wilderness and a Colorado roadless area.

Recreation settings are primarily primitive and challenging in alpine settings and unmodified landscapes to more semi-primitive backcountry and naturally appearing at road crossings where interactions between visitors is more common and motorized use is audible. High existing scenic integrity occurs at road crossings. The Colorado Trail is coincident with the CDT until midway in the Beartown to Stony Pass segment (CO09). Closer to Beartown, the Colorado Trail heads west to Molas Pass.

# **Feature Summary**

# Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Central San Juan Mountains scenic character unit.

- CO09 (Beartown to Stony Pass)
- CO08 (Twin Lakes to Beartown)

#### Location

• East of the Grenadier Range and Needle Mountains in the central San Juan Range in southwestern Colorado

# Length

• 18 miles

# Percent on Road

• 2 percent

#### Percent on Trail

• 98 percent

# Land Manager

- Rio Grande National Forest
- San Juan National Forest

#### Designated Areas

Weminuche Wilderness

#### Significant Scenic, Cultural, and Natural Features

- There are two mountain passes in the Central San Juan Mountains unit: Stoney Pass, Hunchback Pass
- Summits include Canby Mountain and Mount Nebo
- Twin Lakes

#### Named Streams

- Bear Creek
- Middle Ute Creek
- Nebo Creek
- Quartzite Creek
- West Ute Creek

# Weminuche Wilderness Scenic Character Unit

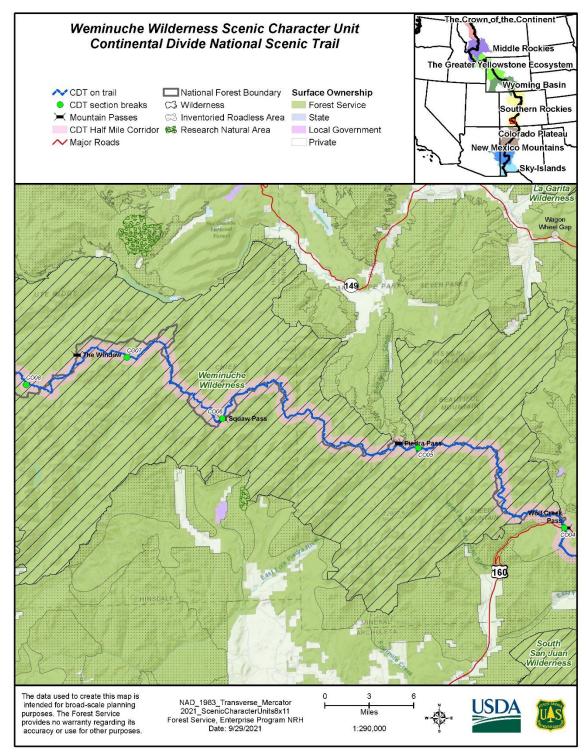


Figure 55. Map of Weminuche Wilderness scenic character unit

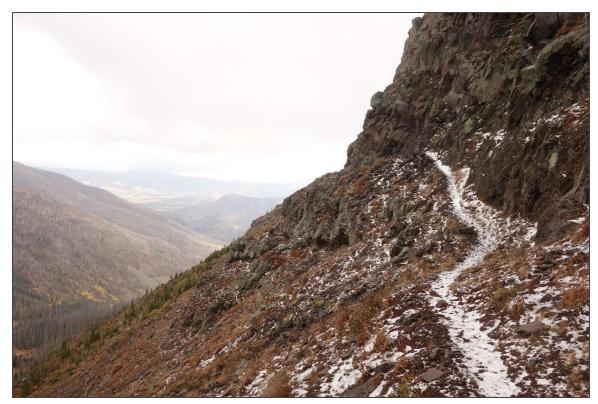


Figure 56. The Continental Divide Trail along the Knife's Edge within the Weminuche Wilderness scenic character unit. Photo Credit: Mike Henrick

The scenic character unit passes through the Weminuche Wilderness, Colorado's largest wilderness, from Twin Lakes to Wolf Creek Pass. Very steep, high-relief mountains, rugged terrain, and large expanses of high elevation alpine tundra characterize the area. The Wilderness has an average elevation of 10,000 feet, a few Fourteeners over four miles from the CDT, and many peaks above 13,000 feet. Scenic attributes are high peaks, rugged mountains, aspen forests, wetlands, and high ecological diversity. The CDT remains at or above 11,000 feet for nearly 70 miles. Trail elevations range from 10,518 to 12,847 feet.

The CDT travels across alpine zones and volcanic subalpine forests on the eastern segments and around Weminuche Pass. Above timberline are alpine meadows and steep, exposed rock and glaciated peaks. Large expanses of alpine tundra and wildflower meadows are amidst towering, rugged mountains. Vegetation includes low shrubs and wildflowers and sedges in wet meadows and forest tundra with windswept krummholz vegetation.

Subalpine forests include diverse vegetation with large, open grassland parks fringed with Engelmann spruce, subalpine fir, and aspen forests. Aspen intermixed with these species provides strong contrasting color in the fall. Aspen's autumn colors of gold, orange, and pink against dark spruce and fir and rocky alpine peaks contribute to distinctive scenery. Insect outbreaks, infrequent fire, and avalanches affect the vegetation mosaic.

The predominant geology is composed of extrusive volcanic and igneous rocks, predominately andesitic with areas of basalt. Unique geologic features located along the CDT include The

Window, a rectangular notch in the Continental Divide, and Knife's Edge, a quarter-mile long shelf built into a shale rock cliff on the Continental Divide.

Water is abundant on the unit and numerous lakes dot the landscape. The unit has high-gradient streams, two of which are eligible for wild and scenic river designation and possess outstanding remarkable values: Los Pinos River and North Fork Los Pinos River.

# Other Attributes

Major land uses include designated wilderness, Colorado roadless areas, recreation, and wildlife habitat. The area is managed to protect wilderness characteristics and provide primitive recreation with high levels of challenge and solitude in a remote alpine setting. The unit has very high existing scenic integrity.

The CDT exits wilderness at Wolf Creek Pass crossing US Highway 160 where the landscape is modified with developments and interactions between visitors is common. Moderate existing scenic integrity occurs at this road crossing.

# **Feature Summary**

# Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Weminuche Wilderness scenic character unit.

- CO07 (Weminuche Pass to Twin Lakes)
- CO06 (Squaw Pass to Weminuche Pass)
- CO05 (South River Peak to Squaw Pass)
- CO04 (Wolf Creek Pass to South River Peak)

#### Location

• Central San Juan Range in southwestern Colorado

#### Length

• 68 miles

#### Percent on Road

• 0 percent

# Percent on Trail

• 100 percent

# Land Manager

- Rio Grande National Forest
- San Juan National Forest

# Designated Areas

• Weminuche Wilderness

# Significant Scenic, Cultural, and Natural Features

- There are four mountain passes in the Weminuche Wilderness unit: The Window, Squaw Pass, Piedra Pass, Wolf Creek Pass
- Summits include Palomino Mountain, Sawtooth Mountain, Mount Hope, South River Peak
- Knife Edge Ridge
- The CDT crosses the following streams with Outstandingly Remarkable Values that are eligible for Wild and Scenic designation and preliminarily classified as wild
  - Los Pinos River, outstandingly remarkable values: Geologic, Recreational, Scenic
  - ♦ North Fork Los Pinos River, outstandingly remarkable values: Geologic, Recreational, Scenic

# Named Streams (streams with outstandingly remarkable values are in bold)

- Fuchs Ditch
- Los Pinos River
- North Fork Los Pinos River
- Raber Lohr Ditch
- Squaw Creek
- West Fork San Juan River

# South San Juan Wilderness Scenic Character Unit

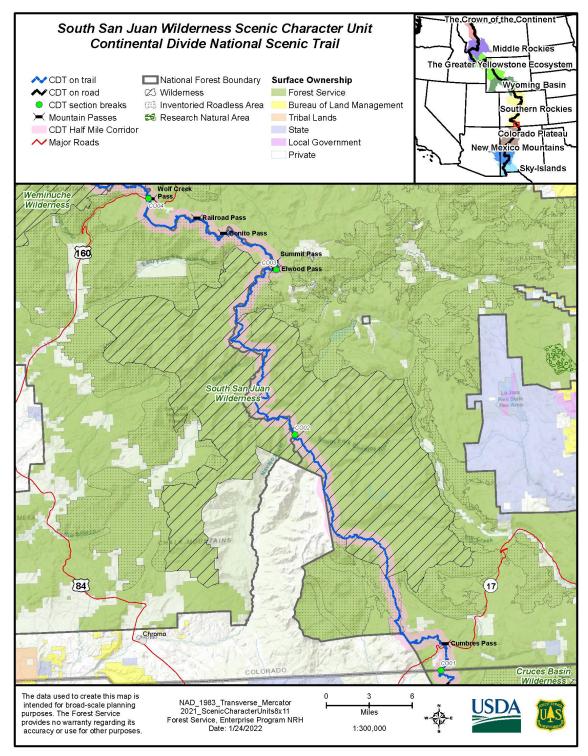


Figure 57. Map of South San Juan Wilderness scenic character unit

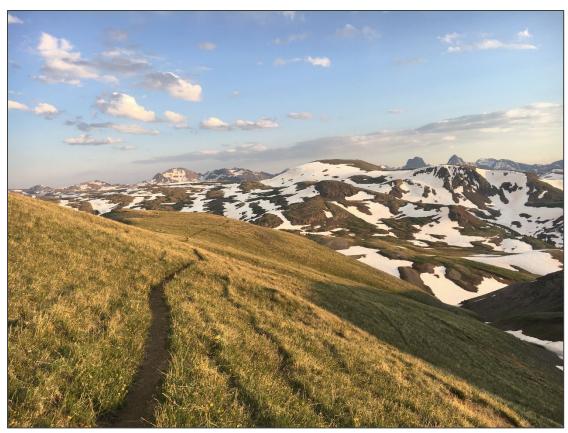


Figure 58. The Continental Divide Trail crosses the rugged mountains of the South San Juan Wilderness scenic character unit. Photo Credit: Matt Berger

The scenic character unit passes from Wolf Creek Pass to the New Mexico border, most of it traversing the South San Juan Wilderness. Very steep slopes above wide U-shaped valleys cut deeper by eroding streams, high peaks and cliffs, jagged pinnacles and ragged ridges, and high elevation alpine tundra characterize the area. The wilderness is capped by Summit Mountain at 13,300 feet. Scenic attributes are high peaks, rugged mountains, aspen forests, and wetlands. Trail elevations range from 9,968 to 12,659 feet.

The CDT travels across alpine zones and volcanic subalpine forests. Above timberline are alpine meadows and steep, exposed rock and glaciated peaks. Large expanses of alpine tundra and wildflower meadows are amidst towering, rugged mountains. Vegetation includes low shrubs and wildflowers and sedges in wet meadows and forest tundra with stunted krummholz vegetation. Subalpine forests include diverse vegetation with large, open grassland parks fringed with Engelmann spruce, subalpine fir, and aspen forests. Aspen intermixed with these species provides strong contrasting color in the fall. Aspen's autumn colors of gold, orange, and pink against dark spruce and fir and rocky alpine peaks contribute to distinctive scenery. Insect outbreaks, infrequent fire, and avalanches affect the vegetation mosaic.

The predominant geology is composed of extrusive volcanic and igneous rocks, predominately andesitic with areas of basalt. Ages of volcanic activity followed by the carving of glaciers left the rough, imposing terrain of the remote South San Juan Wilderness and remnants of 20,000-foot volcanoes that existed millions of years ago.

Water is abundant in the unit and numerous lakes dot the landscape. In the southern end most lakes were formed by glacial activity that drain into turbulent creeks. The unit has high-gradient streams, two of which are eligible for wild and scenic river designation and possess outstanding remarkable values: Middle Fork Conejos River and North Fork Conejos River.

