

WILDERNESS EVALUATION

HOODOO - 621006

11,695 acres

OVERVIEW

History

The first roadless area review and evaluation (RARE I) was completed in 1973 and the Hoodoo Roadless Area was not chosen for future wilderness study. In 1979, the second roadless area review and evaluation (RARE II) was completed and the Hoodoo Roadless Area was not recommended for wilderness designation.

The 2006 inventory removed approximately 451 acres from previous inventory due to nonconforming uses such as road construction and logging; 4,990 acres were added to the previous inventory as they met the criteria for a potential wilderness area (PWA) as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the current 1988 Colville National Forest Land and Resource Management Plan direction for the 2006 PWA.

Table 1--Management area percentages (rounded)

Colville National Forest				
MA1 Old Growth Dependant Species Habitat	MA11 Semi- primitive, Non- motorized Recreation	MA3A Recreation	MA5 Scenic Timber	MA7 Wood/ Forage
4%	46%	3%	23%	24%

Location and Access

The area is located 26 miles west of Colville, Washington. The nearest large population center is Spokane, Washington, which is two hours driving time from this area. The north boundary of the PWA is formed by a portion of Deadman Creek Road (Forest Road #9865). The south boundary is accessed by the Graves Mountain Road (Forest Road #450) and the Lane Creek Road (Forest Road #220). Access to the east boundary is via the Trout Lake Road (Forest Road #450).

Geography and Topography

The Hoodoo PWA is located in the Kettle Mountain Range, which is the divide between the Columbia River and the Curlew and Sanpoil Valleys. The Hoodoo PWA is in the central portion of this area and lies on the east side of the hydrologic divide between the

Columbia River and the Curlew Valley. Generally, the area is part of the Okanogan Highlands landform province, which is characterized by moderate slopes with broad rounded summits as a result of repeated continental glaciation. The broader valley bottoms are characterized by out-washed terraces. Within the Kettle Range, the Hoodoo PWA occupies a portion of the divide between Sherman Creek and Deadman Creek. The highest elevation occurs at 5,947 feet on Graves Mountain. The lowest elevation is 3,000 feet where the PWA boundary approaches Deadman Creek.

Annual precipitation for this area is 25 inches.

Current Uses

Uses of the area include occasional mineral prospecting, the most recent being extensive uranium surveys by the Department of Energy. There is a 25 to 50 percent probability that some prospecting for uranium and tungsten will continue in the area. Portions of the area are within the C.C. Mountain grazing allotment, which is grazed during the summer months. Recreation use within the area is primarily hiking in Hoodoo Canyon and deer hunting in the fall.

Appearance and Surroundings

Appearance of the area is one of rolling to moderately steep wooded mountains, with some vistas available from the open areas on the higher peaks. Although much of the area is covered by dense stands of lodgepole pine trees, Hoodoo Canyon itself is the primary attractive feature in the area and receives most of the use.

Surroundings viewed from the area are the distant major drainages and surrounding rolling foothills and mountains. The Twin Sisters PWA lies to the north of this area.

The surrounding area, other than the adjacent Twin Sisters PWA described above, is National Forest System land currently being managed for various forest uses and is in a roaded condition.

Key Attractions

Three small lakes and Hoodoo Canyon provide a scenic attraction, as well as Hoodoo Canyon itself. There are also scenic views of Lake Roosevelt and the Kettle River valleys from the higher ridges. The area provides a backdrop from the Kettle River and Columbia River valleys.

CAPABILITY FOR WILDERNESS

Level of Natural and Undeveloped Environment

The natural integrity of the area is still generally intact. Portions of the area have high quality scenery, a variety of vegetation types, and a sense of remoteness. Views of adjacent past timber harvest and road construction from several locations in the PWA detract from the sense of naturalness.

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.

Noxious weed inventory data is not available for this PWA. Saint Johnswort is established along the Hoodoo Canyon Trail.

The Hoodoo PWA is partially impaired by light pollution from the Republic and Colville area. The western portion of the PWA (49 percent of the PWA) rates a Class 2 on the Bortle Scale, whereas the eastern portion (51 percent of the PWA) rates as a Class 3. A Class 2 Typical Truly Dark Sky represents the darkest skies viewed in the continental United States. The summer Milky Way is highly structured to the unaided eye. Any clouds in the sky are visible only as dark holes or voids in the starry background. No light domes from population centers are visible. 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. Light domes from population centers may appear on the horizon (10-15 degrees above horizon). Visual observing is still relatively unimpaired. Time-lapse photography could be impaired by light pollution.

