WILDERNESS EVALUATION

PROFANITY - 621004

37,712 acres

OVERVIEW

History

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

The 2006 inventory removed approximately 1,923 acres from previous inventory due to nonconforming uses such as road construction and logging; 10,637 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 Resource Management Plan direction for the 2006 Potential Wilderness Area (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
1%	60%	2%	16%	21%

Location and Access

The area is located 30 miles west of Colville, Washington. The nearest large population center is Spokane, Washington, located two hours driving time from the area. The south boundary of the PWA parallels State Highway 20, which is approximately one mile south. Other access is on the Albion Hill road (Forest Road #2030) off Highway 20. The Boulder-Deer Creek Road (Forest Road #69) lies to the north of the area. Several lower standard roads access the area from State Highway 21 on the west.

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Geography and Topography

The Profanity Potential Wilderness Area (PWA) is in the north central portion of the Kettle Range and lies on both sides of the hydrologic divide between the Columbia River and the Curlew and Valleys.

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 outwashed terraces. A prominent feature is the Kettle Range dividing the Columbia River from the Curlew Valley and is an extension of the Monashee Mountains in British Columbia, Canada. The highest elevation within the area, 7,135 feet, occurs on Copper Butte. The lowest elevation occurs at 4,250 feet where South Boulder Creek crosses the east boundary.

Annual precipitation for this area is 35 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 likelihood that some prospecting for uranium and tungsten will continue in the Mt. Leona area. Portions of the area are within eight different cattle grazing allotments, which are grazed during the summer months. Recreation use within the area centers around use by hikers and horseback users on the Kettle Crest and tributary trails and fall deer hunting. There is a communications site on Mt. Leona. Most of the PWA is managed as semi-primitive non-motorized within the recreation opportunity spectrum classification.

Appearance and Surroundings

The Profanity PWA is a long strip of the Kettle Range divide. Surrounding views from the area are of the distant major drainages and surrounding rolling foothills and mountains. Much of this surrounding area is National Forest System land, which is currently managed for forest uses in a roaded condition.

Appearance of the area is one of rolling to moderately steep wooded mountains, with many vistas available from the open areas on the higher peaks and rocky outcrops. Much of the area is covered by dense stands of lodgepole pine.

Key Attractions

Attractions within the area include the native plants and wildlife common to the Colville National Forest. These animals include large mammals such as deer and bear and other small animals and birds. There are also scenic views of Lake Roosevelt and the Curlew and Kettle River valleys from the higher ridges. The area provides a backdrop for the Colville, Curlew, Kettle, and Columbia River. The Kettle Crest National Recreation Trail traverses the crest of the range and various side trails provide access. A number of summits are easily accessed from this trail, including Profanity Peak, the namesake for this PWA. The area is widely known for high quality backcountry skiing opportunities.

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CAPABILITY FOR WILDERNESS

Level of Natural and Undeveloped Environment

The high mountain range is essentially undeveloped and remains a natural environment, except for the obvious evidence of cattle grazing. Water developments are in place to protect springs. The southern end of the PWA is influenced by the sight and sound of traffic on Highway 20.

Views to the west from some points reveal a modified landscape including evidence of timber harvest and agriculture.

The Old Stage Coach Road, a historic feature, has the appearance of a logging road.

Eastern brook trout have been introduced into some creeks. Noxious weed inventory data is not available for this PWA. Noxious weeds, including Canada thistle and St. Johnswort occur in isolated populations.

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. St. Peter Creek has 2.0 miles classified by the Washington State Department of Ecology as Category 2, waters of concern, which means there is some evidence of a water quality problem, but it does not require a water quality cleanup plan. Lambert Creek has 1.2 miles and Intake Creek has 1.7 miles classified as Category 1, which means the water meets tested standards.

The Profanity PWA is partially impaired by light pollution from the Republic and Colville area. The eastern portion of the PWA (53 percent of the PWA) rates a Class 2 on the Bortle Scale, whereas the western portion (47 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. 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. Time-lapse photography could be impaired by light pollution.

Level of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Opportunities for solitude are good, although they may be limited in parts of the area by management activities both within and outside the area at some times. Accompanying sounds of timber management activities from adjacent lands to the west may affect solitude in some locations. The long, narrow configuration of this area somewhat impedes the physical separation that would otherwise be provided by the mountainous terrain.