#### Other Attributes

Major land uses include recreation, Colorado roadless areas, timber harvest, livestock grazing, as well as designated wilderness, and wildlife habitat.

Wolf Creek Pass to Elwood Pass is more natural appearing south of the CDT due to Colorado roadless area management while areas north of the CDT appear more modified, a working landscape with vegetation management, developments, and roads. The CDT crosses US Highway 160 at Wolf Creek Pass and Wolf Creek Ski Area where the sights and sounds of human activity and management are readily evident and the level of interaction with other visitors ranges from moderate to high. Developments and interactions between visitors are common around road crossings, such as at Elwood Pass.

After Elwood Pass the CDT enters South San Juan Wilderness and Colorado roadless areas. Wilderness is managed to protect wilderness characteristics and provide primitive recreation with high levels of challenge and solitude in a remote alpine setting. Very high existing scenic integrity and naturally evolving scenic character occurs here.

When the CDT exits wilderness, it again encounters Colorado roadless areas to the west and a working landscape with vegetation management and roads to the east until crossing Colorado Highway 17 (Los Caminos Antiguos Scenic Byway) and Cumbres and Toltec Scenic Railroad at Cumbres Pass where developments are noticeable and interactions between visitors is common. Cumbres Pass is the highest mountain pass reached by rail in the United States; the train hugs a sheer rock face as it reaches the summit.

Sangre de Cristo National Heritage Area is a Congressional designation that covers Alamosa, Costilla, and Conegos Counties in southern Colorado. National Heritage Areas are places where historic, cultural, and natural resources combine to form cohesive, nationally important landscapes.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the San Juan Wilderness scenic character unit.

- CO03 (Elwood Pass to Wolf Creek Pass)
- CO02 (Blue Lake to Elwood Pass)
- CO01 (New Mexico Border to Blue Lake)

#### Location

• Southern San Juan Range in southwestern Colorado

#### Length

• 42 miles

#### Percent on Road

• 0 percent

# Percent on Trail

• 100 percent

# Land Manager

- San Juan National Forest
- Rio Grande National Forest

# Designated Areas

- South San Juan Wilderness
- Los Caminos Antiguos Scenic Byway (state designated, National Scenic Byway designation February 2021)
- Cumbres and Toltec Scenic Railroad
- Sangre de Cristo National Heritage Area

# Significant Scenic, Cultural, and Natural Features

- There are eight mountain passes in the South San Juan Wilderness unit, primarily in the northern segment: Wolf Creek Pass, Treasure Pass, Railroad Pass, Silver Pass, Bonito Pass, Summit Pass, Elwood Pass, Cumbres Pass
- Summits include Summit Peak, Montezuma Peak, Long Trek Mountain, Alberta Peak
- Blue Lake
- Cumbres Post Office (historical)
- The CDT crosses the following streams with Outstandingly Remarkable Values that are eligible for Wild and Scenic designation and preliminarily classified as recreational and wild
  - ♦ Middle Fork Conejos River, outstandingly remarkable values: Fish, Geologic, Recreational, Scenic, Wildlife
  - ♦ North Fork Conejos River, outstandingly remarkable values: Fish, Geologic, Recreational, Scenic, Wildlife
  - ♦ El Rito Azul, outstandingly remarkable values: Fish, Geologic, Recreational, Scenic, Wildlife

# Named Streams (streams with outstandingly remarkable values are in bold)

- Adams Fork Coneios River
- East Fork Rio Chama
- El Rito Azul Conejos River
- Iron Creek
- Middle Fork Conejos River
- North Fork Conejos River
- Prospect Creek

# Tusas Mountains Scenic Character Unit

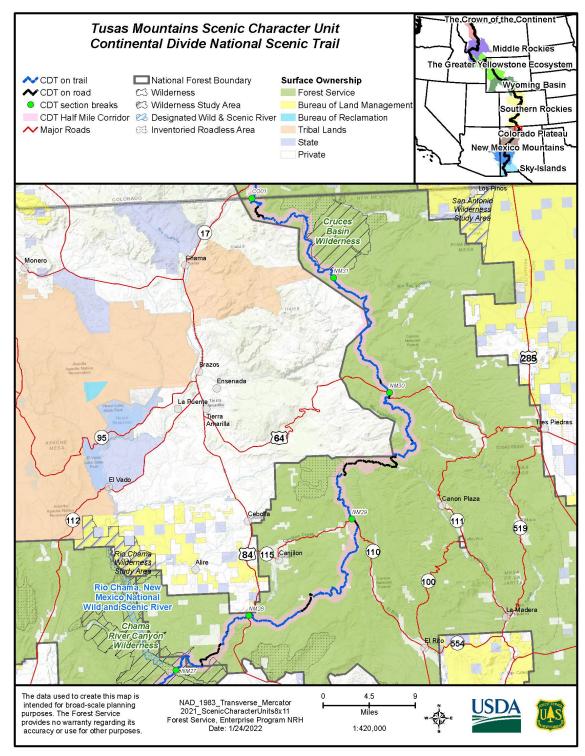


Figure 59. Map of Tusas Mountains scenic character unit



Figure 60. Colorful cliff bands bask in the sun along the Continental Divide Trail in the Tusas Mountain scenic character unit. Photo Credit: Nathan Mathews

The Tusas Mountains unit passes from the New Mexico border to Skull Bridge Trailhead in the Rio Chama valley. An extension of the San Juan Mountains, the unit is diverse, starting to transition between the Southern Rockies to the Colorado Plateau provinces. High mountains with steep slopes, cliffs, and high mesas, interspersed with forests, meadows, and valleys characterize the area. Scenic attributes are tan and red colored cliffs, steep walled canyons, aspen groves, mountain meadows, and small lakes. The CDT travels near the Cruces Basin Wilderness, climbs down from Brazos Ridge, crossing mesas and passes several small lakes and campgrounds. Then the CDT makes its way through Martinez Canyon and toward the distinctive Chama River Canyon through lands where Georgia O'Keefe drew inspiration from brightly colored cliffs and badlands for many of her paintings. Trail elevation ranges between 6,340 and 11,031 feet.

The trail travels across volcanic, crystalline, and sedimentary subalpine forests transitioning to sedimentary mid-elevation forests and foothill shrublands in the southern portion. Subalpine forests include Engelmann spruce, corkbark fir often interspersed with aspen groves and mountain meadows. Mid elevation forest vegetation includes ponderosa pine, aspen, Douglas-fir, and areas of limber pine. A diverse understory of shrubs, grasses, and wildflowers occurs. Foothill shrublands are semi-arid with rolling to irregular terrain of hills and ridges; pinyon-juniper, oak woodlands, and big sagebrush are dominant. Forest blowdown, insect outbreaks, fire, and avalanches affect the vegetation mosaic.

The predominant geology is composed of volcanic rocks transitioning to crystalline and intrusive near Hopewell Lake, then sedimentary on sandstone, siltstone, shale, and limestone substrates in southern mid elevation and shrubland areas. Small lakes and high gradient, perennial streams dot the landscape.

# Other Attributes

Major land uses include recreation, wildlife habitat, timber harvest, and livestock grazing.

Areas north of Hopewell Lake are predominantly natural appearing with high existing scenic integrity. Areas south of Hopewell Lake are working landscapes with mines in the vicinity of Hopewell Lake, vegetation management, livestock grazing developments, and minor roads. The CDT parallels National Forest Service Road 87 north of Laguitas Campground and later crosses New Mexico Highway 110 and US Highway 84. Developments and interactions between visitors are common around road crossings.

The Old Spanish National Historic Trail intersects the CDT near US Highway 84. The CDT descends into the Chama River Canyon Wilderness where primitive recreation settings and very high existing scenic integrity occurs until the trail crosses Chama Canyon Road (National Forest Service Road 151). Rio Grande National Heritage Area is a Congressional designation that covers Taos, Rio Arriba, and Santa Fe Counties in northern New Mexico.

# Feature Summary

# Continental Divide Trail Coalition Trail Segments:

The following trail segments comprise the Tusas Mountains scenic character unit.

- NM31 (Lagunitas CG AP to New Mexico Border)
- NM30 (Hopewell Lake AP to Lagunitas CG AP)
- NM29 (NM Hwy 110 AP to Hopewell Lake AP)
- NM28 (US Hwy 84 AP to NM Hwy 110 AP)
- NM27 (Skull Bridge TH to US Hwy 84 AP)

#### Location

• Tusas Mountains in the southern San Juan Range in northern New Mexico

# Length

• 134 miles

#### Percent on Road

• 12%

#### Percent on Trail

• 88%

#### Land Manager

- Carson National Forest
- Santa Fe National Forest

#### Designated Areas

• Cruces Basin Wilderness

- Chama River Canyon Wilderness
- Old Spanish National Historic Trail
- Rio Grande National Heritage Area Taos, Rio Arriba, and Santa Fe Counties

# Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Tusas Mountains unit
- Summits include Burned Mountain, Jawbone Mountain, Mogote Peak, Mogotito, Mesa del Medio, Olguin Mesa
- Chama River Canyon, Martinez Canyon
- Hopewell Lake, Canjilon Lakes
- Brazos Ridge, Hopewell Ridge
- Brazos Ridge Overlook, The Rim Overlook
- Chama River Gorge Audubon Important Bird Area encompasses cliffs and side canyons of
  the river and mesa provide habitat for nesting raptors. This stretch of the Chama provides a
  high-quality stream and other than boaters, has very little human presence. Dusky
  Flycatcher, Plumbeous Vireo, Pygmy Nuthatch, Western Bluebird, and Grace's Warbler are
  other noteworthy species documented here.

#### Named Streams

- Canjilon Creek
- Canada Jarosita
- Dixie Creek
- East Fork Rio Brazos
- Lagunitas Creek
- Rio San Antonio
- Rio Vallecitos
- Rock Creek

# San Pedro Mountains Scenic Character Unit

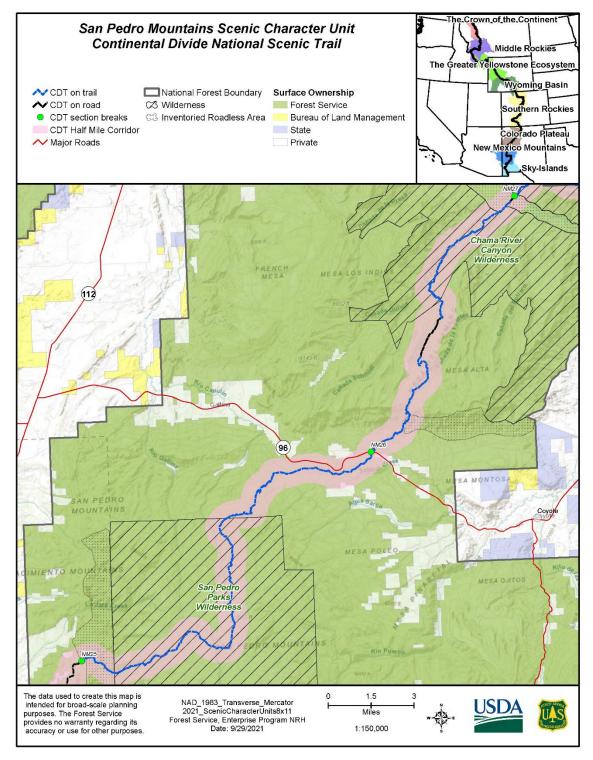


Figure 61. Map of San Pedro Mountains scenic character unit



Figure 62. The Continental Divide Trail crosses through the San Pedro Parks Wilderness in the San Pedros Mountains scenic character unit. Photo Credit: Matt Berger

The San Pedro Mountains unit passes from Skull Bridge Trailhead in the Chama River Canyon to the Los Pinos Trailhead. Diversity continues in this unit with the CDT traveling through the Chama River Canyon Wilderness, a large steep walled river canyon, low elevation shrublands, and high elevation mountains in the San Pedro Parks Wilderness. High mountains, cliffs, canyons, and mesas, interspersed with forests, shrublands, and meadows characterize the area. Scenic attributes are tan and red colored cliffs, steep walled canyons, aspen groves, and wetland mountain meadows. Trail elevation ranges between 6,340 and 10,565 feet.