Level of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Accompanying sounds of timber management activities and Highway 20 may also affect solitude. The buffer from these activities is the distance and physical separation provided by the mountainous terrain and dense timber. The complete solitude of Hoodoo Canyon provides isolation from the sounds of the surrounding area.

Recreation opportunities are present in the form of hunting, fishing, hiking and some rock climbing. Hoodoo Canyon provides primitive recreational opportunities.

Special Features

Hoodoo PWA typifies the Okanogan Highland ecoregion. A backcountry area with lakes is relatively rare on the Colville National Forest; Bead Lake and Marshall Lake near Newport, Washington are in a backcountry setting but are accessed by roads. Several lakes in the Salmo-Priest Wilderness area are inaccessible by road.

There are two plant species present in the Hoodoo PWA each of which are listed as sensitive by the state and as a species of concern under Federal status; trianglelobe moonwort (*Botrychium ascendens*) and scalloped moonwort (*Botrychium crenulatum*).

The PWA provides habitat for Canada lynx and wolverine.

Manageability of Boundaries

The boundary of the Hoodoo PWA follows identifiable topographic features for less than half the circumference of the PWA, including following a creek along a portion of the north boundary and skirting the Albion Hill Road along the west boundary. The remainder of the boundary follows irregular lines that likely skirt around old harvest units.

Wilderness incursions, particularly with snowmobiles, would be likely in a number of locations.

Private lands adjoin a small portion of the east boundary.

AVAILABILITY FOR WILDERNESS

Recreation

The area contains Hoodoo Canyon Trail #17 and the Emerald Lake Trail #94. Both trails are open to hikers and mountain bikers and are closed to all motorized and stock use. Snowmobile use is not allowed in this area.

Both trails within the area receive moderate use from early spring to late fall. The lower elevation (3,000 feet) offers early spring access and is the first trail in the area free of snow. The existing use does not exceed the number of social encounters stated in the 1988 Colville National Forest Land and Resource Management Plan for semi-primitive non-motorized.

Wilderness designation would restrict mountain bike riders from trail use. Increased publicity about the qualities of Hoodoo Canyon could also increase use.

The Hoodoo Canyon PWA is most closely associated with Kettle Falls, Colville, and Republic and is accessed off Highway 20, a National Scenic Byway that invites tourist traffic. Tourism marketing promotes walking, hiking, fishing, and hunting, but does not specifically promote this PWA. The ease of access and availability of nearby campgrounds, coupled with the scenic beauty of the area, would likely draw media publicity if the area were to be designated as wilderness. There would likely be modest increases in tourism-based use on the one trail in the area.

In considering the relative trade-off between wilderness designation and providing for other backcountry recreational uses, due to the current lack of motorized use and low use by mountain bikers, wilderness designation could provide a positive benefit to the array of recreation opportunities on the forest. Despite only having on trail, the area does afford overnight backpacking opportunities. However, use of the area by large groups would likely be displaced.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	4	0

Wildlife

The Hoodoo area contains both warmer/drier and colder/moister mid-elevation habitats and the wildlife species present reflect this: nearly all bird and small mammal species that occupy mid-elevation habitats on the Forest probably inhabit the area during some part of the year. None of the species that require secluded habitat currently reproduce in the area. Woodland caribou probably did not occupy the area within the past century, grizzly bears occupied the area prior to the loss of the salmon fishery in Lake Roosevelt due to Grand Coulee Dam, gray wolves inhabited Ferry County, and the area is too low in elevation to support wolverine denning habitat. The greatest benefits from designating the area as wilderness would be preventing road construction, benefiting those species that depend on

secluded habitat and high quality forage (less affected by noxious weeds which often spread along new roads).

