

WILDERNESS EVALUATION

BLACK CANYON - 608016

13,701 acres

OVERVIEW

History

The area was originally inventoried as roadless during RARE I. The 1979 RARE II process allocated the area to non-wilderness management. The 2006 inventory removed approximately 1,016 acres from previous inventory due to nonconforming uses such as road construction and logging; 4,857 acres were added to the previous inventory as they meet the criteria for a potential wilderness area (PWA) as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the 1989 Okanogan National Forest Land and Resource Management Plan direction for the 2006 potential wilderness area.

Table 1--Management area percentages (rounded)

Okanogan National Forest			
MA39 Wildlife Diversity Habitat	MA47 Timber Range	MA49 Timber Range	In PMA coverage
24%	55%	16%	5%

Location and Access

The area is located south of Twisp in the extreme southern portion of the Methow Valley Ranger District on the Okanogan-Wenatchee National Forest. All lands are in Okanogan County. From Twisp, access is over State Highway 153, and county and national forest roads in Black Canyon and Antoine Creek.

Geography and Topography

This area exhibits some rolling topography etched by stream and glacial action. The south side of Black Canyon and Alta Coulee are large ridge systems with steep side slopes. Most streams flow northeast toward the Methow River. Elevations range from 2,200 feet just above Squaw Creek to over 6,200 feet on Fox Peak.

Current Uses

The area covers approximately one-half of the Black Canyon Unit of the Hunter-McFarland Cattle Allotment. It is managed under an alternate year spring/fall rotation system. There is a small amount of dispersed motorized and non-motorized recreation;

however, there are no system trails or developed recreation sites within, or providing access into the area. An outfitter guide is permitted for day rides in the portion adjacent to private property near Alta Lake.

Appearance and Surroundings

The area is represented by steep slopes that rise to major ridgelines. Much of the area is covered with dense stands of timber and brush and some residual pockets of ponderosa pine old growth. Major ridge tops are more open with willow and scattered trees. Portions of the area near Alta Lake, Highway 153, and Antoine Creek are bordered by private ground.

Key Attractions

There are no key attractions in the area.

CAPABILITY FOR WILDERNESS

Level of Natural and Undeveloped Environment

The area is generally natural appearing with some exceptions. There are several wide fire lines, which are re-vegetated but still easily discerned on the landscape. Several hundred acres were pre-commercially thinned in 1980.

Non-native species and noxious weeds have altered the natural plant community in the areas adjacent to private ground at Alta Lake.

Eastern brook trout are present in Black Canyon Creek.

Water quality data is not available for most of the PWA; however, due to the relatively low level disturbance water quality is assumed to be high. There may be localized disturbances due to grazing activities.

The Black Canyon PWA is impaired by light pollution from the surrounding residential areas and communities, including Pateros, Brewster, and Chelan. The major portion of the area (93 percent of the PWA acreage) rates as a Class 3 on the Bortle Scale, whereas the portion closer to Pateros rates as a Class 4 (3 percent of the PWA). A Class 3 Rural Sky has some indication of light pollution on the horizon. Clouds may appear faintly illuminated in the brightest parts of the sky near the horizon, but are dark overhead. The Milky Way still appears complex. Visual observing is still relatively unimpaired. A Class 4 Rural/Suburban Transition Sky exhibits fairly obvious light-pollution domes over population centers in several directions. The Milky Way well above the horizon is still impressive but lacks all but the most obvious structure. Clouds in the direction of light pollution sources are illuminated but only slightly so, and are still dark overhead. Modest to serious impact to deep sky observing and imaging occurs.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

The area provides limited opportunities for primitive recreation. There is an opportunity for dispersed cross-country hiking and hunting, but little occurs since much of the area is steep with dense stands of trees. There are no system trails or campgrounds in or near the area. Road noise from Highway 153 may be audible from the northern portion of the area. The Forest road on the north and west boundary is a groomed snowmobile route and snowmobiles are audible from within the area.

Though the area is relatively small, the rough terrain, dense stands, and lack of key attractions may provide a moderate degree of solitude.

Special Features

There are no special features in this area. The area is within the North Cascades Grizzly Bear recovery area and the core recovery area for the Canada lynx, and provides source habitat for the wolverine. These species have very limited distribution in the region. Lynx, bald eagle, and gray fly catcher are known to occur in the area. A raptor flyway crosses over a portion of the area. Western gray squirrels, a Washington State threatened species and a Forest Service sensitive species, is known to occur here. The western grey squirrel is limited to three isolated populations statewide, with an estimated total of 468 to 1,405 individuals.