The trail travels across foothill shrublands and sedimentary mid-elevation forests until reaching the subalpine forests of the San Pedro Parks. Foothill shrublands are semi-arid with rolling to irregular terrain of hills and ridges; pinyon-juniper, oak woodlands, and big sagebrush are dominant. Chama River Canyon is a multi-colored sandstone canyon which is at times 1,500 feet deep. Multi-colored red and tan sandstone cliffs contrast with the greens of sagebrush, pinyon juniper, and ponderosa pine. Mid-elevation forest vegetation includes ponderosa pine, aspen, Douglas-fir, and areas of limber pine. Subalpine forests include Engelmann spruce and subalpine fir often interspersed with aspen groves and mountain meadows. San Pedro Parks Wilderness is known for high, moist, rolling mountaintops with numerous meadows and large grassy parks. Dense stands of Engelmann spruce and mixed conifers also include small stands of aspen. Wet

meadows flourish with bluegrass, oat grass, sedge, rush, and Rocky Mountain iris. Forest blowdown, insect outbreaks, and fire affect the vegetation mosaic.

The predominant geology is composed of sedimentary on sandstone, siltstone, shale, and limestone substrates. San Pedro Parks Wilderness include crystalline and metamorphic materials, such as gneiss, schist, and granite, as well as some areas of igneous intrusive rocks.

Wetlands and high gradient, perennial streams dot the landscape. Clear streams wander through the forest openings in the San Pedro Parks Wilderness.

# Other Attributes

Major land uses include recreation, wilderness, roadless, wildlife habitat, timber harvest, and livestock grazing. Whitewater boating and camping are popular in Chama River Canyon.

The CDT crosses the Chama River Canyon Wilderness and San Pedro Parks Wilderness which have primitive recreation settings, a high degree of self-reliance, and solitude, and very high existing scenic integrity. Other portions of the unit are working landscapes with vegetation management, livestock grazing developments, and minor roads; existing scenic integrity varies between moderate and high. The CDT crosses New Mexico Highway 96 where developments and interactions between visitors are common around road crossings.

Rio Chama is a wild and scenic study river at the CDT crossing, possessing outstandingly remarkable values for scenery, recreation, and wildlife and was designated under section 5(a) of the Wild and Scenic River Act. While this stretch is not designated as part of the National System of Wild and Scenic Rivers, it is generally managed to protect and enhance river values in the interim until further study is done.

The Old Spanish National Historic Trail intersects the CDT near New Mexico Highway 96. Rio Grande National Heritage Area is a Congressional designation that covers Taos, Rio Arriba, and Santa Fe Counties in northern New Mexico.

# Feature Summary

# Continental Divide Trail Coalition Trail Segments:

The following trail segments comprise the San Pedro Mountains scenic character unit.

- NM26 (NM Hwy 96 AP to Skull Bridge TH)
- NM25 (Los Pinos TH to NM Hwy 96 AP)

#### Location:

San Pedro Peaks Range and Chama River Canyon in northern New Mexico

# Length

• 35 miles

#### Percent on Road

• 7%

# Percent on Trail

• 93%

# Land Manager

• Santa Fe National Forest

# Designated Areas

- Chama River Canyon Wilderness
- San Pedro Parks Wilderness
- Old Spanish National Historic Trail
- Rio Grande National Heritage Area Taos, Rio Arriba, and Santa Fe Counties (New Mexico)
- The CDT crosses the Rio Chama Study River Wild and Scenic River Study Area with scenery, recreation, and wildlife Outstandingly Remarkable Values (ORV) and preliminary recreational classification

# Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the San Pedro Mountains unit
- Summits include Mesa del Camino
- Joaquin Canyon and Ojitos Canyon in Chama River Canyon
- San Pedro parks and wetlands
- Chama River Gorge Audubon Important Bird Area (described in the Tusas Mountains scenic character unit)

# Named Streams (streams with outstandingly remarkable values are in bold)

- Canada Camino
- Canada Gurule
- Rio Chama
- Rio Puerco
- Rio de las Vacas
- Rito de los Pinos

# **Colorado Plateau Province**

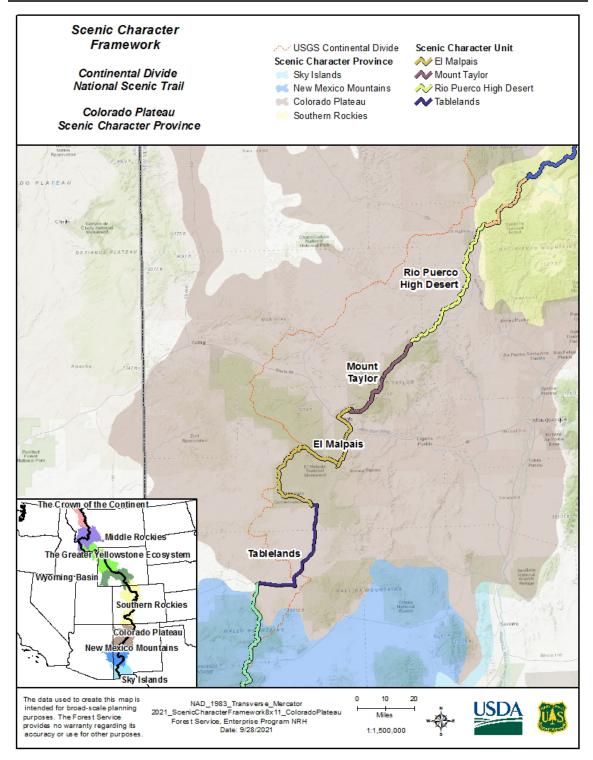


Figure 63. Map of Continental Divide Trail scenic character units in the Colorado Plateau province.

The CDT clips the southeastern edge of the Colorado Plateau province (Figure 63), an area of rugged tablelands with canyons, mesas, plateaus, and mountains. Escarpments mark abrupt changes in local relief, often of 1,000 to 2,000 feet or more. Plateau tops range from 5,000 to 7,000 feet. In some areas, volcanic mountains rise 1,000 to 3,000 feet above the plateau surface. The high country of the Southern Rockies province lies to the north and the New Mexico Mountains province lies to the south.

Stream valleys are narrow and widely spaced. Flowing out of the Southern Rockies, the San Juan River is one of the region's few rivers. Many other streams flow year-round, but the volume of water fluctuates considerably.

Due to the region's high altitude, the climate is characterized by cold winters. Summer days are usually hot, but nights are cool. Temperature varies considerably throughout the day. Average annual precipitation is about 20 inches, except on the mountains where it is higher. Some parts of the province receive less than 10 inches. Thunderstorms are common during the summer monsoon season.

Lower elevations are a mix of shrub-steppe, and semi-desert grasslands with visible bare ground. A profusion of annuals and perennials blooms during the summer monsoon season. In the south, several kinds of cactus and yucca are common. Cottonwoods grow along perennial streams.

Middle elevations are mostly pinyon-juniper woodlands, with some ponderosa pine at higher elevations. Trees often intermingle with grasslands and shrublands. Gambel oak, mountain mahogany, and serviceberry are common. The highest mountain elevations are forested with Douglas-fir, Engelmann spruce, fir, and aspen.

This region is one of the world's premier natural showcases for Earth history with a long geologic history of rock formations. Geology is mostly sedimentary sandstone, shale, and mudstone with fairly recent volcanic activity in the El Malpais, or badlands.

Livestock grazing, some irrigated agriculture, recreation, wildlife habitat, mining, and oil and gas production are major land uses.

The following scenic character units occur within the Colorado Plateau province:

- Rio Puerco High Desert
- Mount Taylor
- El Malpais
- Tablelands

# Rio Puerco High Desert Scenic Character Unit

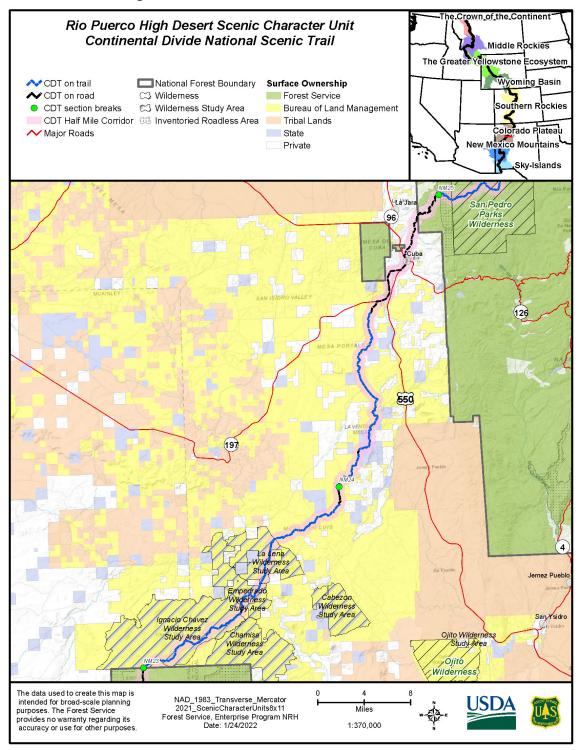


Figure 64. Map of Rio Puerco High Desert scenic character unit



Figure 65. The Continental Divide Trail crosses conifer woodlands and savannas in the Rio Puerco High Desert scenic character unit. Photo Credit: Matt Berger

The Rio Puerco High Desert unit passes from Los Pinos Trailhead in the western San Juan Mountains into the Rio Puerco valley, through the community of Cuba, New Mexico, and across mesas and valleys to the southwest. High desert shrublands, mesas, valleys, narrow box canyons, and arroyos characterize the area. Scenic attributes are mountainous ridges, sandstone ridges and outcrops, badlands, and riparian vegetation. Trail elevation ranges between 5,943 and 8,190 feet.

The trail leaves mid-elevation forests decreasing in elevation into the valleys, tablelands, and mesas southwest of Cuba, New Mexico until the trail climbs again in conifer woodlands and savannas. Mid-elevation forest vegetation includes ponderosa pine and Douglas-fir forests. Pinyon-juniper and oak woodlands dominate foothills. The low elevation high desert landscapes exhibit relatively sparse vegetation composed of pinyon-juniper woodlands and juniper savannas on mesa side slopes and hillsides with a mix of desert scrub, semi-desert shrub-steppe and semi-desert grasslands. The Rio Puerco valley is dominated by non-native tamarisk (also called salt cedar), with occasional groves of mature broad-leafed cottonwoods. Conifer woodlands and savannas are mostly pinyon-juniper woodlands intermixed with grasslands and shrublands.

The predominant geology is composed of Tertiary and Cretaceous sedimentary rocks on sandstone, siltstone, shale, and mudstone substrates. Nacimiento Ridge, a granitic intrusion of steep mountainous side slopes, dominates the western edge of the Jemez Mountains. The lower elevations include the Rio Puerco River valley with surrounding flat top mesas and narrow box

canyons with vertical rock outcrops. The La Lena and Empedrado wilderness study areas are characterized by deep arroyos, highly sculpted mesas, canyons, and sandstone and shale outcrops. The Ignacio Chavez wilderness study area is more diverse. The northern portion is arid, while the southern portion consists of a higher plateau dominated by pinyon and ponderosa pines. Some areas experience severe erosion due to geology, topography, and human influences.

The unit is semi-arid. Rio Puerco is the dominant perennial stream. There are additional perennial streams in the western San Pedro Mountains.