Recreation opportunities are present in the form of hunting, cross country hiking, trail riding, Nordic skiing and some moderately challenging rock climbing opportunity. The outstanding recreational feature of the area is the Kettle Crest National Recreation Trail, which follows and traverses the Kettle Mountain Range for approximately 30 miles. The area contains some of the more well-defined mountain peaks in the Kettle Range area.

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Special Features

The high peaks of the Kettle Range are a special feature unique to the Okanogan Highland province. The area is widely known for high quality backcountry skiing opportunities.

The PWA provides habitat for Canada lynx and wolverine.

There are two State listed threatened plant species present in the Profanity PWA; western moonwort (*Botrychium hesperium*) and peculiar moonwort (*Botrychium paradoxum*), which also has a Federal status as a species of concern.

The Columbia Mountain lookout cabin is eligible for inclusion in the National Register of Historic Places.

Manageability of Boundaries

Because the area covers both sides of a mountain range, most of the boundaries are points on the mid-slope where past management activities cease to be noticeable. The southern boundary of the PWA is near Highway 20; the sights and sounds of the highway are experienced within the PWA. The north boundary, which is adjacent to a Ferry County road, does receive a great deal of activity at the Deer Creek Summit Forest Camp and trailhead. The Albion Hill road forms the PWA boundary on the east side of the area.

AVAILABILITY FOR WILDERNESS

Recreation

Recreation opportunities are present in the form of hunting, day hiking, mountain biking, trail riding, backpacking (extended day), snowshoeing, snowboarding, and cross-country skiing. The most outstanding recreational feature of the area is the Kettle Crest National Recreation Trail, which follows the Kettle Mountain Range for approximately 30 miles. The area is closed to snowmobile use. Portions of the area are gaining in popularity with mountain bikers and the area is regarded as one of the best mountain biking opportunities on the Colville National Forest. In addition, the Old Stagecoach Road offers a trail that can be used by horse-drawn carts. This is a rare opportunity in a backcountry setting.

The area contains Kettle Crest National Recreation Trail #13, Sherman Tie, Sherman, Columbia Mountain Loop, Jungle Hill, Walpaloosie, Timber Ridge, Marcus, Old Stage Coach, Midnight, Lambert, Leona, Leona Loop, Stickpin, Big Lick, Ryan Cabin, Profanity, Long Alec, and Taylor Ridge trails. All trails are open to hikers, stock use, and mountain bikes. They are all closed to motorized vehicles. Trails within the area receive moderate use from late spring to late fall.

Change to wilderness designation would result in prohibiting mountain bikes and horse-drawn carts.

The Profanity PWA is most closely associated with the communities of 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, the scenic beauty of the area, the extensive trail system, and the historical interest in making this area wilderness would likely draw substantial media publicity if the

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area were to be designated as wilderness. There is likely to be a significant increase in tourism-based hiking and stock-oriented use of the area, with a corresponding increase in tourism-based revenue. However, use of this area has been gaining in popularity by mountain bikers with much of the use originating from British Columbia. These users would be displaced with Wilderness designation.

The Profanity and nearby Bald Snow PWAs provide one of the best opportunities for wilderness-oriented recreation on the Colville National Forest, but at the expense of displacing other well-established and emerging uses.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	67	0

Wildlife

The Profanity PWA contains higher-elevation habitats and the wildlife species present reflect this: nearly all mammal and bird species that occupy this elevation band 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. It is unclear whether grizzly bears occupied the area but they roamed much of the lower and mid elevations prior to the loss of the salmon fishery in Lake Roosevelt due to Grand Coulee Dam. Gray wolves inhabited Ferry County and probably at least moved through the area and wolverines have been trapped in the area but not for three decades (Tracks from a confirmed wolverine sighting in 2005 indicated that the animal was moving towards higher elevations, potentially towards the Profanity PWA). With an extensive road system from timber harvest activities to the east and west of this area, the greatest benefits from designating the area as wilderness would come as a result of no new roads: benefits to those species that depend on secluded habitat and reduced loss of forage due to noxious weeds (which often spread along new roads).