Manageability of Boundaries

The relatively small size of the area would make management as wilderness difficult. Most of the south boundary of the area is on an identifiable ridge top. The most logical location for boundaries on the north end would be contour lines which would be difficult to identify and would further reduce the capability of managing the area as wilderness.

AVAILABILITY FOR WILDERNESS

Recreation

Most of the area provides lower quality, semi-primitive non-motorized recreation opportunities due to the influence of activities in the surrounding areas. Some roaded natural recreation opportunities are provided on portions of the area adjacent to roads such as dispersed camping. There are no special recreation features. There are no system trails in the area. Recreation use is low because of a lack of attractions and trails. Fall hunting is the primary use.

Black Canyon is most closely associated with the community of Pateros. Tourism promotional materials for the area promote outdoor recreation on nearby National Forest System lands, but do not specifically promote this area. Due to the lack of trails, tourism-based use of this area is likely to remain low even if the area became designated wilderness other than day use by an outfitter guide.

Table 2--Miles of recreation trails

Motorized System Trails	Non-motorized Trails	Snowmobile Trails
0	0	0

Wildlife

The area provides suitable habitat for the gray wolf (federally listed as endangered), the grizzly bear, lynx, and bald eagle (federally listed as threatened), and the wolverine, western gray squirrel, and gray flycatcher (listed by the Forest Service as a sensitive species). Lynx, bald eagle, western gray squirrel, and gray flycatcher are known to occur in the area. Gray wolf, grizzly bear, and wolverine are suspected to occur.

The western grey squirrel has suffered substantial losses of habitat in the Chelan/Okanogan area due to large stand replacement fires in dry forest. The ability to manage excess fuels with mechanical treatments designed to favor squirrel habitat needs would be precluded with wilderness designation. In areas where fire would provide a mosaic of vegetative conditions, wilderness designation could benefit the western grey squirrel.

Approximately 2200 acres are in winter range for mule and white-tailed deer. Open south-facing slopes with bitterbrush and other shrubs provide vital winter forage for deer. Mixed conifer old-growth in the area provides productive habitat for several species of wildlife. Many species of raptors migrate annually along Chelan ridge in the southwest portion of the area.

Each PWA provides varying levels of habitat for focal wildlife species. The following information was provided to evaluate the habitat provided by the Black Canyon PWA: the focal species emphasized in the area, the amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the forest that is within this particular PWA.

Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species, and R6 focal species

Wildlife Species	Acres of Habitat	Habitat Priority Ranking (1=high, 2=mod., 3=low)	%Total Forest Habitat in Evaluation Area
Grizzly bear	8,500	2	<1
Canada lynx	81	1	<1
Wolverine	5,836	2	<1
American marten	174	3	<1

Water and Fish

This PWA is located within the Methow subbasin (4th HUC) and contains two subwatersheds (6th HUC). These are Black Canyon Creek and the mouth of the Methow River. Black Canyon Creek and mouth of the Methow subwatersheds have some changes

in expected vegetation conditions and some road effects. When vegetation conditions and road related effects are considered cumulatively, these subwatersheds were rated fair.

Major drainages within the Black Canyon PWA include Black Canyon Creek, Left Fork Black Canyon Creek, and Little Joe Creek. Federally threatened summer steelhead spawn and rear in the lower 1.5 miles of Black Canyon Creek and this section is designated as critical habitat. Eastern brook trout use Black Canyon Creek in beaver ponds upstream of areas where steelhead are found. Water uses for livestock, irrigation, and domestic purposes have over-adjudicated the creek, resulting in low summer flows and higher stream temperatures. Fish habitat conditions in Black Canyon Creek overall are in fair condition with low large wood levels, elevated fine sediment levels, low summer flows, and possibly high summer temperatures. Summer steelhead would benefit from greater protection in the Black Canyon drainage.

There are no existing power withdrawals, proposed impoundments, or no federal energy regulatory commission permits or licenses outstanding.

Range

The area is entirely within the Black Canyon Unit of the Hunter-McFarland Cattle Allotment and comprises approximately half of the unit. The allotment has rugged terrain with slopes exceeding 50 percent on nearly half of it. Wildfires in 1970 resulted in 4,259 acres that were suitable for grazing as transitory range. Lack of range improvements and water distribution caused the stocking rate to drop from 2,236 animal unit months (AUM) to 669 AUMs. This unit is managed under an alternate year spring/fall rotation system. There are no range facilities in this area. Permittees are allowed the use of motorized equipment and transportation. No motorized use would be allowed under wilderness designation.

The table below shows grazing suitability and current allotment status for this PWA.