#### Other Attributes

Major land uses include recreation, livestock grazing, wildlife habitat, and mining. Areas with active mining operations often modify the desired scenic character and exhibit low existing scenic integrity, which does not meet the CDT's nature and purposes.

Much of the unit is a working landscape with livestock grazing developments and minor roads; existing scenic integrity varies between moderate and high. The CDT crosses multiple main and secondary roads. The CDT travels near Cuba, New Mexico, a rural to urban setting, crossing New Mexico Highway 126 and US Highway 550 where developments and interactions between visitors is moderate to high. New Mexico Highway 126 and US Highway 550 are part of the Jemez Mountain National Scenic Byway.

The CDT crosses three wilderness study areas in the southern end of the unit, which provide very high existing scenic integrity and primitive recreation with high levels of challenge and solitude.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Rio Puerco High Desert scenic character unit.

- NM24 (Cerro Colorado AP to Los Pinos TH)
- NM23 (FR 239A TH to Cerro Colorado AP)

#### Location

• Western edge of the San Pedro mountains and Rio Puerco Basin in northern New Mexico

#### Length

• 66 miles

#### Percent on Road

26%

#### Percent on Trail

• 74%

#### Land Manager

- BLM Rio Puerco Field Office
- Santa Fe National Forest
- State of New Mexico

## Designated Areas:

• Jemez Mountain National Scenic Byway near Cuba, New Mexico

#### Significant Scenic, Cultural, and Natural Features:

- There are no mountain passes in the Rio Puerco High Desert unit
- Summits include Cerros Colorados, Deadman Peaks, La Ventana Mesa, Cerro Colorado, Mesa Portales, and Cerro del Ojo Frio
- Wilderness Study Areas: La Lena, Empedrado, Ignacio Chavez
- Rio Puerco

#### Named Streams

- Arroyo Chijuilla
- Arroyo Chico
- Arroyo de los Cerros
- Arroyo la Azabache
- Arroyo Piedra Lumbre
- Canada de las Lomitas
- Kinaird Arroyo
- Rio Puerco
- Rito Leche
- Rito de los Pinos
- Rito de los Utes

# Mount Taylor Scenic Character Unit

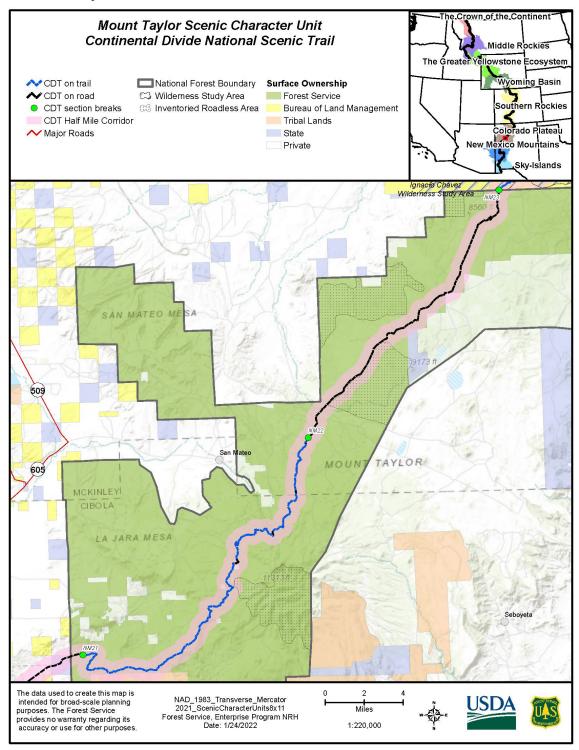


Figure 66. Map of Mount Taylor scenic character unit



Figure 67. The Continental Divide Trail passes below the summit of Mount Taylor. Photo Credit: Kate Bobal

The Mount Taylor unit passes from the National Forest Service Road 239A Trailhead to the Mount Taylor Trailhead in the San Mateo Mountains. The unit is named for a dominant landform located east of the CDT. Mount Taylor is a collapsed volcanic caldera that appears to rise out of the mesas and tablelands that surround it. Mountains, mesas, and canyons interspersed with coniferous forests and savannas characterize the area. Scenic attributes are canyons, large aspen stands, deciduous-coniferous tree mixes, deciduous shrubs, Gambel oak, and views of Mount Taylor. Trail elevation ranges between 6,866 and 9,736 feet.

The CDT travels across conifer woodlands and savannas and some montane conifer forests in areas closer to Mount Taylor. Conifer woodlands and savannas is an area of mostly pinyon-juniper woodlands with some ponderosa pine at higher elevations. It often intermingles with grasslands and shrublands. El Dado Mesa is dominated by large aspen stands, Gambel oak, deciduous shrubs, and deciduous-coniferous forest mixes. Montane conifer forests around Mount Taylor are dominated by ponderosa pine and Douglas-fir along with Gambel oak. Wildfire influences the forested ecosystems.

The predominant geology is composed of igneous, volcanic, and volcaniclastic sedimentary rocks. Moderate to high gradient intermittent and ephemeral streams occur. Some streams are spring fed.

#### Other Attributes

Major land uses include recreation, wildlife habitat, timber harvest, and livestock grazing.

The CDT is in a working landscape with timber harvest, livestock grazing, and several secondary roads. The northern segment is coincident on a road open for public motorized travel with motorized use encountered. Existing scenic integrity is moderate across most of the area with some high existing scenic integrity areas around Mount Taylor and inventoried roadless areas near the trail. Developments and management activities are evident around roads. The recreation setting is influenced by roads with more interactions between visitors and less self-reliance. Mount Taylor is a designated Traditional Cultural Property of special religious and cultural significance to several pueblos and tribes.

## Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Mount Taylor scenic character unit.

- NM22 (FR 239 AP to FR 293A TH)
- NM21 (Mt Taylor TH to FR 239 AP)

#### Location

• Mount Taylor division of the San Mateo Mountains in west central New Mexico

#### Length

• 44 miles

#### Percent on Road

• 43%

#### Percent on Trail

• 57%

#### Land Manager

Cibola National Forest

#### Designated Areas

• None identified

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Mount Taylor unit
- Summits include Cerro Venada
- Antelope Flats
- Mount Taylor is a Traditional Cultural Property

#### Named Streams

- San Mateo Creek
- San Miguel Creek

# El Malpais Scenic Character Unit

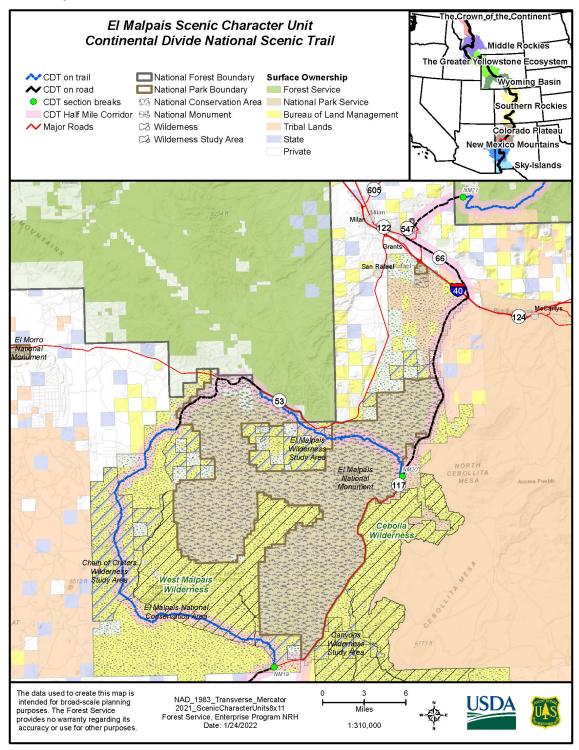


Figure 68. Map of El Malpais scenic character unit



Figure 69. The Continental Divide Trail crosses pinyon-juniper woodland and lava features within the El Malpais scenic character unit. Photo Credit: Alison Taylor <a href="https://www.flickr.com/people/alitay/">https://www.flickr.com/people/alitay/</a>

In the El Malpais unit, the CDT traverses hills, low mountains, canyons, and tablelands of mesas, plateaus, and cliffs. The Zuni Mountains lie to the northwest, Mount Taylor and San Mateo Mountains are to the north, and the Tablelands scenic character unit lies to the south. At the heart of the unit is the recent volcanism of the Zuni-Bandera Volcanic Field. Trail elevation ranges between 6,328 and 8,153 feet.

The underlying geology is the sedimentary rock of the Colorado Plateau. Within the volcanic field, recent lava flows date to 3,000 years ago and have left volcanic deposits, extensive lavatube systems, and associated lava tube caves. Chain of Craters wilderness study area encompasses a line of more than 25 cinder cones. Soils are variable with a variety of growing conditions.

Some unique flora and fauna have adapted to live in the lava habitat of the volcanic field. A large colony of Mexican free-tailed bats migrates between some of the caves. Stunted Douglas-fir and ponderosa pine grow in moisture pockets. Grasses, cacti, aspen, pine, and juniper also occur. Outside of the volcanic field, vegetation is mostly pinyon-juniper woodlands. Open stands of ponderosa pine grow at higher elevations. Semi-arid shrublands with scattered juniper is the predominant vegetation in the northern portion of the unit.

Hills and low mountains have moderate to high gradient, intermittent streams with bedrock, cobble, gravel, and sandy substrates. Tablelands are semiarid with ephemeral streams. There is no surface water in the volcanic field.

#### Other Attributes

Major land uses include wildlife habitat, recreation, wilderness, livestock grazing,

The El Malpais National Conservation Area was established to protect nationally significant geological, archaeological, ecological, cultural, scenic, scientific, and wilderness resources surrounding the Zuni-Bandera volcanic field. Areas within the National Conservation Area, designated wilderness, wilderness study areas, and El Malpais National Monument have very high existing scenic integrity. The recreation setting is managed to be primitive to semi-primitive with a high degree of self-reliance and solitude.

In the northern portion, the CDT is on New Mexico 117 and crosses Interstate 40 near Grants, New Mexico. The recreational setting is rural to urban in and around Grants. Areas adjacent to roads have more developments and active management. Existing scenic integrity ranges from moderate to high. Outside of Grants, the recreation setting is rural with easy access, moderate self-reliance, and higher interactions between visitors.

The lands in and around El Malpais National Monument and National Conservation Area have played an important role in the cultures of Acoma, Laguna, and Zuni for thousands of years. Puebloan Cultures and their ties to the land are still evident today in places like the Zuni-Acoma Trail, which was established to connect Acoma Pueblo to Zuni Pueblo.

#### **Feature Summary**

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise El Malpais scenic character unit.

