WILDERNESS EVALUATION

GRASSY TOP – 621982

Colville NF 2,209 Acres

Idaho Panhandle NF 13,617 Acres

OVERVIEW

History

The Grassy Top Potential Wilderness Area was initially inventoried in the first Roadless Area Review and Evaluation (RARE I). It was not selected as wilderness. In the second Roadless Area Review and Evaluation (RARE II) the area was recommended for non-wilderness. Most of the area is on the Kaniksu National Forest, which is administered as part of the Idaho Panhandle National Forests.

The 2006 inventory divided the Grassy Top PWA into two areas. This narrative only pertains to the portion that is still connected to the larger piece administered by the IPNF. The portion of the old Grassy Top IRA that is now detached has been renamed as Hall Mountain PWA, and has its own wilderness evaluation document.

This evaluation focuses on the portion of Grassy Top PWA that is administered by the Colville National Forest. The evaluation of the Idaho Panhandle National Forest (IPNF) portion is attached, and was considered in the summary evaluation sections.

The 2006 inventory removed approximately one acre from previous inventory due to nonconforming uses such as road construction and logging; 36 acres were added to the previous inventory as they met the criteria for a potential wilderness area as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the current 1988 Colville National Forest Land and Resources Management Plan direction for the 2006 inventoried area.

Table 1--Management area percentages (rounded)

MA11 Semi-primitive, Non-motorized Recreation	MA2 Caribou Habitat	MA7 Wood/ Forage
29%	68%	3%

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Location and Access

The area is located in northern Pend Oreille County, Washington, 90 miles north of Spokane, Washington. Primary access is seven miles from Ione, Washington, seven miles west of the area. Access is via the North Fork Harvey Creek Road (Forest Road 1935035) and from the Nordman-Metaline Road (Forest Road 2200000). The north fork of Harvey Creek Road is accessed from the Harvey Creek Road (Forest Road 1935000) from the Sullivan Lake Road (County Road 9345). The Nordman-Metaline Road is accessed from the Sullivan Lake Road. The Sullivan Lake Road is accessible from State Highway 31 in two places.

Geography and Topography

This area is in the southwest edge of the Selkirk Mountains which extend north into British Columbia. The Selkirk Mountain Range lies between the Okanogan Highlands landform province on the west and the Rocky Mountain trench on the east. The Grassy Top proposed wilderness area (PWA) lies on the west slope of the divide between the Pend Oreille River on the west and Priest River area to the east. The geologic structure in the area is complex due to repeated continental glaciation.

The dominant topographic feature of the area is Grassy Top. The elevation of Grassy Top Mountain is 6,253 feet. Cirques on the north side of Hall Mountain indicate there were mountain glaciers in the geologic history of this area.

Current Uses

Primary recreation use is hiking, horseback riding, and mountain biking, and it is concentrated on or near the trails. The Grassy Top Trail #503 is a national recreation trail, and it is connected to the Hall Mountain Trail #533, and to Pass Creek Pass. The trail system is popular in the summer for berry picking, and in the fall for hunting access.

Appearance and Surroundings

The general appearance of the area is of a rolling to steep mountainous terrain. Grassy Top is a moderately steep mountain with a pleasing contrast between the conifer forests and interspersed conifer-grassland vegetation at the summit.

This area offers a wide variety of spectacular scenery from the Pass Creek-Grassy Top Trail #503. The trail passes through a wide variety of vegetation types and their associated ecosystems. The summit of Grassy Top Mountain is a ten-minute hike from the Pass Creek-Grassy Top trailhead and offers an excellent panoramic view of the Salmo-Priest Wilderness, upper Priest River, and the upper Pend Oreille valley.

A protective strip of uncut timber screens the hiker on the Hall Mountain-Grassy Top trail from many of the sights and sounds of timber harvest activity both in Johns Creek and Harvey Creek.