Table 4--Grazing suitability and current allotments

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
16	78	55	0

Vegetation and Ecology

Much of the area contains immature lodgepole pine that established following the 1970 Mitchell Creek fire. Larger trees cover the northern slopes. Principal tree species are lodgepole pine, Douglas-fir, and ponderosa pine. Some subalpine fir and Engelmann spruce is also found. Ground cover includes shrubs on wetter sites and shrub and grass mixture on drier sites.

The majority of the lands suitable for timber harvest support immature stands of lodgepole pine that established following the 1970 Mitchell Creek fire. Since 1980, several hundred acres were pre-commercially thinned. The remaining lands suitable for timber production support mature mixed conifer and lodgepole stands.

The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects in the wildland urban interface (WUI). The HFRA prohibits authorized projects in wilderness areas.

Options to utilize mechanical treatments to manage vegetation would be precluded. Generally, the priority for restoration treatments occurs within the wildland urban interface (WUI) or within the dry and mesic forest groups. Because WUI represents nearly three quarters of the potential wilderness area, the prohibition on restorative treatments is a concern. An increased concern results in recognizing that dry and mesic forest occupies over three quarters of the area. The high percentage of the area in WUI, noxious weed presence and treatment, and range activities would make this area difficult to manage as wilderness.

Timber Harvest Suitability

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:

- Is it forest land (10 percent crown cover minimum, productivity more than 20 ft³/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes more than 65 percent, and certain land types).
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation less than 5,500 feet).
- Economic and technologic viability (less than 0.5 miles from existing transportation system, species value or condition, volume availability, logging systems).

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

Table 5--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
	0%	Parkland	0%	Total WUI
Cold Dry		1%	WUI in Dry and Mesic Forest	75%
Cold Moist		11%		
Mesic		0%		
Dry		75%		
Non-forest		12%		

Fire

The Mitchell Creek fire of 1970 burned over approximately 50 percent of the area. The direct affect of this fire was the establishment of lodgepole pine as the principle coniferous tree species. In addition, a large area grew naturally with brush species. This brush component is the primary fire carrier along with annual grass over most of the area. For that reason the overall fire potential remains low, except for the grass-dominated ponderosa pine stands along the breaks of the Methow River. Application and use of unplanned ignition sources (i.e., lightning or human-caused) to accomplish other resource objectives is not permitted under current management direction.

Insects and Disease

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency “to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role”. Policy also directs the agency to “protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species”, and finally, “to control insect and plant disease epidemics that threaten adjacent lands or resources.”

An insect and disease survey was completed in 2007. The most extensive damaging agent detected in the Hungry Hunter area was mountain pine beetle. Small pockets of beetles occur across the Black Canyon PWA, but much larger infestations are a short distance to the northwest. Mountain pine beetles can attack and kill many species of pines, but are most closely associated with lodgepole pine. Lodgepole pine stands that are older than 80 years, with an average dbh of eight inches or greater are highly likely to experience outbreaks. Additional risk factors are basal area over 120 square feet per acre, and low elevation.

One small pockets of fir engraver activity was reported. Fir engravers are bark beetles that attack true firs. Fir engraver activity is often associated with root disease. They are also attracted to trees under stress from drought, defoliation or other damage. Trees that are attacked may be killed outright, or they may survive with top kill. Damage that was visible during the 2007 survey probably occurred in 2006, when trees were under stress from the drought of 2005.

No Douglas-fir beetle activity was detected.

Threatened, Endangered, and Sensitive Plant Species

There are no known rare plant species known to occur in the area.

Noxious Weeds

One noxious weed site exists within the Black Canyon proposed PWA. This site is located throughout Alta Coulee from the U.S. Forest Service (U.S.F.S.) boundary with Tom Ryan's private property, up the coulee to the fence marking the boundary between U.S.F.S. land and the Alta Lake State Park, with a legal location of T. 29 R. 23, S. 34/27/22. The largest and most problematic infestation present in Alta Coulee is Dalmatian toadflax (*Linaria dalmatica*) however, there is scattered diffuse knapweed (*Centaurea diffusa*) and one prevalent population of Russian knapweed (*Centaurea repens*) near a pond toward the north end of the coulee that is usually dry in summer. Dalmatian toadflax is prevalent throughout a majority of the coulee, with heavy infestations occurring in a series of three "potholes" located about halfway between the Ryan property and the state park property. It is estimated that approximately 125 acres of the proposed PWA is infested with Dalmatian toadflax.

Minerals and Soils

The Black Canyon PWA is underlain by high-grade metamorphic and intrusive igneous rocks. Sporadic prospecting and exploration has been focused on the metamorphic rocks exposed in the northern and eastern parts of the area as indicated by historic mining claim records. Based on anomalous uranium concentrations in stream sediments samples derived from granitic rocks of the Cooper Mountain batholith, approximately 9,000 acres in the western half of the area have a low to moderate potential for the occurrence of uranium (Grant, 1982). There are no historic prospects or mines of significance within the PWA and at present (5/2008), there are no active claims within the area.