- NM20 (Zuni-Acoma TH (NM Hwy 117) to Mt Taylor TH)
- NM19 (NM Hwy 117 AP to Zuni-Acoma TH)

#### Location

• Zuni-Bandera Volcanic Field in west central New Mexico

#### Length

• 83 miles

#### Percent on Road

• 44%

#### Percent on Trail

• 56%

## Land Manager

- Acoma Pueblo
- El Malpais National Monument, National Park Service
- BLM Rio Puerco Field Office

#### Designated Areas

- El Malpais National Monument
- El Malpais National Conservation Area
- West Malpais Wilderness
- Historic Route 66 National Scenic Byway
- Trail of the Ancients State Scenic Byway
- El Malpais Wilderness Study Area
- Chain of Craters Wilderness Study Area

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the El Malpais scenic character unit.
- Summits include Cerro Chatito, Cerro Chato, Cerro Colorado, Cerro Lobo, Cerro Piedrita, Cerrito Comadre, Cerro Bandera, Cerro Leonides, Cerro Negro, Cerro Americano, and Encerrito
- Bandero Crater
- Las Ventanas Ridge

#### Named Streams

- Cebollita Creek
- Rio San Jose

# **Tablelands Scenic Character Unit**

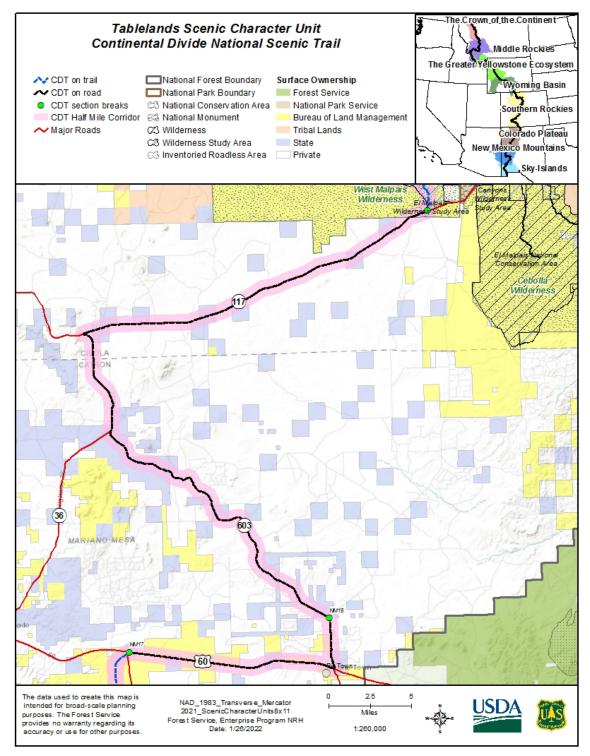


Figure 70. Map of Tablelands scenic character unit



Figure 71. The Continental Divide Trail on road in the Tablelands scenic character unit. Photo Credit: Whitney LaRuffa

The Tablelands unit is the transition between the Colorado Plateau province to the north and the New Mexico Mountains to the south. Terrain consists of mesas, plateaus, valleys, and canyons formed from flat to low relief plains. Trail elevation ranges between 7,076 and 7,681 feet.

Semi-arid grasses, shrubs, and woodland cover the tablelands. Scattered junipers occur on shallow, stony soils, and are dense in some areas. Pinyon-juniper woodland is also common in some areas. Saltbush species, alkali sacaton, sand dropseed, and mixed grama grasses occur.

Streams are intermittent and ephemeral. There is little surface water.

Geology is predominantly sedimentary rocks with some volcanic fields. Exposed bedrock is common. The Cebolla Wilderness is northeast of the unit with sandstone bluffs and sandy washes beneath high mesas.

#### Other Attributes

Major land uses include livestock grazing and wildlife habitat. The CDT passes through the small communities of Pie Town, Tres Lagunas, and Lehew, New Mexico.

The CDT is on roads through the entire unit. The BLM manages land along US Highway 60 in the south and close to the El Malpais unit to the north. In the middle, the CDT is on secondary

roads through private and state land. Areas adjacent to roads have more developments and management activities. Existing scenic integrity ranges from moderate to high. The recreation setting is rural with easy access, moderate self-reliance, and higher interactions between visitors.

## Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Tablelands scenic character unit.

- NM18 (York Ranch Rd to NM Hwy 117 AP)
- NM17 (US Hwy 60 to York Ranch Rd)

#### Location

• New Mexico west central New Mexico

#### Length

• 47 miles

#### Percent on Road

• 100%

#### Percent on Trail

• 0%

#### Land Manager

- BLM Rio Puerco Field Office
- BLM Socorro Field Office
- State of New Mexico
- Private land

#### Designated Areas

• None identified

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Tablelands scenic character unit.
- There are no summits within 0.5 mile of the CDT in the unit.

#### Named Streams

• Freeland Arroyo

# **New Mexico Mountains Province**

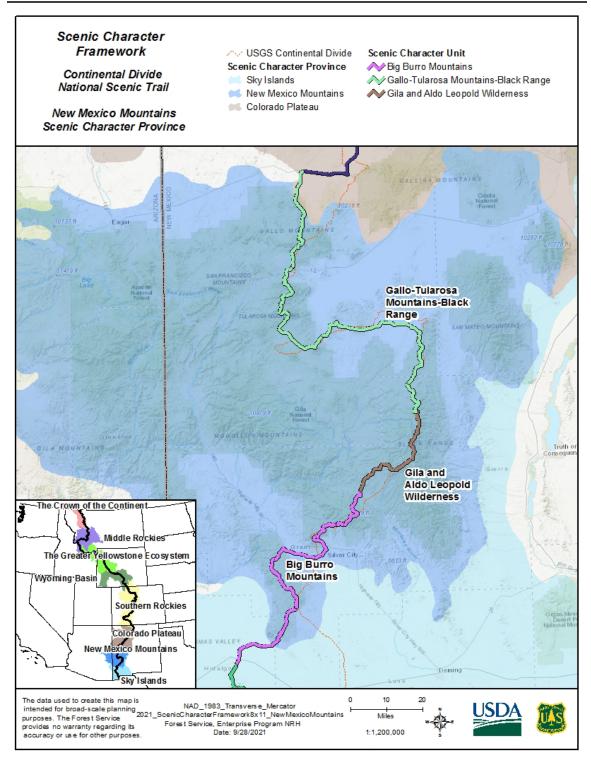


Figure 72. Map of Continental Divide Trail scenic character units in the New Mexico Mountains province

The New Mexico Mountains province (Figure 72) is a mass of steep foothills and sprawling mountains with some deeply dissected high plateaus. Elevations range from 4,500 to 10,000 feet. In many areas, the relief is higher than 3,000 feet. The Colorado Plateau province is to the north. The Sky Island province is to the south. Here, the CDT crosses through several mountain ranges.

The province's vegetation is indicative of drier, warmer environments. Foothills, as high as 7,000 feet, are characterized by mixed grasses, chaparral brush, oak-juniper woodland, and pinyon-juniper woodland. At about 7,000 feet, open forests of ponderosa pine grow, with pinyon and juniper on south facing slopes. Ponderosa pine forest is replaced at about 8,000 feet on north facing slopes by Douglas-fir where aspen is common. At about 9,000 feet, Douglas-fir intergrades with Engelmann spruce and corkbark fir. Wildfire is an important process influencing the forests.

The province has a cool to cold climate with most precipitation occurring during the late summer monsoon season as thunderstorms. Winter also brings precipitation. Higher elevations record more precipitation. In the mountains, most precipitation is snow.

Streams are mostly moderate to high gradient and flow intermittently or perennially. Stream substrates are bedrock, cobble, gravel, and sandy. Endemic Gila trout occur in some streams. The region is influenced by the Sierra Madre Occidental to the south with species such as white-nosed coati, ringtail, and javelina occurring in lower elevations. Bighorn sheep and elk roam the forested high-country.

The province is geologically diverse with volcanic, sedimentary, and some intrusive and crystalline rocks.

Livestock grazing, wildlife habitat, designated wilderness, inventoried roadless area, recreation, mining, and timber production are major land uses.

The following scenic character units occur within the New Mexico Mountains province:

- Gallo -Tularosa Mountains Black Range
- Gila and Aldo Leopold Wilderness
- Big Burro Mountains

# Gallo - Tularosa Mountains - Black Range Scenic Character Unit

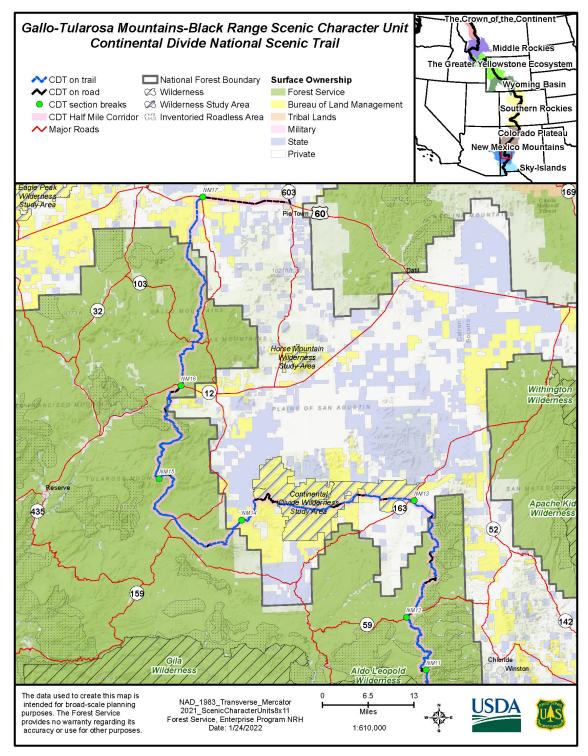


Figure 73. Map of Gallo - Tularosa Mountains - Black Range scenic character unit



Figure 74. The Continental Divide Trail within the Tularosa Mountains. Photo Credit: Continental Divide Trail Coalition

In the Gallo – Tularosa Mountains – Black Range unit, the CDT connects numerous mountain ranges. Trail elevation ranges between 7,027 and 9,308 feet.

Terrain is rugged with high hills, numerous canyons, and steep mountains. Lower elevation woodlands are mostly Mexican pinyon, one-seed juniper, alligator juniper, gray oak, Emory oak, manzanita, and grasses. Higher elevation forests are ponderosa pine, Gambel oak, mountain mahogany, Arizona sycamore, Douglas-fir, southwestern white pine, and white fir. Rolling, open grasslands surround Pelona Mountain. Fire is the major influence affecting the mosaic of vegetation.

Mostly moderate to high gradient, intermittent, and some perennial streams with bedrock, cobble, gravel, and sandy substrates are found in this unit. Intermittent and perennial springs occur throughout.

The geology is diverse with volcanic, sedimentary, and some intrusive and crystalline rocks. The Black Range is predominantly composed of volcanic rocks.

#### Other Attributes

Major land uses include inventoried roadless area, recreation, livestock grazing, wildlife habitat, and timber production. Tanks are scattered about to provide water for livestock.

Major roads, New Mexico Highway 12, Bursum Road, New Mexico Highway 59, and New Mexico Highway 163 cross the CDT but are separated by large expanses of natural appearing scenery. Minor roads interact with the CDT more frequently. Areas adjacent to roads have more developments and management activities. Existing scenic integrity ranges from moderate to high. The recreation setting is more accessible, with moderate self-reliance, and higher interactions between visitors.

The area around Pelona Mountain is a BLM wilderness study area and managed for a primitive recreation setting with a moderate degree of self-reliance and solitude. Within the wilderness study area and inventoried roadless areas, the existing scenic integrity is high.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Gallo - Tularosa Mountains - Black Range scenic character unit.