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Key Attractions

Many small animals and birds common to the Colville National Forest may be found in the area, in addition to black bear, deer, elk, cougar, bobcat, and moose. This entire area is identified as grizzly bear habitat, and caribou habitat.

CAPABILITY FOR WILDERNESS

Level of natural and undeveloped environment

Natural ecological processes, trails, and endangered species habitat are some of the attractive features of the area. The last major natural change evident in the area was when most of the area burned over in one of the major fires of 1926 and 1929. The largest influence of humans has been the control of wildfires in the last 45 years. This influence is encouraging succession to continue toward a climax condition.

This area does not appear to be free from human influence because of the extent of activities around it. Clear-cutting in Noisy, Harvey, Pass, and Johns Creek drainages are disturbances present all around the area.

Although noises reach the top of the mountain, they are offset by the panoramic views and visual isolation from signs of human disturbance. Primitive recreation opportunities in this area include hiking, hunting, wildlife photography, panoramic scenery, nature study, and some camping. The streams are not large enough for water sports or fishing.

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.

Noxious weed inventory data is not available for this PWA.

The Grassy Top PWA is minimally impaired by light pollution from the Metaline area. The entire PWA rates as Class 2 on the Bortle scale. 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.

Outstanding opportunities for solitude or primitive and unconfined recreation

The main area for a challenging hiking experience would be the trip into Grassy Top, which is long enough to create feelings of solitude. Additional challenge can be found heading east of Grassy Top, as the trails into the Idaho Panhandle have not been maintained in years. Primitive recreation opportunities in this area include hiking, hunting, mountain biking, wildlife photography, panoramic scenery, nature study, and some camping. The streams are not large enough for water sports or fishing. Winter activity is limited by the steep terrain, deep snow, and amount of access.

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Special Features

Habitat for the threatened grizzly bear and the endangered caribou is being managed in this area. A large portion of the area is identified as potential habitat for grizzly bear in the Sullivan-Hughes grizzly bear management unit (GBMU).

Sensitive plant surveys have not been conducted in this PWA and no sensitive plants have been identified.

Habitat for pileated woodpeckers, American marten, goshawks, caribou, and wolverine exist in this area. This area will eventually support a climax vegetation community and its associated wildlife.

There are two known cultural resources within the Grassy Top area. Both these sites are remnant foundations of historic lookouts; Grassy Top and North Grassy Top. Unless a site has been determined to be ineligible for the National Register, it is managed as a significant site until such a determination is made.

Manageability of Boundaries

The west and south boundaries are in acceptable locations for managing this area. These boundaries avoid existing or potential uses that might result in demands to enter the area with non-conforming activities or structures. The greater portion of these two boundaries can be accurately described and easily found on the ground. The boundaries limit use inappropriate to PWAs; however, they are not located where they could shield the user from the sights and sounds of human activity.

The north and east boundaries are in poor locations to stop non-conforming use or to act as a shield from sights and sounds of human activity. These two boundaries skirt the edges of existing timber harvest units where recurring activity will be scheduled. The boundaries follow along side hills, cross major draws and ridges in nonlocatable places. The location factors make management of the areas adjacent to these boundaries difficult.

AVAILABILITY FOR WILDERNESS

Recreation

Primary recreation use is hiking, horseback riding, and mountain biking, and it is concentrated on or near the trails. The Grassy Top Trail #503 is a national recreation trail, and it is connected to the Hall Mountain Trail #533, and to Pass Creek Pass. The trail system is popular in the summer for berry picking, and in the fall for hunting access. A trail system connecting Grassy Top Mountain to the east has not been maintained for years, but some people venture that direction. Parts of the Grassy Top PWA are open for snowmobile use.