Historically, the area had been trapped heavily for American marten and the area remains a core area for marten on the Kettle Crest. Golden eagles, great gray owls, and northern goshawks have been sighted in the area but no nests have been recorded. The first boreal owls recorded in Washington were found in this area. The higher-elevation, north-south spine serves as a minor corridor for southward-moving raptors and smaller neotropical migrants but does not connect to mountainous habitats further south to continue the higher-elevation corridor. Designating the area as wilderness would not affect management for any of the species mentioned above because nearly all occupy management areas currently do not allow timber harvest.

Nearly all of the area lies with a lynx analysis unit, and this area contains the core area from which we have most of our historic lynx sightings on the forest, including many that were trapped in the 1970s. We have few tracks or sighting records from the past 15 years from this area, and an intensive effort to obtain hair samples failed. Most of the area does not currently support good habitat conditions because of the lack of younger stands, though two fires in the past 15 years have regenerated some of the stands and some will grow into

good foraging habitat with the next decade. Younger stands could be created by timber harvest or fire. Designation of the area as wilderness would not change management for lynx over most of the area because most is currently in management areas that do not allow timber harvest: we would continue to rely on natural processes to create the boom/bust of young stands that supply good foraging habitat.

The area was known for producing large mule deer and was heavily hunted by people from across the state. In recent years the success rate and number of hunters has declined. The entire area contains summer range for big game and consists of large patches of cover and large patches of open grassland or rocks. Some of the large patches of cover have grown too dense to provide good habitat. Introducing fire in most of these dense stands would probably result in a stand-replacement fire, similar to what occurred during two large fires within the past 15 years. These fires did create large stands of forage habitat. Were the area designated as wilderness, timber harvest to improve forage would not be an option and the forage base would decline as the forest canopy continued to grow closed. However, management in most of the area currently does not allow timber harvest, so management conditions would change only slightly. The area does not contain low-elevation winter range though does contain some small pockets of higher elevation winter range for mule deer, especially on the northern half. Projects to improve big game winter cover and forage would be feasible only in those small pockets, but designating the area as wilderness would have only a minor negative effect because most of these pockets lie in management areas that currently do not allow timber harvest. 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 more prized by hunters.

Many of the higher ridges and saddles and the subalpine areas support open stands of Douglas-fir, subalpine fir, and other species that support blue grouse. Prescribed fire could be used as the primary management tool in these areas, so wilderness designation would not change potential management.

Pockets of late-successional stands exist throughout the area. Conditions in these stands vary widely. Those in cool or cold sites remain in good condition. Those on drier sites often consist of widely spaced larch or Douglas-fir in the overstory and a sea of even-aged trees in the understory. Stands in the higher elevations lie in management areas that do not allow timber harvest so designating the area as wilderness would not change management over current conditions. On the drier sites, designating the area as wilderness would preclude timber harvest from opening the understory and decreasing competition for resources from the smaller trees.

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	4,203	1	23.9
Wolverine	31,754	1	3.9
American marten	31	3	<1

Water and Fish

The Profanity PWA is located in the Sanpoil, Lake Roosevelt, and the Kettle River Subbasins (4th HUC). The area is drained by North and South Forks of the Sanpoil River, Lambert Creek, St. Peters Creek, Aeneas Creek, Long Alec Creek, South Fork Boulder Creek, and Deadman Creek, which are tributaries of the Kettle River and Sherman Creek which drains into Lake Roosevelt.

Small portions of fish bearing streams, Sherman Creek and South Fork Boulder Creek, lie just within the boundaries. Brook trout are found in most of the tributaries. Westslope cutthroat trout is found in the headwaters of Sherman Creek and the South Fork of the Sanpoil River. Interior redband trout are found in Deadman Creek and portions of Sherman Creek. A hybrid swarm of coastal rainbow and interior redband trout is found in the South Fork of Boulder Creek.

Stream surveys were conducted in Sherman Creek (1994), South Fork River (1999), a tributary of Sherman Creek (1994), North Fork (1999), South Fork Boulder Creek (2000), Lambert Creek (1991), a tributary of Lambert Creek (1994), and the north fork of Saint Peters Creek (1992). Habitat conditions were good for trout. There was an abundance of large woody debris and pools. In some of the streams, the number of pools per mile was low, but this is typical of small headwater streams. Also typical of all of these small headwaters streams are high gradients, bedrock chutes, and falls that serve as migration barriers. Because of the barriers, only Sherman Creek, a tributary of Sherman Creek, South Fork Boulder Creek, Lambert Creek, and a tributary of Lambert Creek have fish within the PWA.