- NM16 (NM Hwy 12 to US Hwy 60)
- NM15 (FR 3070 to NM Hwy 12 TH)
- NM14 (Coyote Stock Tank (CR 16) to FR 3070)
- NM13 (NM Hwy 163 to Coyote Stock Tank (CR 16))
- NM12 (NM Hwy 59 to NM Hwy 163)
- NM11 (FR 226 to NM Hwy 59 TH)

#### Location

 Gallo Mountains, Tularosa Mountains, Pelona Mountain, and the northern Black Range in west central New Mexico

#### Length

• 160 miles

#### Percent on Road

• 5%

#### Percent on Trail

• 95%

#### Land Manager

- Gila National Forest
- BLM Socorro Field Office

#### Designated Areas

Continental Divide Wilderness Study Area

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Gallo Tullarosa Mountains Black Range unit.
- Summits include John Kerr Peak, Kline Mountain, Pelona Mountain, Wagontongue Mountain, Coyote Peak, and Pinon Knob

## Continental Divide Trail Scenic Character Descriptions

# Named Streams

- Mangas Creek
- San Ignacio Creek
- Tularosa River

# Gila and Aldo Leopold Wilderness Scenic Character Unit

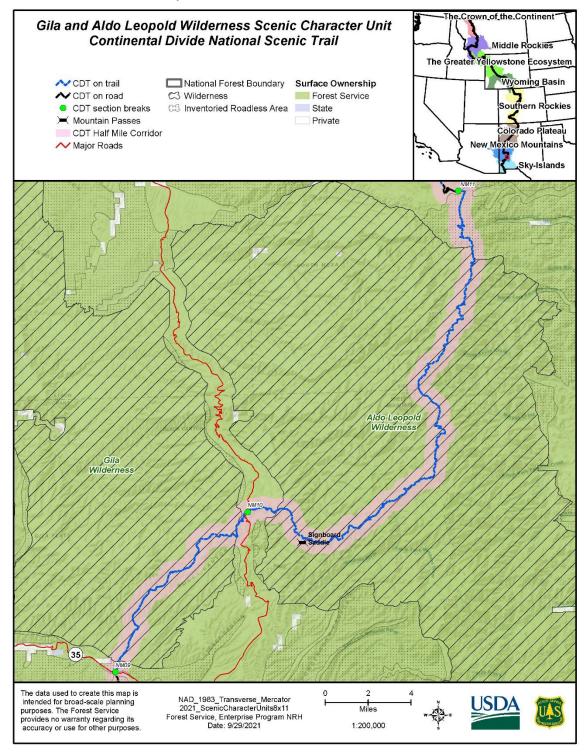


Figure 75. Map of Gila and Aldo Leopold Wilderness scenic character unit



Figure 76. The Continental Divide Trail crosses canyons and high mesas within the Gila and Aldo Leopold Wilderness scenic character unit. Photo Credit: Whitney LaRuffa

The Gila and Aldo Leopold Wilderness unit connects the Pinos Altos Range in the south with the Black Range in the north. Landforms include rolling hills, deep canyons, and high mesas in the south. In the north, the CDT traces the southern crest of the north-south running Black Range where the topography is rugged with sharp ridges and broad benches broken by deep canyons. Trail elevation ranges between 6,180 and 9,842 feet.

Lower elevations in the south have pinyon-juniper woodland and a few open parks. Canyons have riparian communities of willows, cottonwoods, boxelder, and Arizona sycamore. Steep mountain slopes have juniper, pinyon, ponderosa pine, and oak woodlands. Above 7,000 feet, subalpine forests include Engelmann spruce, blue spruce, white fir, corkbark fir, and aspen. Fire is the major influence affecting the mosaic of vegetation.

Streams are moderate to high gradient with bedrock gravel and substrates. Some springs and streams are both intermittent and perennial.

The geology is diverse with volcanic, sedimentary, and some intrusive and crystalline rocks. The Black Range is predominantly composed of volcanic rocks.

#### Other Attributes

Major land uses include wilderness, livestock grazing, inventoried roadless areas, wildlife habitat, and recreation. The recreation setting is predominantly primitive and remote, with a high degree of solitude and self-reliance. Existing scenic integrity is mostly very high. The CDT crosses the Gila and Aldo Leopold Wildernesses. National Forest Service Road 150 crosses the CDT in the middle of the unit with more interaction between visitors.

## **Feature Summary**

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Gila and Aldo Leopold Wilderness scenic character unit.

- NM10 (Rocky Point (FR 150) to FR 226)
- NM09 (NM Hwy 35 to Rocky Point (FR 150))

#### Location

• Southern Black Range in west central New Mexico

#### Length

• 49 miles

#### Percent on Road

• 0%

#### Percent on Trail

• 100%

#### Land Manager

• Gila National Forest

#### Designated Areas

- Aldo Leopold Wilderness
- Gila Wilderness

#### Significant Scenic, Cultural, and Natural Features

- There is one mountain pass in the Gila and Aldo Leopold Wilderness unit: Signboard Saddle.
- Summits include Aspen Mountain, Diamond Peak, Reeds Peak, and Rocky Point

#### Named Streams

• Sapillo Creek

# Big Burro Mountains Scenic Character Unit

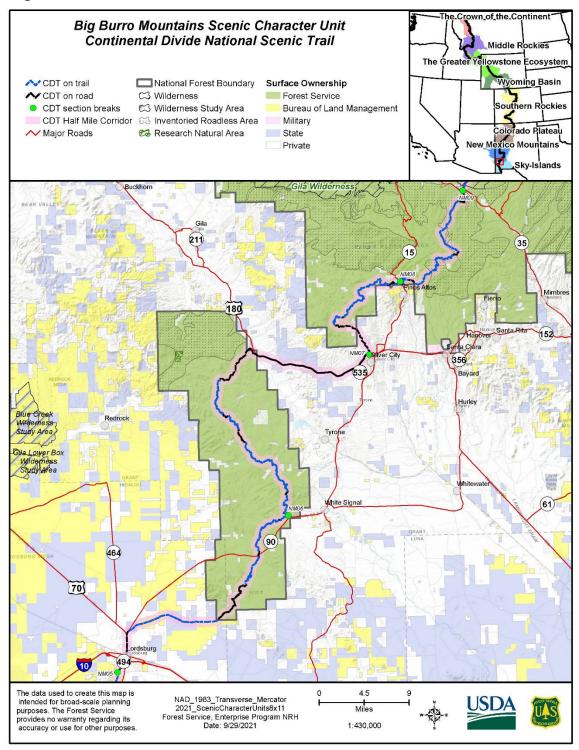


Figure 77. Map of Big Burro Mountains scenic character unit



Figure 78 The Continental Divide Trail crosses broad intermontane valleys of pinyon pine, juniper, and oaks within the Big Burro Mountains scenic character unit. Photo Credit: Teresa Martinez

The Big Burro Mountains unit is a transition from the Sky Island province to the south and the New Mexico Mountain province to the north. The southern portion of the unit is in the Chihuahuan Desert basins and playas. The northern portion is in the Pinos Altos Range. In the middle, the CDT crosses over the spine of the Big Burro Mountains and broad intermontane valleys. The unit is diverse, and the CDT crosses five different ecological zones. Trail elevation ranges between 4,193 and 9,842 feet.

Terrain and vegetation are diverse across the unit. Lower elevations are sparsely vegetated desert basins. Desert grasslands have scattered yuccas, lechuguilla, sotol, and junipers. Mountains are steep with open foothills and numerous canyons. Lower elevation forests are mostly Mexican pinyon, one-seed juniper, alligator juniper, gray oak, Emory oak, manzanita, and grasses. Higher elevations are ponderosa pine, Gambel oak, mountain mahogany, Arizona sycamore, Douglas-fir, and southwestern white pine.

The geology is diverse with volcanic, sedimentary, and some intrusive and crystalline rocks. Lower elevation streams are ephemeral and only flow after rain events. Mountains have high to moderate gradient, intermittent, and ephemeral streams with bedrock, cobble, gravel, and sandy substrates.

#### Other Attributes

Major land uses include livestock grazing, some irrigated cropland, recreation, inventoried roadless area, wildlife habitat, mining, and timber production.

Much of the unit is a working landscape with livestock grazing developments, and minor roads; existing scenic integrity varies between moderate and high. Areas with active mining operations often modify the desired scenic character and exhibit low existing scenic integrity, which does not meet the CDT's nature and purposes. Tanks are scattered about to provide water for livestock.

The recreation setting is rural to urban around Lordsburg and Silver City, New Mexico. The CDT crosses Interstate 10 near Lordsburg. Numerous other major roads cross the CDT, such as New Mexico Highway 90, US Highway 180, New Mexico Highway 15, and New Mexico Highway 35. Portions of the latter three are segments of the Trail of the Mountain Spirits National Scenic Byway. Areas adjacent to roads have more developments, management activities, and more interactions between visitors.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Big Burro Mountains scenic character unit.

- NM08 (NM Hwy 15 to NM Hwy 35)
- NM07 (US Hwy 180 to US Hwy 15)
- NM06 (Burro Peak TH to US Hwy 180)
- NM05 (NM Hwy 494 to Burro Peak TH)

#### Location

• Big Burro Mountains in southwestern New Mexico

#### Length

• 120 miles

#### Percent on Road

• 37%

#### Percent on Trail

• 63%

#### Land Manage:

- Gila National Forest
- BLM Las Cruces Field Office
- State of New Mexico

#### Designated Areas

• Trail of the Mountain Spirits National Scenic Byway

#### Significant Scenic, Cultural, and Natural Features

• There are no mountain passes in the Big Burro Mountains unit

#### Continental Divide Trail Scenic Character Descriptions

• Summits include Saddle Rock, Black Peak, Boston Hill, Bullard Peak, Burro Peak, Ferguson Mountain, Twin Sisters, and Jacks Peak

## Named Streams

- Arroyo Rico
- Bear Creek
- Mangas Creek
- North Fork Walnut Creek
- Silva Creek
- Twin Sisters Creek
- Willow Creek

# **Sky Island Province**

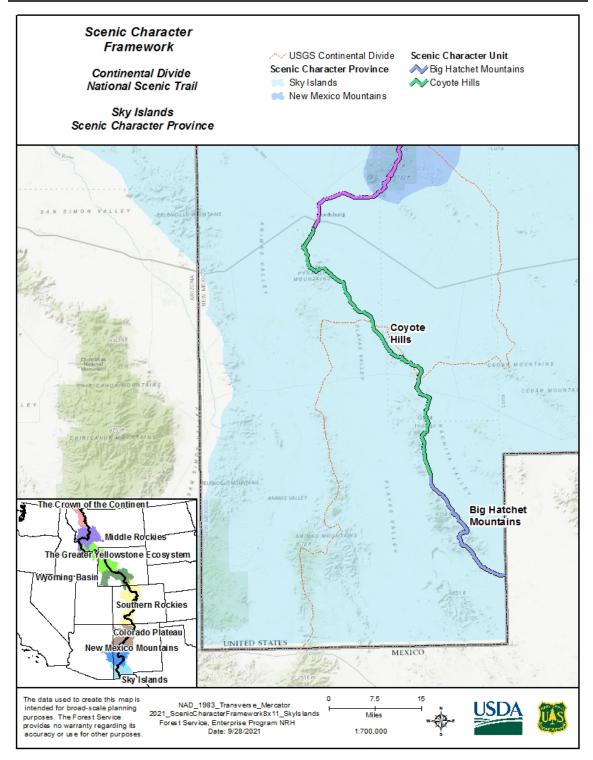


Figure 79. Map of Continental Divide Trail scenic character units in the Sky Islands province

#### Continental Divide Trail Scenic Character Descriptions

The Sky Islands province (Figure 78) is a region of contrasts between island mountain ranges that rise abruptly up from broad rolling plains. The New Mexico Mountains lie to the north, and vast desert plains extend into Mexico to the south. The topography is characterized as basin and range. Mountains have been pushed up and valleys carved downward to create a distinct pattern of ranges and valleys. In the north of the province, the CDT crosses an arm of the Chihuahuan Desert. The CDT southern terminus is within an isolated island mountain range at the border with Mexico.

The plains are predominantly vegetated with desert grasses and shrubs, while the mountains are wet enough for evergreen oaks at mid-elevations, and pine-oak forests at the highest elevations. It is a region of ecological mixing between the Rocky Mountains, the Sierra Madre Occidental, and the Chihuahuan Desert.

About half of the annual precipitation falls during the winter rainy season and half during the summer monsoon season. Monsoon rain and winter snowmelt flows into creeks, rushes down canyon bottoms, and flows into the desert basins. Surface water is rare, and most streams are ephemeral. Springs occur in the mountain ranges. Lower elevations contain bajadas and washes of sedimentary soils and volcanic intrusive rocks. The ranges are a mix of sedimentary and granitic rock.

A few small reservoirs support livestock grazing. Water, in all its forms, attracts a wide variety of wildlife. Mining is also a major land use.