The Grassy Top PWA is most closely associated with the small communities of Ione, Metaline Falls, and Metaline. The motto on the tourism brochure for the area is "where pristine wilderness meets rural communities with much to offer visitors." This promotional brochure promotes hiking, cross-country skiing, and wildlife viewing as PWA-based

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opportunities. Promotional materials do not directly promote this PWA. The PWA is fairly isolated, but is accessed via Pass Creek Pass which is a long dirt road that draws low levels of tourism-based traffic because it connects scenic portions of the Idaho-Panhandle National Forest with the scenic Sullivan Lake area. Because the Grassy Top Trail is a National Recreation Trail that also increases the profile of the area, as does its proximity to the Salmo Priest Wilderness. These factors, coupled with the scenic beauty of the area, would likely draw media publicity if the area were designated as wilderness. However, due to the remote location, increases in tourism-based use are likely to be modest.

Due to the existing pattern of use being primarily wilderness related uses, with only low levels of mountain bike use, wilderness designation would benefit management of the adjacent wilderness area, and would not adversely affect mountain bikers as a whole.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	4	0

Wildlife

Suitable habitat for the threatened grizzly bear (Sullivan-Hughes grizzly bear management unit) and the endangered mountain caribou (Thunder-Hall caribou management unit) is in this area. The grizzly bear and caribou, along with a wide variety of game and non-game species of wildlife, provide an excellent opportunity for both consumptive and non-consumptive use of this resource. Gray wolves may occasionally use the area, although currently animals seen on the Colville National Forest are transient, moving over large areas. Habitat is available for Canada lynx within this PWA. There is one Lynx Analysis Unit (LAU) within this area, the Harvey LAU. Habitat also exists for wolverine.

Habitat improvement opportunities in this area would be primarily from creating openings in the dense timber stand to provide more food. Projects improving the extent and condition of riparian habitat could also enhance habitat for many non-game species. Improvement of habitat for bighorn sheep would be through creating large openings and planting grass, not trees, at the higher elevations. Habitat for caribou could be created by converting lodgepole pine stands to climax forest types. Habitat for grizzly bear could be enhanced through creating openings vegetated with grasses, forbs, and shrubs and interspersed with cover. A mosaic of habitats to benefit all of these species could be developed, however, it would not be easily managed to provide timber rotations. Roads would need to be closed to provide seclusion habitat. Habitat manipulation would be precluded by wilderness designation.

Potential management activities necessary to maintain threatened, endangered, or sensitive species include:

> **Grizzly Bear:** 1) provide seclusion by minimizing new roads in the area, 2) maintain or enhance habitat through the use of prescribed fire, regulated timber harvest, or letting some natural fires burn, and 3) vegetation seeding or planting.

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Selkirk Mountain Caribou: 1) maintain arboreal lichen producing habitat at high elevations, 2) regulate fires in subalpine habitat, 3) provide seclusion, and 4) use prescribed fire, timber harvest, or natural fires to convert lodgepole pine stands above 4,200 foot elevation to climax forest types.

Habitat for pileated woodpeckers, American marten, and other old growth dependent species exist in this area.

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)	%Total Forest Habitat in Evaluation Area
Grizzly bear	2127	1	NA
Canada lynx	312	2	1.8
Wolverine	2,127	2	<1
American marten	90	2	<1

Water and Fish

The Grassy Top PWA is located in the Pend Oreille River subbasin (4th HUC). The PWA contains tributaries of Harvey Creek within the Harvey Creek watershed (6th HUC) and tributaries of Pass Creek within the Sullivan Creek watershed (6th HUC).

The boundary of the Grassy Top PWA is bordered by North Fork Harvey Creek, Harvey Creek, and Middle Fork Harvey Creek on the west and south, and Pass Creek on the north. The area encompasses primarily intermittent and perennial non-fishbearing streams. Harvey Creek contains one of the largest pure westslope cutthroat trout populations on the forest. Harvey Creek supports both resident and adfluvial life forms of the cutthroat trout. Harvey Creek also provides spawning habitat for 12 to 14 thousand Kokanee salmon each year as well as pygmy whitefish, a sensitive species, from Sullivan Lake.