The PWA subwatersheds have been analyzed for vegetation and road conditions. When vegetation conditions and road related effects are considered cumulatively, this subwatershed was rated *poor*. This is due to past harvest activities, livestock grazing and high road densities.

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 by the Regional Forester or Chief in the future within this PWA. The adverse effects of such actions could extend beyond the boundaries of the PWA and continue throughout the 6th field HUCs.

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

The PWA has a water source protection area totaling 1,429 acres of stream that contributes to a non- community, non- transient water system for Grand Coulee Dam.

Range

The area is part of eight domestic livestock grazing allotments, one, Graves Mountain, being vacant. The rest of the allotments are grazed under a deferred rest rotation management system and include 26 water developments and approximately one mile of fence. The permittee is not allowed to use motorized vehicles because the PWA is managed as non-motorized.

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
17	93	37	0

Vegetation and Ecology

Vegetation in the area is dominated by climax forests of Douglas-fir, subalpine fir and western red cedar. Forest species that occupied the areas after fire include extensive stands of pole-sized western larch, lodgepole pine, and ponderosa pine. Other vegetation present is bunchgrass and forbs on the drier southern exposures and hardwood brush 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 ridgetop 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 shallow soil on rock outcrops. There are areas occupied by grasses and shrubs on the higher elevation southern exposures which may predate the continental glaciation and therefore be of prairie origin. Cold soil temperatures in the high elevation limit growth of trees in the area. Unusual plants associated with this condition include rough fescue and big sagebrush.

Plant communities present are primarily ponderosa pine-Douglas-fir/bluebunch wheatgrass, Douglas-fir/pinegrass, Douglas-fir/ninebark, Douglas-fir/huckleberry, subalpine fir/pinegrass, subalpine fir/huckleberry, subalpine fir/cascade azalea, and parklands. A unique characteristic within the Kettle Range is the common occurrence of black twinberry (*Lonicera involucrate*) in the subalpine fir/white rhododendron plant association and the absence of mock azalea (*Menziesia ferruginea*).

Generally, the priority for restoration treatments occurs within the wildland urban interface (WUI) or within the dry and mesic forest groups. Because WUI is ten percent of the PWA the prohibition on restorative treatments, if designated, is less of a concern. The concern is increased, however by recognizing that dry and mesic forest occurs on 40 percent of the WUI.

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

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.

Table 5--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	**Parkland**	7%	**Total WUI**	10%
	Cold Dry	12%	**WUI in Dry and Mesic Forest**	40%
	Cold Moist	56%		
	Mesic	2%		
	Dry	22%		
	Non-forest	1%		

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Fire

Management considerations for the area include a history of wildfire, with much of the area being burned in 1929.

Although the area has been severely burned it is not in a high fire occurrence area. The presence of large amounts of insect killed trees would increase the risk of large fire however. Since 1988, there have been two large fires. Copper Butte Fire, 1994, and Mt. Leona Fire, 2001, combined for over 20,000 acres of burned area.

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."

The high summits of the Kettle Crest support small stands of whitebark pine. Due to a combination of anthropogenic causes (introduced white pine blister rust, global warming, and fire suppression leading to high severity wildfires) coupled with predation from native mountain pine beetles, whitebark pine stands are at risk across their range. 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. 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.

An aerial survey of this PWA was completed in 2007. The Douglas-fir beetle (*Dendroctonus pseudotsugae*) outbreak that 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.

Mountain pine beetles have been active in lodgepole pine stands since about 2003. 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. When a mountain pine beetle outbreak occurs in a lodgepole pine stand, the beetles preferentially attack the largest diameter pines. Over the course of an outbreak, 85 percent or more of the large diameter trees will be killed, and progressively smaller proportions of the smaller diameter pines will also be killed. Fires that burns in lodgepole pine stands causes serotinous cones to open, regenerating new lodgepole pine stands. Most of the lodgepole pine stands in this area initiated following fire in 1929, and are reaching a susceptible age

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and size. About 20,000 acres of the PWA regenerated following wildfires in 1994 and 2001. These stands are dominated by lodgepole pine, and will be susceptible to mountain pine beetles in about 2080.