The following scenic character units occur within the Sky Islands province:

- Coyote Hills
- Big Hatchet Mountains

# Coyote Hills Scenic Character Unit

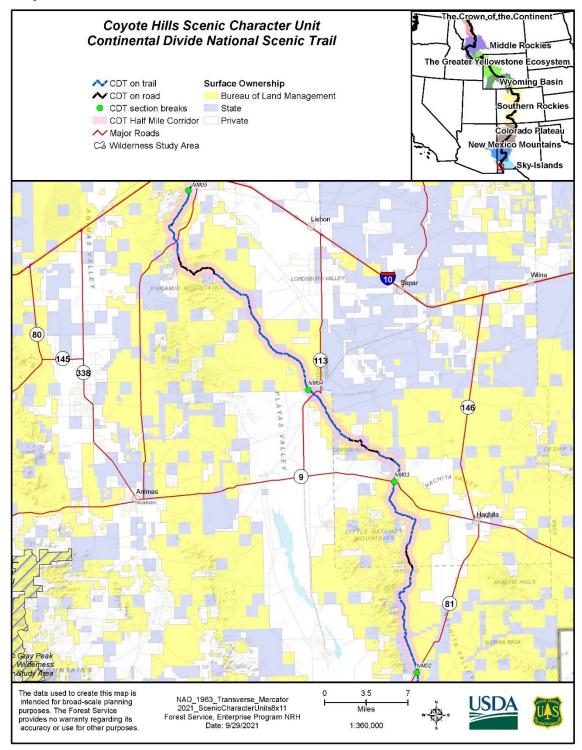


Figure 80. Map of Coyote Hills scenic character unit



Figure 81. The Continental Divide Trail crosses through desert shrubs in the Coyote Hills scenic character unit. Photo Credit: Continental Divide Trail Coalition

In the Coyote Hills unit, the CDT wanders over bajadas and low mountains slightly above the basins and playas of the Chihuahan Desert. Terrain is basin and range with distinct patterns of north-south trending small mountain ranges separated by basins. The CDT crosses over the Little Hatchet Mountains, Coyote Hills, and Pyramid Mountains. Playas Valley lies to the west, and the Lordsburg and Nachita Valley lie to the east. The Trail elevation ranges between 4,361 and 5,050 feet.

Vegetation is desert shrubs, such as sotol, lechuguilla, yucca, ocotillo, lotebush, tarbush, and prickly pear, with a sparse cover of grasses. At higher elevations, trees include scattered one-seeded juniper and pinyon pine. Strips of gray oak, velvet ash, and little walnut along ephemeral drainages, and oaks may spread up north-facing slopes from the riparian zones.

Springs are scattered throughout, but surface water is rare. Streams are ephemeral. Geology is sandstone, limestone, and shale with some volcanic and intrusive rocks.

#### Other Attributes

Major land use includes livestock grazing, recreation, and wildlife habitat. Mining and energy development are prevalent near Lordsburg and in localized areas such as in the Pyramid and Little Hatchet Mountains. Areas with mining operations and energy developments often modify the desired scenic character and exhibit low existing scenic integrity, which does not meet the CDT's nature and purposes. Tanks are scattered throughout to provide water for livestock.

The CDT is crossed by multiple major roads, such as New Mexico Highway 81, New Mexico Highway 9, and New Mexico Highway 146, and multiple secondary roads. Areas adjacent to roads have more developments and management activities. Overall, interaction between visitors is moderate to high. In the northern end of the unit, near Lordsburg, New Mexico, the recreation setting becomes rural to urban. In the southern portion of the unit, the recreation setting becomes more remote with higher degrees of solitude and self-reliance.

#### Feature Summary

#### Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Coyote Hills scenic character unit.

- NM04 (NM Hwy 113 to NM Hwy 494)
- NM03 (NM Hwy 9 to NM Hwy 113)
- NM02 (NM Hwy 81 to NM Hwy 9)

#### Location

 Pyramid Mountains, Coyote Hills, and Little Hatchet Mountains within the Chihuahuan Desert of southwestern New Mexico

#### Length

• 58 miles

#### Percent on Road

18%

#### Percent on Trail

• 82%

#### Land Manager

- BLM Las Cruces Field Office
- State of New Mexico

#### Designated Areas

• None identified

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Coyote Hills unit
- Summits include Aberdeen Peak

#### Named Streams

Mansfield Wash

# Big Hatchet Mountains Scenic Character Unit

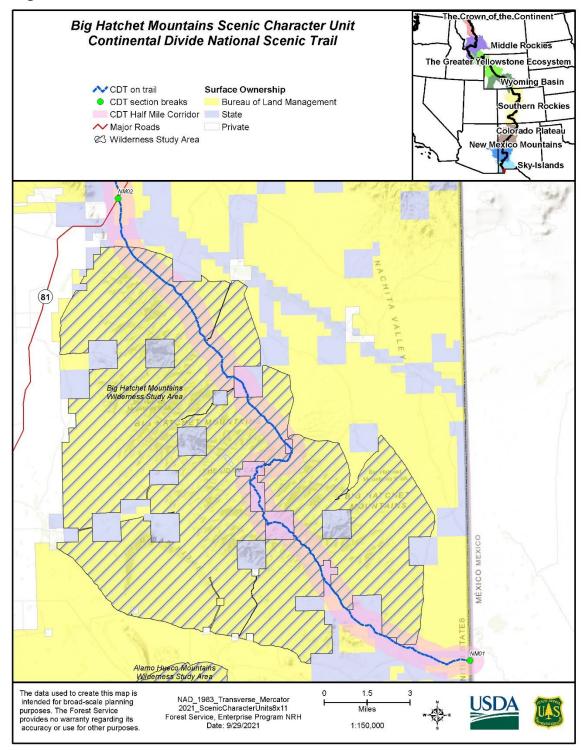


Figure 82. Map of Big Hatchet Mountains scenic character unit



Figure 83. The Continental Divide Trail crosses the Big Hatchet Mountains near its southern terminus at the border with Mexico. Photo Credit: Continental Divide Trail Coalition

Both ends of the Big Hatchet Mountains unit begin and end in the Chihuahuan Desert. The CDT climbs into the highest mountain in the vicinity. The range is an isolated block fault, uplifted mountain with tall, stratified cliffs. Scenic attributes include massive limestone cliffs. The Playas Valley lies to the west, and the Nachita Valley lies to the east. The mountains are home to desert bighorn sheep and significant bat colonies. Trail elevation ranges between 4,300 and 5,269 feet.

Lower elevations are ephemeral streams, alluvial fans, and rolling basins. Depressions have been filled with sediment. Vegetation is semi-desert grasses and shrubs with mesquite, sotol, yucca, ocotillo, cacti, and agave.

Foothills and mid-elevation mountains have ephemeral and intermittent creeks with gravel, sand, and silt substrates. Springs occur but water is scarce throughout the unit. Vegetation is woodland of pinyon, juniper, mountain mahogany, evergreen oaks, and chaparral.

Geology is predominantly limestone. Wells are scattered throughout, but surface water is rare. Streams are ephemeral.

#### Other Attributes

Major land uses include livestock grazing, wilderness study area, recreation, wildlife habitat, and some mining. Tanks are scattered about to provide water for livestock.

The recreation setting is remote with a high degree of solitude and self-reliance. The CDT crosses the BLM Big Hatchet Mountains Wilderness Study Area which is managed as a primitive

recreation setting. Existing scenic integrity is mostly high with modifications visible in the lower elevations.

## Feature Summary

## Continental Divide Trail Coalition Trail Segments

The following trail segments comprise the Big Hatchet Mountains scenic character unit.

• NM01 (Mexico Border to NM State Hwy 81)

#### Location

• Big Hatchet Mountains in southwestern New Mexico

#### Length

• 26 miles

#### Percent on Road

• 0%

#### Percent on Trail

• 100%

#### Land Manager

- BLM Las Cruces Field Office
- State of New Mexico

#### Designated Areas

• Big Hatchet Wilderness Study Area

#### Significant Scenic, Cultural, and Natural Features

- There are no mountain passes in the Big Hatchet Mountains unit
- There are no named summits within 0.5 mile of the CDT in the unit

#### Named Streams

• There are no named streams

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National Heritage Areas Program https://www.nps.gov/subjects/heritageareas/discover-nhas.htm

# Appendix A – Recreation Opportunity Spectrum, Scenery Management System, and Effects to Scenic Character

# Scenery Management System

# Scenic Integrity

Scenic integrity is the degree to which a landscape and its scenic character is visually perceived to be "intact". A landscape with intact attributes is considered to have higher scenic integrity. Landscapes with more noticeable deviations in the scenic attributes have lower scenic integrity. Existing scenic integrity represents the current condition of a landscape and is defined with five levels.

**Very High** – The landscape is intact with only minor changes from the valued attributes described in the scenic character.

**High** – Management activities are unnoticed, and the landscape appears unaltered.

**Moderate** – Management activities are noticeable but are subordinate to the scenic character. The landscape appears slightly altered

**Low** – The landscape appears altered. Management activities are evident and sometimes dominate but are designed to blend with surroundings by repeating form, line, color, and texture of attributes described in the scenic character.

**Very Low** – This level is used to describe landscapes that are heavily altered and in which the valued attributes described in the scenic character are not evident. Management activities strongly dominate the landscape and may not borrow attributes from the scenic character.

Wilderness areas, wilderness study areas, and recommended wilderness typically have very high existing scenic integrity. Inventoried roadless areas and semi-primitive settings typically have high existing scenic integrity. General forest areas typically have moderate existing scenic integrity. Areas with past timber harvest or vegetation management typically have moderate or low existing scenic integrity until trees reach a height to blend with the surrounding landscape. When hazard trees result from natural disturbances, mitigation of the hazard trees can leave stumps, reduce shade, and leave slash from cut trees, lowering scenic integrity. Once these management activities are no longer evident, they have high existing scenic integrity. Larger administrative or recreation facilities, mountain resorts, mineral extraction, communications sites, and utilities typically have low or very low existing scenic integrity.

#### Scenic Attractiveness

Scenic attractiveness is the intrinsic scenic diversity of landform, rock form, water characteristics, and vegetation patterns. Scenic attractiveness indicates varying levels of intrinsic, long-term beauty of the scenic character. Scenic character descriptions are the frame of reference describing each landscape's unique scenic qualities. The three scenic attractiveness categories are:

Category A – Distinctive landscapes are areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide unusual, unique, or outstanding scenic quality. These landscapes have strong positive attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

**Category B** – Typical landscapes are areas where landform, vegetation patterns, water characteristics and cultural features combine to provide ordinary or common scenic quality. These landscapes have generally positive, yet common attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

Category C – Indistinctive landscapes are areas where landform, vegetation patterns, water characteristics and cultural features have low scenic quality. Often water and rock form of any consequence are missing in class C landscapes. These landscapes have weak or missing attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

# Recreation Opportunity Spectrum

Recreation settings are the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The Forest Service uses the Recreation Opportunity Spectrum to define recreation settings and categorize them into six distinct classes (36 CFR 219.19 & FSH 1909.12 zero code). The Recreation Opportunity Spectrum is used to map and convey the existing condition and trend of recreation settings, opportunities, and predicted experiences and other associated benefits across the plan area and map and convey desired recreation settings and opportunities.

There are six, nationally defined, Recreation Opportunity Classes or Settings. They are defined by the social, managerial, and physical characteristics of a place that, when combined, provide distinct recreation opportunities. (36 CFR 219.19 and FSH 1909.12, zero code, sec. 05)

**Primitive** settings encompass large, wild, and predominately unmodified landscapes. Their size and configuration create remoteness from the sights and sounds of human activities, management, and development. Signs and other structures are minimal and constructed of rustic, native materials. Motorized travel does not occur. Encounters with other visitors is very low, offering visitors the opportunity for solitude, self-reliance, closeness with nature, challenge, risk, and discovery. Many primitive settings coincide with designated wilderness areas in which mechanized equipment is not present. Additional primitive settings may also occur outside of wilderness areas. Mechanized travel and motorized equipment may occur in non-wilderness primitive settings.