Harvey Creek, Sullivan Lake, and Sullivan Creek together comprise the Sullivan Creek watershed. Mill Pond Dam on Sullivan Creek presently is a blockage to upstream fish passage, isolating the westslope cutthroat trout and preventing any upstream migration of bull trout or other species. This dam is scheduled for surrender and upstream fish passage is expected to be restored at a later date.

This watershed is considered to be core habitat that is essential for the recovery of the threatened bull trout in northeastern Washington. This watershed also contains designated critical habitat for the recovery of this species downstream of the PWA. There have been no observations of bull trout in the portion of the watershed within and adjacent to the

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PWA. The most recent observation, in 1994, was a 20-inch female bull trout while snorkeling below Mill Pond Dam.

Pass Creek drains into the Sullivan Creek watershed, which is designated as a priority watershed within the Colville Land and Resource Management Plan as amended by INFISH. This designation indicates that these watersheds have excellent habitat and/or strong assemblages of native fish with a priority on bull trout. The stream habitat conditions range from excellent to fair

All 6th field watersheds have been analyzed for vegetation and road conditions. When vegetation conditions and road related effects are considered cumulatively, the Harvey Creek and Sullivan creek watersheds were rated as fair. This rating is due primarily to high road densities.

This habitat in the Harvey and Sullivan Creek portions of the PWA is considered important core area habitat necessary for the recovery of the bull trout within northeastern Washington. Although a large portion of both watersheds is not within the PWA, several tributaries are located in the PWA and could have significant effects on downstream water quality and instream habitat in lower Harvey and Sullivan Creeks.

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. If management actions, such as road building and timber harvest, are approved by the Regional Forester or Chief in the future within this PWA, a degradation of riparian and aquatic processes is expected. The adverse effects of such actions could extend beyond the boundaries of the PWA and continue throughout the 6th field HUCs.

There are no existing power withdrawals, proposed impoundments, or known Federal Energy Regulatory Commission permits or licenses outstanding.

There are no water source protection areas.

Range

This area has little potential for domestic stock use because of the steep terrain and lack of water. There are no grazing allotments located within this PWA. There are no known range improvements.

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
2	0	7	0

Vegetation and Ecology

This area is covered by forests, grasslands and shrub vegetation types. About 80 percent of the area is covered by forests. These forested areas are a mixture of mature and immature stands. Most of the younger stands are nearing 85 of age and are the result of large fires in

the late 1920s. The forest vegetation types include: Douglas-fir/ponderosa pine type on some south aspects; cedar/hemlock type in the draws and north and east aspects; subalpine fir/Engelmann spruce type at higher elevations and the ridge between Noisy and Harvey Creeks; and subalpine fir/whitebark pine type on the top of Grassy Top Mountain. Trees in this forested area are extremely dense. There are grassy openings on the west and south faces of Grassy Top Mountain, which contain a mixture of grass species along with some forbs, legumes and shrubs.

Plant Communities present include Douglas-fir/ninebark, western hemlock/pachistima, grand fir/pachistima, subalpine fir/beargrass, subalpine fir/menziesia, fescue grassland, and forbfield.

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 ft^3/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.

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Table 5--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	6%	Total WUI	0%
	Cold Dry	0%	WUI in Dry and Mesic Forest	0%
	Cold Moist	92%		
	Mesic	0%		
	Dry	0%		
	Non-forest	0%		

Fire

Wildland fires are the major natural disturbance to vegetative communities within the potential wilderness area fulfilling an important role in ecosystem maintenance and development across the landscape. Fire behavior and vegetation response is classified into three broad categories based on the severity of the fires characteristic to that regime. These categories are low, mixed (or moderate), and high severity fire regimes.

Low severity fire regimes are those where fires result in 90 percent of the overstory vegetation surviving (Morgan et al. 1996). In this regime, surface fuels typically carry fire and only litter, herbaceous material, foliage, and small twigs on woody undergrowth (i.e., “fine fuels”) are consumed by the fire. Examples within the Grassy Top Potential Wilderness Area include the relatively low to mid-elevation, south-facing slopes with sparse overstory of fire-tolerant ponderosa pine and Douglas-fir, and an understory dominated by bunchgrasses or rhizomatous graminoids (less than 10 percent of the analysis area). The historic fire-return interval is 5 to 35 years (LANDFIRE imagery, 2007).