Wilderness designation would not affect the following species or habitats that occur in the area. Golden eagles have nested in the cliff area on the eastern side and bald eagles have been seen but Trout Lake is probably too small to support a territorial pair. The small lakes in the area provide habitat for those wildlife species associated with small streams and lakes, including Columbia spotted frogs, once thought to be uncommon. The area contains little late-succession habitat, most of which is open-growing ponderosa pine trees on dry, steep, slopes. Currently, most of the late-succession habitat does not require thinning of its understory, so managing the area using prescribed fire remains feasible.

The southern edge and eastern part of the Hoodoo area serves as winter range for mule and white-tailed deer. Fire exclusion has allowed understories of shade-tolerant trees to develop in some of these stands, which can decrease the habitat quality of a stand for deer. Projects like timber harvest and prescribed fire to open stands to improve forage or remove understory vegetation to improve cover would be feasible in winter range. On those sites on which a dense understory of trees has developed under a taller overstory that provides good cover, attempting to kill the smaller trees using fire rather than timber harvest followed by fire would probably result in a stand-replacement fire and loss of cover. The entire area contains summer range for big game and opening up the area, via harvest, would improve the amount of forage especially on the north-facing slopes that cover much of the area. Using fire only in the denser stands of trees on the north-facing slopes would probably torch the stands. If the area were designated wilderness, using harvest to manage stands to improve big game forage and cover would not be an option: the forage base would continue to decline as the forest grows more closed. Though mule deer do not require secluded habitat, they tend to live longer and thus the males achieve larger antlers in areas away from roads with vehicle traffic. These larger-antlered males are prized by hunters. Secluded habitat is less of a concern with white-tailed deer.

The ridge along the southern portion contains habitat for blue grouse, though lack of fire is allowing shade-tolerant conifers to encroach and decrease habitat quality. Prescribed fire could be used as the primary management tool on the ridges, so wilderness designation would not change potential management.

Lynx have been recorded from the area, though not within the past decade. Much of the area lies with a lynx analysis unit, though most of this does not currently support good habitat conditions because of the lack of younger stands to provide habitat for snowshoe hares. Younger stands could be created by timber harvest or fire.

The PWAs provide varying levels of habitat for focal wildlife species. To help evaluate the habitat that these areas provide, the following information was provided: 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 the 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)	Percent Total Forest Habitat in Evaluation Area
Grizzly bear	NA	NA	NA
Canada lynx	239	1	1.4
Wolverine	9,142	2	1.1
American marten	18	3	<1

Water and Fish

The Hoodoo PWA is located in both Kettle River and Lake Roosevelt subbasins (4th HUC). The PWA contains tributaries to the South Fork Deadman Creek (6th HUC) and Lower Sherman Creek (6th HUC). Existing habitat condition or the existence of fish subpopulations within these tributaries to the South Fork of Deadman Creek is unknown. Trout Creek, a tributary to Sherman Creek contains several lakes. Trout Lake is stocked annually with coastal rainbow trout. Both 6th field watersheds have been analyzed for vegetation and road conditions. When vegetation conditions and road related effects are considered cumulatively, the Lower Sherman Creek and Deadman Creek subwatersheds were rated poor. This is due to past harvest activities, livestock grazing, and high road densities.

The South Fork combines with the North Fork to form Deadman Creek. This larger watershed contains eastern brook trout and the largest individual distribution of interior redband trout on the Colville National Forest. It constitutes a 6th field HUC that flows into the Kettle River subbasin. Approximately 99 percent of this 6th field watershed is located above a cracked concrete box type culvert that blocks upstream fish passage to focal species that may reside or travel through the lower Kettle River. This unnatural blockage also prevents any introgression from coastal rainbow trout that could cause a high level of hybridization.

Trout Creek, as part of the lower Sherman Creek watershed, contains eastern brook and coastal rainbow trout. Lower Sherman Creek contains coastal rainbow/interior redband/westslope cutthroat trout hybrid swarms and eastern brook trout. A natural falls, located approximately three and a half miles upstream from its mouth, prevents upstream fish passage to focal species that may reside or travel through the upper Columbia River (Lake Roosevelt).

This habitat is not considered essential to the recovery of the bull trout that has been observed within the lower Kettle River or upper Columbia River in the past. This is due to the natural and unnatural blockages to a majority of this habitat to utilization by bull trout.