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

Armillaria root disease caused by *Armillaria ostoyae* is currently not a major cause of tree mortality in this PWA. 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 this PWA 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.

Seven percent of this PWA is comprised of a parkland forest group and is known to support stands of whitebark pine. Due to a combination of anthropogenic causes (introduced white pine blister rust, global warming, and fire suppression leading to high severity wildfires) coupled with predation from native mountain pine beetles, whitebark pine stands are at risk across their range. 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. 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.

Threatened, Endangered and Sensitive Plant Species

Three locations within the Profanity PWA have been identified as containing rare plants. Each site contained a different fern species: western moonwart (*Botrychium hesperium),* peculiar moonwort *(Botrychium paradox), and* stalked moonwort *(Botrychium pedunculosum).*

Noxious Weeds

Noxious weed inventory data is not available for this PWA. Noxious weeds, including Canada thistle and St. Johnswort occur in isolated populations.

Minerals and Soils

Soils within the area are derived from volcanic ash, loess deposits, and glacial till. They are generally coarse-textured with rapid drainage. Steeper south and west aspects have less evidence of ash deposition due to past erosion. Some glacial outwash and lake bed deposits occur adjacent to the streams. Soils generally have a moderate to severe hazard of erosion due to steepness of slope. Metamorphic gneiss, schist, and quartzite dominate the geology of the northern half of the area. Younger granite occurs in the southern portion of the area. Rock outcrops occur on many of the granitic knobs and ridges within the southern part of the area. Heavy dissection of the terrain occurs in the east side of the area. There is a

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moderate amount of water occurring on the surface at mid-elevation from high elevation percolation.

The Profanity PWA is located within the Kettle Metamorphic Core Complex, a significant structural feature where relatively deep crustal rocks have been exhumed as a result of major extensional tectonics. The south half of the area is underlain by pre-Tertiary metamorphic rocks, namely gneiss, schist, and quartzite, which have been intruded by quartz monzonite of the Tertiary Kettle Crest pluton. The north half of the area is underlain almost entirely by pre-Tertiary gneiss. In places, Pleistocene glacial deposits mantle stream valleys and upland areas.

Based on location information for historic prospects/mines and historic claim records, the area from Mt. Leona to Tonasket Mountain in T. 38 N., R. 34 E. has received considerable exploration attention, largely for uranium (Grant, 1982; Bernardi and others, 1982). Similarly, there are some historic uranium prospects just south of the area in the general vicinity of Sherman Pass. Currently (4/2008), there is only one active claim that may be within the PWA and it is located near the western boundary of the area in the SE ¼ of Section 4, T. 36 N., R. 34 E.

The majority of the Profanity PWA has a low or unknown potential for the occurrence of locatable minerals but there are several areas with a moderate to high potential as described below. The northwestern part of the area in the vicinity of Stickpin Hill, Mt. Leona, and Tonasket Mountain has a high potential for the occurrence of uranium and tungsten (Grant, 1982; Bernardi and others, 1982). Furthermore, there is a low to moderate potential for the occurrence of uranium in the southwestern part of the area south of Bracken Creek and in the northeastern part of the area north of Taylor Ridge (Grant, 1982; Bernardi and others, 1982). The far southern part of the area in the vicinity of Columbia Mountain has a low to moderate potential for gold and zinc (Grant, 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 eleven known cultural resources within the Profanity PWA. Three of the sites are associated with fire detection and are old lookout sites. The Taylor Ridge and Copper Butte lookouts have no remaining structures and are not eligible for the National Register of Historic Places. Columbia Mountain Lookout cabin is eligible to the National Register and is in need of preservation and protection. The remainder of the sites in this area is associated with historic mining, homesteading, or transportation (the Boulder-Ryan trail). One other site of note is the Midget Civilian Conservation Corps camp remains, which was a depression-era spike camp associated with the Civilian Conservation Corps. 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.

With the exception of the Columbia Mountain Lookout cabin, historic properties in this area would either be enhanced or not affected by wilderness designation. Wilderness designation could have a degrading effect on the Columbia Mountain Lookout cabin by making restoration and preservation for this site more difficult.