The mixed or moderate severity fire regimes are those where fires result in 20 percent to 80 percent of the overstory vegetation surviving. Fire frequency and fire effects are variable across the landscape producing spatially uneven mosaics of even-aged stands. Typically, wildland fires in this regime are largely understory fires except when local fire weather and fuels interact to create periods of high severity (stand-replacing fires). This is the most common fire regime within the study area. Examples within the Grassy Top PWA include the Douglas-fir/grand fir, lodgepole pine and western larch cover types (mid-slope, most aspects), and subalpine fire/whitebark pine type on the ridge-tops and higher elevations. The historic fire-return interval is typically 35 to 75 years.

The high severity fire regimes are those where fire often results in less than 10 percent of the overstory vegetation surviving. Fire frequency is relatively long, severity is high (stand-replacing), and opportunity for ignition is limited. This is a common fire regime within riparian areas and sheltered slopes (eg. north aspects). Examples within the Grassy Top PWA include the western hemlock/western red cedar and Engelmann spruce cover types. Large woody debris with an abundant shrub and herbaceous layer characterize the understory component of this fire regime. The historic fire-return interval is 100+ years.

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Prescribed fire is an option that may be used to reduce surface and ladder fuels, promote fire-tolerant species, improve big-game browse, and maintain and/or restore the area to its historic fire regime.

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. The most significant insect impact near this PWA has been attacks of western balsam bark beetles on subalpine firs. About 29,000 trees have been killed near the PWA since 2000. Blowdown and root disease may play an important role in the buildup of western balsam bark beetle populations. When beetle populations are high, they can more easily attack and kill healthy trees. Removing blowdown may be a way of reducing tree mortality by these beetles.

Pockets of balsam woolly adelgid activity have been reported several times since 2005. Balsam woolly adelgid is a European insect that was introduced to North America in the early 1900s. Any true fir can be a host, but subalpine fir is the most susceptible species on the district. Feeding by this sucking insect causes branch gouting and flagging, growth loss, wood degradation, and eventual tree death. Twenty-three species of predators were introduced between 1957 and 1964 in order to control this insect. Five of these species are established but do not appear to be reducing the balsam woolly adelgid population in any significant way. There is considerable difference in individual tree susceptibility.

Fir engravers kill several thousand grand firs every year. 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.

Mountain pine beetles *(Dendroctonus ponderosae)* have killed a few hundred western white pines and whitebark pines every year. Whitebark pine mortality due to mountain pine beetles has been increasing in many places, possibly due to the combined effects of white pine blister rust and generally warmer winter temperatures. Efforts to breed rust-resistant whitebark pines are currently underway. Reducing access to stands of whitebark pine could complicate the logistics of cone caging and collection.

These whitebark pine stands are of inherent value as a plant community, for providing important habitat for wildlife including the federally listed grizzly bear, and for their aesthetics in contributing to the social setting. Wilderness designation would limit restoration options for these stands, which are in 6 percent of this PWA. Manipulations would only be considered in order to protect the composite wilderness resource, and only as a last resort to preserve naturalness at the expense of trammeling. Vegetation cover manipulation and reforestation in wilderness require approval of the Chief of the Forest Service. The Regional Forester can approve pesticide use.

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The Douglas-fir beetle *(Dendroctonus pseudotsugae)* outbreak, which began in the late 1990s, had subsided by 2002, though some Douglas-firs are killed by bark beetles every year. Douglas-fir beetle outbreaks typically last about four years, and occur when severe blowdown or similar disturbance provides abundant breeding material. Removing blowdown Douglas-firs before the beetles complete their life cycle can substantially reduce the size of an outbreak. Douglas-fir blowdown that occurs in wilderness cannot be removed, and can be a source of beetles.