Semi-Primitive Non-motorized settings are characterized by predominantly natural or natural-appearing landscapes. The size of these areas facilitate distance from more heavily used and developed areas, creating a sense of remoteness. Interaction with other visitors is low. These settings provide opportunities for self-reliance and utilizing wildland skills. Motorized vehicles are not present, while mountain bikes, and other mechanized equipment may be present. Although some roads may be evident, they do not dominate the landscape. Vehicular use is infrequent. Occasional administrative use occurs on these roads for the purpose of natural and cultural resource protection and management.

Semi-Primitive Motorized classes are characterized as predominately natural or natural appearing backcountry settings. Motorized travel by off-highway vehicles (OHVs) or high clearance vehicles occurs on designated routes and areas. Motorized routes are typically maintenance level 0-2 roads or motorized trails, offering a high degree of self-reliance, challenge, and risk in exploring these large backcountry settings. Mountain bikes, other mechanized equipment, and non-motorized uses are also present. Limited rustic facilities are present for the purpose of visitor safety, sanitation, and resource protection.

Roaded Natural settings are characterized by predominately natural-appearing settings, with moderate sights and sounds of human activities and development. The overall perception is one of naturalness. Evidence of human activity varies from area to area and may include: improved highways and high maintenance level roads; developed campgrounds and other recreation sites; small resorts and summer homes; and evidence of other multiple uses and management activities such as livestock grazing, timber harvesting, mining, watershed restoration activities, and oil and gas operations. Roads, motorized equipment, and vehicles are common in this setting. Non-motorized uses are also present. The density of use is moderate except at developed sites, where concentrations of use are higher. Regulations pertaining to visitor behaviors are common but generally less restrictive than those in the Rural and Urban ROS classes.

**Rural** settings are characterized as modified natural environments. While these landscapes often contain geometric patterns created by management activities, there is a dominant sense of open, green space, typically characterized as pastoral farm and ranch lands. Facilities are common and may include resorts and summer home complexes; administrative sites and work centers; and highly developed campgrounds, interpretive sites, trailheads, picnic areas, and other recreation facilities. The sights and sounds of human activity and management are readily evident and the level of interaction with other visitors ranges from moderate to high.

**Urban** settings are characterized as highly modified landscapes, dominated by structures and other infrastructure. Clustered facilities contain amenities for visitor convenience and comfort. There is a preponderance of on-site regulations that direct and limit the behavior of visitors. Very high and concentrated use levels are common. These settings are typically small in overall size and not common on forest system lands. Large ski areas, visitor centers, and resorts are sometimes classified as urban ROS settings.

# Management Activity Effects to Scenic Character

# **Vegetation and Fire Management**

Vegetation management activities including tree removal, depending on the intensity of the treatment, can have varying consequences on scenery. Mechanical treatments could change the character of the landscape where activities occur in the short-term. Vegetation treatments may have short-term effects of ground disturbance, stumps, and slash, but in the long term, if designed for scenery, may provide for some preferred scenic settings, such as: visual access into the forest, large trees, and a smooth herbaceous ground cover. Vegetation management activities with sharp edges, unnatural and geometric shapes, or an extensive network of open or closed roads have lower scenic integrity as these effects are typically not part of the desired scenic character. In the long-term, the removal of some trees, dependent on scale and intensity of treatment, may improve scenic character and make scenic attributes more resilient to uncharacteristic large-scale disturbance.

Treatments to restore fire-adapted ecosystems vary and include use of prescribed fire as well as managed fire. All fire activities are evident in the short term with burned, blackened vegetation, and charred ground surfaces. Grasses and shrubs typically recover quickly, depending on when treatment occurs and moisture conditions during the growing season. In the long term, prescribed fire usually increases the diversity of texture, color, vegetative size classes, and distribution across the landscape. In the long term, prescribed fire at lower intensities creates preferred scenic settings and increases sustainability of scenic character.

Scenery management considers the dynamic nature of landscapes, recognizing that landscapes are not static. Natural disturbances (such as fire, insects, and disease) change landscapes over time. Therefore, scenery changes over time as the landscape mosaic changes. Scenery management for resilient landscape restoration focuses on long term results rather than short term effects, however, short term effects are minimized through site specific project design features.

# **Mineral Extraction and Energy Development**

Potential impacts of these developments are longer in duration and can include changes to scenic resources from ground disturbance associated with mineral extraction, road and pad construction, and associated facilities. If minimal landform alterations are associated with mineral extraction and areas are reclaimed or revegetating, then scenery effects lessen over time and scenic integrity improves. When energy development activities are scattered across the landscape, borrow colors from the landscape for facilities, and sited to blend with the topography of the area, these activities have less impact on scenic resources.

# Range Management

In places with range management activities, views may include windmills, cattle, stock tanks, fences, and other private ranchland features. Effects of range management can be negative or positive depending on an individual's preferred setting. Impacts perceived as negative may include noticeable changes to the landscape when looking at short, grazed vegetation, the difference between grazed and ungrazed vegetation at allotment boundaries and fences, cattle waste dominating grasslands and meadows, and trailing around water developments. Most range facilities are small and localized, and with some design consideration for scenery (such as natural materials or colors) have minimal effects on, or contribute to, the scenic character. Many residents are accustomed to viewing these structures and features and consider them a highly

valued part of the traditional landscape. Some visitors may also have an appreciation of these landscape's rural or pastoral scenic character. For many residents and some visitors, the presence of this activity contributes to the sense of place or cultural identity, while for others this activity is not viewed positively.

# **Special Use Activities**

Special use activities include, but are not limited to, mountain resorts, utilities, recreation events, outfitter-guide use, and communication sites. Development associated with facilities and special uses impact scenic resources often creating contrasts in form, line, color, or texture to the scenic character. Structures may not have architectural styles, materials, or colors that blend with the landscape. In the short term, active construction, vegetative clearing, and other ground-disturbing activities can dominate the landscape. Energy transmission corridors, along with communication sites are generally long-term commitments of federal lands having high potential to affect scenic resources for a long duration. In the long term, scenic effects of operations and maintenance of permanent structures are usually greatest when these developments occur within view of high public use areas and where operations or structures do not borrow from the form, line, color, or texture found in the surrounding landscape. Cleared rights-of-way and utility structures often contrast highly with the surrounding landscape and dominate the scenic character. Structures with strong vertical elements may especially dominate scenic character.

Winter resort developments often have highly modified landscapes, dominated by resort infrastructure. Openings in the forest canopy associated with ski runs may have straight edges, strongly dominating the landscape and modifying the natural appearance of the scenery. Scenery design considerations may lessen these effects.

Development associated with federal administrative and permitted facilities that are designed to blend with the surrounding landscape (materials, colors, architectural styles) have minimal effects to scenery or contribute to the scenic character and cultural landscape.

# **Transportation Infrastructure**

Road-related activities, such as road construction, maintenance, or decommissioning impacts scenic resources by creating evident contrasts in color and texture and changing landforms for cut and fill slopes. Effects of road construction may be dominant in foreground, middleground, and even background distance zones depending on location and design. Roads also serve as the viewer platform, offering opportunities, and access, to view scenery. The somewhat modified setting of a viewer platform (road or trail) is accepted as a necessary component allowing travelers to experience the greater landscape (USDA Forest Service 1995, page D-1). Road decommissioning creates noticeable soil color contrasts in foreground views by exposing fresh, often lighter colored, soils during decommissioning activities. In the short term, these areas visually recover quickly as the area revegetates. In the long term, road decommissioning is typically beneficial to scenic resources by recontouring slopes to mimic natural landforms and rehabilitating and revegetating exposed soils, often noticeable on cut and fill slopes created during road construction. Road maintenance is beneficial for scenic resource viewing by providing access and a platform for viewing scenery from motorized vehicles.

#### **Recreation Facilities**

Developments for recreation activities are evident, such as roads, trails, campgrounds, and dayuse areas. Facilities may be evident and noticeable, creating a built environment in an otherwise natural-appearing setting. Facilities designed to blend with the surrounding landscape would have minimal effects to scenery. When best environmental and sustainable design practices are used, facilities harmonize with the surrounding landscape or enhance and complement the desired scenic character. The location of facilities also affects the surrounding setting because they raise the level of concern by becoming viewing platforms for visitors. Recreation use beyond the designed capacity can cause natural resource damage adjacent to and within recreation sites, roads, and trails, affecting the natural-appearing scenery.

# Natural Effects to Scenic Character

Most noticeable changes to scenic conditions across a landscape occur through natural processes such as wildfires, insect and disease, or flooding. These natural disturbances continue to shape the vegetation and landform features of the landscape, affecting the overall sustainability of the scenic character. Other factors which continue to affect the sustainability of the scenic character across large landscapes include: drought conditions affecting vegetation and water features, invasive species affecting native vegetation, tree encroachment on meadows and other forest openings, and conifer encroachment on aspen. Fire and insect and disease effects are covered in more detail below.

#### **Fire Effects**

Fire is a disturbance pattern that maintains or enhances the scenic attributes in many landscapes when it occurs within the natural range of variability and is part of that characteristic landscape. Fire effects are both short term and long term that can drastically change the scenic character or also benefit scenic character.

If vegetation is consumed by fire, the existing scenic character would be altered until trees and understory vegetation reestablishes. Fire effects evident in the short term include burned, blackened vegetation, and charred ground surfaces. Grasses and shrubs typically recover quickly, depending on fire intensity and moisture conditions during the growing season. If vegetation is killed by wildfire, scorched timber and shrubs alter the forested setting, often changing the sense of place for visitors. In the long term, low intensity fire usually increases the diversity of texture, color, vegetative size classes, and distribution across the landscape. In the long term, fire at lower intensities creates preferred scenic settings and increases sustainability of scenic character.

Historic fires in some landscapes result in large areas of aspen, which provide beautiful golden fall colors intermixed against green conifer covered mountains, or provide a mosaic of forest or shrub types, age classes, or patterns across a landscape.

Wildfires that burn with low or mixed severity have fewer impacts to scenic character than those that burn with high severity, which result in greater tree mortality. Low and mixed severity fires are often part of a characteristic landscape. Wildfires with mixed severity often burn in a mosaic pattern with a mixture of blackened tree boles, green trees, red needled trees and pockets of crown replacement and blackened trees.

Uncharacteristic wildfires are those that burn at a severity or interval that is outside the historic range of variability for a vegetation type. High severity fires may heavily alter the scenic character causing widespread tree and vegetation mortality and resulting hazard trees. Widespread mortality changes the scenic character from views of conifer forest covered mountains to open shrub and grass covered mountains with standing and fallen dead trees over time. Post-fire flooding and erosion may further alter the scenic character of such areas by moving and exposing

soils and affecting revegetation and access, since some roads or trails may remain closed within a fire area.

#### **Insect and Disease Effects**

When many trees are killed by an insect or disease outbreak at epidemic levels, the existing scenic character could be moderately or heavily altered until trees reestablish. Tree mortality caused by an insect outbreak is often very noticeable in the first two years of mortality, as long as red needles persist. After needles fall to the ground, standing, dead trees appear gray in color. In most cases groups of dead trees, once needles have fallen, remain subordinate to a surrounding landscape of green trees. However, an epidemic outbreak that kills entire stands of trees, or groups of trees larger than an acre, may start to dominate the landscape being viewed. Beetle mortality would especially dominate when a viewer has a direct view of an affected hillside for longer durations. Tops of the standing, dead trees eventually break out or entire dead trees fall to the ground. Areas with a lot of mortality often create a "jack-straw" appearance of downed logs across the forest floor as these trees fall to the ground. Insect and disease epidemics often result in hazard trees that are mitigated.