Wilderness designation would protect the basic ecological functions of these tributaries. This objective could also be accomplished without Wilderness designation if the proposed PWA remained in an unroaded condition. A degradation of riparian and aquatic processes is expected if management actions, such as road building and timber harvest, are approved in the future by the Regional Forester or Chief. The adverse effects of such actions could extend beyond the boundaries of the PWA and continue throughout the 6th field HUCs.

The PWA has a water source protection area totaling 699 acres of stream that contributes to a non-community, non-transient water system for Grand Coulee Dam.

Range

The area is located within the C.C. Mountain livestock grazing allotment. The grazing potential could be increased for livestock use through seeding and fertilization of grass within areas of any future timber harvest activity.

Some of the higher-elevation, south-facing slopes do not contain the noxious weeds present in similar habitats at lower elevations.

Table 4--Percentage of grazing suitability areas 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
6%	58%	12%	0%

Vegetation and Ecology

Vegetation in the area is dominated by climax forests of Douglas-fir, and western red cedar. Forest species, which colonized the areas after fire, have resulted in extensive stands of pole-sized western larch, lodgepole pine, and ponderosa pine. Other vegetation present are bunchgrasses and forbs on the drier southern exposures and hardwood shrubs and forbs on the northern exposures. Stream courses and other wet areas contain western red cedar, Engelmann spruce, quaking aspen, cottonwood, and birch trees. Numerous forb species are present in these wet areas. The forested ridge top vegetation is of the same general composition as described for north and south slopes. The vegetation on the ridges is more scattered due to the thin soil found on the exposed rock outcrops. There are areas occupied by grasses and forbs on higher elevation southern exposures.

Plant communities present are primarily Douglas-fir/pinegrass, Douglas-fir/ninebark, grand fir/pachistima, subalpine fir/pachistima and western red cedar/pachistima.

Generally, the priority for restoration treatments occurs within the wildland urban interface (WUI) or within the dry and mesic forest groups. The dry and mesic forest groups occur on approximately 60 percent of the PWA. Because WUI is approximately 18 percent of the PWA, and most of it being dry/mesic forest, the prohibition on restorative treatments if designated wilderness is also a concern.

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 >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 >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 <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	18%
	Cold Dry	2%	WUI in Dry and Mesic Forest	75%
	Cold Moist	33%		
	Mesic	14%		
	Dry	46%		
	Non-forest	5%		

Fire

Fire occurrence is low to moderate with fires occurring in the area every one to two years, mostly started by natural ignitions. The 1929 Dollar Mountain Fire burned through the entire area of the Hoodoo PWA leaving opportunities for burned sites to be occupied by lodgepole pine, western larch, and patches of ponderosa pine under the overstory of Douglas-fir, grand fir and subalpine fir.

The overall dry/mesic forest group mix, which is located primarily in the eastern portion of the PWA, can support stand replacement fires. The possibility of stand replacement fires is partially dependent upon the level of fuel loadings, which can be moderated if more frequent, low to mixed severity fires burn at 10 to 30 year return intervals helping to reduce the understory vegetation and fuel loadings. Historically, this fire return interval was more typical of the dry forest group of the PWA.

Studying the fire history of the area since the Dollar Mountain fire indicates, however, that accumulated fuel loadings have not been reduced by low intensity fires. It can be interpolated then that fuel loadings average 15 to 25 tons per acre across the various forest

groups in the PWA, and likely much greater in areas that have been impacted significantly by insect infestations and disease. These circumstances increase the risk of an uncharacteristically high-severity fire occurring under critical fire weather conditions, especially in the dry forest portions located in the eastern quarter of the PWA.

A large area to the south has been managed with landscape burns the last several years. Immediately adjacent to the east and within a mile to the northeast of the Hoodoo PWA are WUI areas in the Nancy Creek and Deadman Creek areas, respectively. Thus, approximately the eastern quarter of the Hoodoo PWA would be a moderate to high priority area to conduct fuel treatments adjacent to WUI areas, despite terrain and accessibility challenges.

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 aerial survey of this PWA was completed in 2007. Since 2003, the most significant insect activity has been fir engravers killing grand firs and pine beetles killing lodgepole pines and ponderosa pines. Both lodgepole and ponderosa pines have been killed by mountain pine beetles. Western pine beetles, which are specific to ponderosa pines, are also active here. There are numerous snags in the area, both standing and on the ground.