Western larch dwarf mistletoe probably occurs in approximately 50 percent of the larch stands in the Sullivan Lake 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 Pend Oreille Valley Ranger District. The very first efforts to survey Ribes and develop practices of controlling the disease in western North America were tested on the Sullivan Lake District in the late 1920s. 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 no inventoried rare plant species on the Colville National Forest portion of the Grassy Top PWA.

Noxious Weeds

Noxious weed inventory data is not available for this PWA.

Minerals and Soils

Soils in this area are extremely varied. Generally, they are a complex of rock outcrops and sandy to silt loams. There is evidence of past mass failures (landslides). Soils usually consist of a thin layer of weathered volcanic ash over glacial till, colluvium or alluvium. The weathered volcanic ash soils have a high water holding capacity.

The Grassy Top PWA is located within the far eastern part of the Kootenay Arc, a highly faulted and folded sequence of Middle and Late Proterozoic and Early Paleozoic rocks. The subject lands are largely underlain by a complex assemblage of faulted metasedimentary rocks, namely meta-argillite, metasiltite, quartzite, metaconglomerate,

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metalimestone, dolomite, and phyllite, with minor mafic igneous intrusive rocks in the form of greenstone.

In the early 1980s, the central and southern parts of the subject lands were encumbered by moderate to large claim blocks. However, there are no historic prospects/mines of significance within the PWA and at present (3/2008), there are no active claims within the area. Almost the entire area has a moderate to high potential for the occurrence of porphyry molybdenum-tungsten mineralization related to the emplacement of several Cretaceous igneous plutons in the area (Grant, 1982). The far southeastern tip of the area has the highest mineral potential given its proximity to the Harvey Creek pluton on the south.

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 a low potential for the occurrence of coal and oil and gas resources and a low or unknown potential for geothermal resources.

Cultural and Heritage Resources

A final determination of availability based on cultural and heritage resources is pending further analysis.

Land Uses and Special Uses

Past management consideration for the area included an agreement with the U. S. Air Force which permitted use of the area for training of survival instructors. The Grassy Top PWA was dropped as a training area when the special use permit was reissued in 2001.

Private lands

There are no private lands within the boundaries of the Grassy Top PWA.

NEED FOR WILDERNESS

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

The nearest designated wilderness is the Salmo-Priest Wilderness which contains 41,335 acres. This wilderness is located within the Colville and Idaho Panhandle National Forests. The nearest population center is Spokane. The drive time from Spokane to the Salmo-Priest Wilderness is approximately two hours. The drive time from Spokane to the Grassy Top PWA is approximately 3.5 hours.

There are only two relatively small congressionally designated wilderness areas within a three-hour drive of the Spokane area, including the adjacent Salmo-Priest Wilderness. In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as *high*, a factor influenced by its near seamless connection to the Salmo Priest Wilderness. The area provides high quality destinations that would attract wilderness users, and there are interconnected trail systems that facilitate both day trips and overnight use. The area is not likely to attract high use, however, due to the remote access on unpaved roads.

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

Use of the Salmo-Priest Wilderness is fairly light. Wilderness use was monitored during the summer of 2004 through the national visitor use monitoring program. Only 18 visitors to the wilderness were encountered during 21 days of sampling. Much of the use is from northeastern Washington. Residents of Spokane also have access to the Idaho Panhandle National Forest for recreation. Travel time and distance to potential wilderness areas in Idaho are comparable to the areas located on the Colville National Forest. There are over 300,000 acres proposed for roadless allocations and xx acres recommended for wilderness designation on the Idaho Panhandle National Forests. Seattle, a ten-hour drive from this area, is the closest major metropolitan area. The abundance of prime backcountry recreation (including wilderness) close to Seattle precludes heavy use from that area.