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Land Uses and Special Uses

Grazing allotments are managed through term grazing permits. There is an existing powerline easement on the south end of the area to Bonneville Power Administration.

The Forest Service maintains a radio repeater facility on the top of Mt. Leona. Wilderness designation would require a re evaluation of whether this facility is necessary for the administration of wilderness

Private Lands

There are no private lands immediately adjacent to the PWA. The surrounding terrain would buffer activities occurring on private land from users.

NEED FOR WILDERNESS

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

The Profanity PWA is approximately 70 air miles west of the 41,335 acre Salmo-Priest Wilderness on the Colville National Forest, 95 air miles east of the 529,477 acre Pasayten Wilderness, and 90 air miles northeast of the 151,435 acre Lake Chelan-Sawtooth Wilderness. The drive time from Spokane to the Salmo-Priest Wilderness is approximately two hours, about the same as the Profanity PWA. The drive time from the Puget Sound area to the Profanity PWA is about seven hours; many wildernesses are much closer to this urban population.

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. The area is relatively accessible, the area offers high quality destinations that would attract wilderness users, and there are interconnected trail systems that facilitate both day trips and overnight use.

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

Recreation use in this area is light, most of it occurring along the Kettle Crest Trail. Much of the use is from northeastern Washington residents, including the Spokane averages. Seattle, an eight-hour driving distance 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.

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

There are nine other PWAs within 15 miles of the Profanity PWA (Bald-Snow, Cougar Mountain, Deer Creek, Hoodoo, Jackknife, Owl Mountain, South Huckleberry, Thirteenmile, and Twin Sisters) that encompass an additional 101,035 acres. This acreage, in combination with other PWAs and designated wilderness, totals approximately 226,000 acres. The only designated wilderness within the Colville National Forest is the Salmo-Priest.

Mountain Biking, riding off-highway vehicles (OHVs) and snowmobiles has increased in popularity and demand on the national forests. Demand for primitive and semi-primitive recreation opportunities outside of designated wilderness is growing for these users, as these opportunities are restricted in designated wilderness areas. With declining trail maintenance, horse riders have become more dependent on trails outside of wilderness that can be maintained more easily with chainsaws, and where there is no party size limitation.

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 or the need for a protected area for other unique scientific value or phenomena

Wildlife

The PWA provides habitat for Canada lynx and wolverine, as well as a very small amount of habitat for American marten. The wildlife sustainability index is 46.5 (a high relative ranking) and the habitat connectivity index is 33.2 (also a high relative ranking).

Fish

This habitat is not considered essential to the recovery of the bull trout due to unnatural and natural blockages of this species to many of the watersheds within the PWA. However, some of the habitat within 6th field HUCS partially covered by the PWA, is important to the continued sustainability of other aquatic focal species such as the westslope cutthroat and the interior redband trout. These watersheds are Deadman Creek, Sherman Creek and the South Fork of the Sanpoil River. As a result of this analysis, the lack of natural access to much of this PWA for bull trout is offset by the importance to maintain habitat and water quality in habitat supporting interior redband and westslope cutthroat trout. The poor to fair habitat conditions indicates that this PWA should be considered a moderate priority for wilderness classification.

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Table 6--South Fork of Boulder 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	0.5	<1	-1.00	-0.30	3
Westslope cutthroat trout	0	0	-1.00	-0.30	3
Interior redband trout	0	0	-1.00	-0.30	3
Pygmy whitefish	0	0	-1.00	-0.30	3

Table 7--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 8--South Fork 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	-1.00	3
Westslope cutthroat trout	0	0	-1.00	-1.00	3
Interior redband trout	0	0	-1.00	-1.00	3
Pygmy whitefish	0	0	-1.00	-1.00	3

Table 9--North Fork Sanpoil River 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	-0.30	3

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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 also ranked as high 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 high priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landform types and ecosystems

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 9 percent (approximately 3,490 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 low for the portion of this area with underrepresented cover types, but 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 finer scale cover types represented in this PWA include a representative amount of cottonwood and abundant stands of aspen.

In particular, the alpine meadow cover type, which comprises approximately 1,200 acres in this PWA, the forb lands, which comprise approximately 1,500 acres, and the abundant aspen stands would make a significant contribution within the eastern Washington planning area.

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