The area has not been the subject of expressions of interest, lease applications, or leases for coal, oil and gas, or geothermal resources. The area has no potential for the occurrence of coal and oil and gas resources and a low to moderate potential for geothermal resources.

Most of the soils are granitically derived tills over granitic bedrock. Some soils are covered with varying thicknesses of volcanic ash or pumice. Organic matter is limited to the upper two to four inches of the soil profile. These soils generally have high infiltration rates.

Soils covered by organic matter have low erosion hazards and are considered generally stable for management activities. Where the litter layer has been stripped away or where soils are very shallow, erosion hazards are high to very high and considered unstable for management activities. Mass erosion hazard is low except in debris avalanche chutes.

Cultural and Heritage Resources

The *Cultural Resource Overview of the Twisp-Winthrop-Conconully Planning Unit* (Bennett, 1979) identified no evidence of cultural resources in the area.

Land Uses and Special Uses

There are no authorized land uses in the area other than range allotments and the outfitter guide permit mentioned in "Current Uses".

Private Lands

There is no private land within the area and no known outstanding subsurface rights. Portions of the area adjoin private land.

NEED FOR WILDERNESS

Location and size of other wildernesses in the general vicinity, and distance from the area and population centers

The area is approximately 55 air miles south of the Pasayten Wilderness (529,477 acres), approximately 12 air miles southeast of the Lake Chelan-Sawtooth Wilderness (151,435 acres), and approximately 25 air miles southeast of the Glacier Peak Wilderness (570,573) on the Wenatchee National Forest. The area is a two-hour drive from Wenatchee, three hours from Spokane, and a four to six hour drive from the Bellingham and Seattle/ Tacoma area.

A separate analysis identified where the PWAs could contribute to the recreation setting either by preserving the primitive recreation setting adjacent to existing wilderness, or by contributing assessable and attractive day use destinations (which are under heavy pressure in existing wilderness). The analysis also examined which PWAs would contribute either a unique landform to the wilderness system, or the trails access vegetation types that are underrepresented in wilderness at a regional scale.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as low. The only attraction is outfitter guide day rides offered from Alta Lake. The dry forest vegetation types would provide a setting that is currently unrepresented in wilderness; however, the lack of system trails would limit enjoyment of this setting.

Present visitor pressure on other wildernesses, trends, and changing patterns of use

Overall, there is a continuous, slight increase in the number of people visiting wilderness areas. The user groups showing the most increase are day-hikers in the Pasayten and Lake Chelan-Sawtooth Wildernesses and day horse users in the Lake Chelan-Sawtooth Wilderness. There also appears to be a slight increase in off-trail travel to specific destinations within these wilderness areas. There is also a trend to shorter multiple-day trips. The addition of this area as wilderness would not be likely to draw increased use due to lack of key attractions relative to other areas nearby.

Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences

There are approximately 900,000 acres of National Forest System land outside of wilderness on the Methow Valley Ranger District. In the summer, non wilderness portions of the district draw hikers, stock users, mountain bikers, and more limited motorcycle use. Certain portions also offer regionally significant rock climbing and mountaineering. In the winter the area features outstanding cross-country, backcountry skiing, and snowmobiling.

The area is within four to six hour's driving time from the greater Puget Sound area and two hours from Wenatchee.

The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena

Wildlife

The grizzly bear, gray wolf, wolverine, and other wide-ranging carnivores require large areas of remote, undeveloped habitat for survival. These habitats can be provided through wilderness or by managing areas in an unroaded condition.

For American marten (*Martes Americana*), grizzly bear (*Ursus arctos*), wolverine (*Gulo gulo*), and Canada lynx (*Lynx canadensis*) the wildlife sustainability index is 7.3 (a low relative ranking) and the habitat connectivity index is 10.5 (also a low relative ranking).

Fish

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off-forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest, PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a high ranking based on these factors.

Rare Plant Species

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as low for this PWA. The second factor, which also ranked as low for this PWA, examined the degree of rarity of any SOI/SOC species present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington State as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support

SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as moderate priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landforms types and ecosystems

Wilderness lands are well represented in the east Cascades ecoregion.

An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 46 percent of the vegetative cover of this PWA (6,340 acres). These types include forb lands, non-alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as high for the portion of this area with underrepresented cover types, and also as high for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such fine scale cover types represented in this PWA include sparse amounts of cottonwood and aspen.

In particular, the forb land cover type, which comprises approximately 2,300 acres in this PWA, would make a significant contribution within the eastern Washington planning area.