Douglas-fir dwarf mistletoe and western larch dwarf mistletoe probably occur in approximately 50 percent of the Douglas-fir and larch stands in the Three Rivers planning areas.

White pine blister rust caused by *Cronartium ribicola* was introduced into the Sullivan Lake area in the early 1920s following its introduction into Vancouver, British Columbia in 1910. The disease occurs in essentially every stand of western white pine and whitebark pine on the Three Rivers Ranger District. The disease is the greatest threat to 5-needle pines but it does not threaten the existence of five-needle pines. Western white pine regenerates naturally well on the district. Many of the white pines have some degree of genetic resistance because white pine stands in the area have been exposed to inoculum for 80 years. The most susceptible trees were eliminated decades ago. Lower crown pruning has been employed as an effective method of managing white pines to reduce losses to the disease on the District.

Armillaria root disease caused by *Armillaria ostoyae* is currently not a major cause of tree mortality in the potential wilderness areas. The fungus is undoubtedly present in most of the stands especially those with Douglas-firs and/or grand firs but it is in equilibrium with the hosts. If stands in the potential wilderness areas were to be logged or if other mortality agents were to kill large numbers of firs armillaria root disease would become a serious tree killer. The fungus gains energy from colonized roots and stumps and spreads to infect and kill adjacent trees, especially Douglas-firs.

Threatened, Endangered, and Sensitive Plant Species

There are two plant species present in the Hoodoo PWA each of which are listed as sensitive by the state and as a species of concern under Federal status; trianglelobe moonwort (*Botrychium ascendens*) and scalloped moonwort (*Botrychium crenulatum*). The diversity of habitats within this potential wilderness area lends a strong probability of finding other sensitive plants here that are known to be present in the Kettle Range and elsewhere in northeastern Washington

Noxious Weeds

Noxious weed inventory data is not available for this PWA. St. Johnswort is established along the Hoodoo Canyon Trail.

Minerals and Soils

The area is characterized by extensive shallow soils and rock outcrops. The eastern part of the area, in particular, is dominated by rocky land with little or no soil development. Otherwise, soils within the area are derived from volcanic ash and loess deposits formed over glacial till or granitic bedrock. Steeper south and west aspects have less evidence of ash deposition due to past erosion. The ash material overlies rocky granitic glacial till. Outwash and lake bed deposits occur adjacent to streams. On forested sites the more recent glaciation and ash deposits have resulted in relatively undeveloped soils. Soil productivity within the area is generally low to moderate.

The Hoodoo PWA is located in the central part of the Kettle Metamorphic Core Complex, a significant structural feature where relatively deep crustal rocks have been exhumed resulting from major extensional tectonics. The subject lands are underlain by pre-Tertiary metamorphic rocks, namely gneiss, quartzite, and to a lesser degree marble and amphibolite.

Based on historic mining claim records, a significant amount of prospecting and exploration has occurred in the eastern half of the area. However, there are no significant historic prospects or mines within the area. At present (4/2008), there are no active claims within the PWA. The far eastern edge of the area has a high potential for the occurrence of uranium and there are several historic uranium prospects/mines as well as an active uranium claim block located immediately east of the PWA (Grant, 1982; Bernardi and others, 1982). The remainder of the PWA generally has a low to moderate potential for the occurrence of uranium and tungsten resources (Grant, 1982; Bernardi and others, 1982).

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 or unknown potential for geothermal resources.

Cultural and Heritage Resources

There are no known cultural resources within the Hoodoo area. Further inventories may be necessary in this area to insure that potential cultural resources are recorded and evaluated.

Land Uses and Special Uses

Grazing allotments are managed through term grazing permits.

Private Lands

The closest private lands are three miles to the northeast. The Sherman Creek Wildlife Management Area (State) is approximately a mile to the southeast.

NEED FOR WILDERNESS

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

The Hoodoo PWA is approximately 65 air miles west of the 41,335 acre Salmo-Priest Wilderness on the Colville National Forest, 105 air miles east of the 529,477 acre Pasayten Wilderness, and 100 air miles northeast of the 151,435 acre Lake Chelan-Sawtooth Wilderness. The Salmo-Priest Wilderness is approximately a 2.5-hour drive from Spokane, and the Hoodoo PWA is about a three-hour drive.