The projected population increase for the period of 2000 to 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 six other PWAs within 15 air miles of the Grassy Top PWA (Abercrombie-Hooknose, Hall Mountain, Harvey Creek, Lost Creek, Salmo-Priest adjacent, and South Fork Mountain) that encompass an additional 41,071 acres. This acreage, in combination with other Colville NF PWAs and designated wilderness, totals approximately 226,000 acres. The roadless areas identified in RARE II constitute about twenty percent of the Colville National Forest.

Another consideration is off-highway vehicle recreation, which has increased tenfold 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 surroundings for the need for a protected area for other unique scientific value or phenomena

Wildlife

Grassy Top PWA is adjacent to large areas of limited human access including the formally designated grizzly bear recovery area. Grassy Top PWA has habitat for Selkirk mountain caribou, grizzly bear, Canada lynx, wolverine, and American marten. However, the wildlife sustainability index is 3.4 (a low relative ranking) and the habitat connectivity index is 2.0 (also low relative ranking).

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Fish

The habitat within the two watersheds within the PWA is considered essential to the recovery of the bull trout. This PWA contains primarily tributaries that are important to future water and instream habitat quality in Pass, Sullivan and Harvey Creeks. Bull trout have also been observed in lower Sullivan Creek below Mill Pond Dam. This PWA contains a very small portion of Pass Creek, a tributary to Sullivan Creek. The habitat condition, for this watershed, is considered to be fair. This PWA also contains the headwaters of the Middle Fork of Harvey Creek, a tributary to Harvey Creek and eventually to Sullivan Creek. The habitat condition, for this watershed, is considered to be fair.

The 6th field HUCs in this PWA also provide suitable habitat for resident and adfluvial westslope cutthroat trout subpopulations; approximately 25 percent of the available habitat on the Forest. While the PWA contains only a small portion of these subpopulations, activities in the PWA could influence habitat conditions and water quality for those subpopulations located downstream. These are important factors that influence the future sustainability of these isolated subpopulations.

The Harvey Creek watershed also includes Sullivan Lake. This body of water provides 64 percent of the habitat occupied by pygmy whitefish on the Forest. This population is one of only two populations on the Forest and one of seven in the state of Washington. A few whitefish have been captured during spawning season in lower Harvey Creek. It is unclear how much of the population spawns in the lake versus spawning in Harvey Creek. Habitat conditions within the portion of the PWA in this watershed could influence the long-term sustainability of the pygmy whitefish.

It is understood that habitat conditions for TES species within the 6th field HUCs is fair. However, as a result of this analysis, the importance of this PWA to future water and habitat quality in potential and existing bull trout habitat and sustainability to three subpopulations of westslope cutthroat trout and one population of pygmy whitefish indicates that this PWA should be considered a high priority for wilderness classification.

Table 6--Sullivan 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	3.2	3	0.01	-1.00	2
Westslope cutthroat trout	28	16	0.01	-1.00	2
Interior redband trout	0	0	0.01	-1.00	3
Pygmy whitefish	0	0	0.01	-1.00	3

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Table 7--Harvey 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	0.01	-0.87	2
Westslope cutthroat trout	16	9	0.01	-0.87	2
Interior redband trout	0	0	0.01	-0.87	3
Pygmy whitefish	1291 (acres)	64%	0.01	-0.87	3

Threatened, Endangered, and Sensitive Plants

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 landform types and ecosystems

This area is classified as Okanogan Highlands using Bailey's Ecoregion classification which is an underrepresented landform in the wilderness system. The area is part of the Selkirk Mountain Range.

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 eight percent (approximately 169 acres) of the vegetative cover if this PWA. These types include alpine meadows, forb lands, non-alpine meadows, ponderosa pine, and western red cedar. Taken as a whole, the contribution of underrepresented vegetation types ranks as low for the portion of this area with underrepresented cover

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types, and also as low 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 sparse amounts of quaking aspen.

This PWA would not make a significant contribution for providing underrepresented cover types within the eastern Washington planning area.

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