There are only two small congressionally designated wilderness areas within a three-hour drive of the Spokane area. In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as moderate. The area is relatively accessible, and Hoodoo Canyon and the lakes within it provide a scenic high quality destination, but the trail system within the PWA is limited.

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

The visitor pressure on the wilderness areas mentioned above is low relative to other wilderness areas in the Pacific Northwest Region. The Pasayten and the Salmo-Priest have experienced a slow increase in use, but they are still below capacity levels except for some popular spots. Trends for wilderness use show that length of stay has shortened, there is more day use, and visitors are not traveling as far into the wilderness.

The projected population increase for the period from 2000 through 2030 in Ferry, Pend Oreille, Stevens, and Spokane Counties ranges from 40 to 67 percent. With this increase in population comes the potential for overuse of and crowding in the Salmo Priest Wilderness.

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

There are seven other PWAs within fifteen air miles of the Hoodoo PWA (Jackknife, Bald-Snow, Cougar Mountain, Profanity, South Huckleberry, Twin Sisters, and Thirteenmile), which encompass an additional 110,138 acres. This acreage, in combination with other PWAs and designated wilderness, totals approximately 226,000 acres. These areas provide for a combination of motorized and non-motorized backcountry recreation opportunities. The roadless areas identified in RARE II constitute about twenty percent of the Colville National Forest.

Off-highway vehicle recreation has increased substantially in the last 30 years and is projected to continue increasing in the future. This use often conflicts with non-motorized recreation in the Forest, creating need for areas where motorized recreation is prohibited.

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

Wildlife

The PWA provides habitat for Canada lynx and wolverine. The wildlife sustainability index is 7.8 (a low relative ranking) and the habitat connectivity index is 10.9 (a moderate relative ranking).

Fish

This habitat is not considered essential to the recovery of the bull trout. Bull trout naturally cannot access most of the habitat in this PWA. However, it is important to the sustainability of the interior redband trout, another aquatic focal subspecies. This is due to the fact that the PWA contains tributaries that can affect water quality and in channel habitat conditions for main Deadman Creek which contains a large population of this subspecies. The analysis indicates that this PWA should be considered a moderate priority for wilderness classification due to the importance of this PWA to future water and habitat quality to an isolated subpopulation of a focal and sensitive subspecies (interior redband).

Table 6--Deadman Creek Watershed

Focal Species	Miles of Habitat	Percent Total Forest Habitat in Evaluation Area	Vegetation Score	Overall Road Density Score	Habitat Priority Ranking (1=high, 2=mod., 3=low)
Bull trout	0	0	-1.00	-0.82	3
Westslope cutthroat trout	0	0	-1.00	-0.82	3
Interior redband trout	20	30	-1.00	-0.82	2
Pygmy whitefish	0	0	-1.00	-0.82	3

Table 7--Lower Sherman Creek Watershed

Focal Species	Miles of Habitat	Percent Total Forest Habitat in Evaluation Area	Vegetation Score	Overall Road Density Score	Habitat Priority Ranking (1=high, 2=mod., 3=low)
Bull trout	0	0	-1.00	-0.54	3
Westslope cutthroat trout	0	0	-1.00	-0.54	3
Interior redband trout	0	0	-1.00	-0.54	3
Pygmy whitefish	0	0	-1.00	-0.54	3

Threatened, Endangered, and Sensitive 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 ranked as moderate 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 landform types and ecosystems

This area represents the Okanogan Highlands ecoregion. Designated wilderness is under-represented in the Okanogan Highlands 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 18 percent (approximately 2,050 acres) of the vegetative cover if this PWA. These types include forb lands, non-alpine meadows, ponderosa pine, and western red cedar. Taken as a whole, the contribution of underrepresented vegetation types ranks as moderate for the portion of this area with underrepresented cover types, and also as moderate 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 finer scale cover types represented in this PWA include abundant amounts of cottonwood and aspen.

In particular, the forb land cover type, which comprises approximately 1,500 acres in this PWA, and the abundant stands of cottonwood and quaking aspen would make a significant contribution within the eastern Washington planning area.

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