

# WILDERNESS EVALUATION

## JACKSON CREEK - 608001

**11,063 acres**

8,049 Acres (Okanogan Wenatchee National Forest)

3,014 Acres (Colville National Forest)

## OVERVIEW

### History

The Jackson Creek Potential Wilderness Area (PWA) was originally inventoried as roadless during RARE I. In 1972, a timber sale reduced the size of the area by approximately 1,800 acres. The 1979 RARE II process did not recommend the area for wilderness designation. Since 1979, approximately 2,900 acres have been impacted by roads and logging.

The 2006 inventory removed approximately 201 acres from previous inventory due to road construction and logging; 456 acres were added to the previous inventory as they meet the criteria for a potential wilderness area as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the land and resource management plan allocations for the 2006 potential wilderness area.

**Table 1--Management area percentages (rounded)**

Colville National Forest					Okanogan N.F.	
MA1 Old Growth Dependent Species Habitat	MA5 Scenic Timber	MA6 Scenic /Winter Range	MA7 Wood/ Forage	MA8 Winter Range	MA25 Timber/ Range	MA26 Deer Winter Range
6%	2%	6%	1%	13%	33%	40%

### Location and Access

The area is located northeast of Tonasket in the northeast and northwest corners of the Okanogan and Colville National Forests, respectively. Portions of T. 40 N., R. 31 and 32 E., W.M, Okanogan and Ferry County are incorporated. From Tonasket, access is provided over State Highway 20, County Road 9495 and National Forest System road #3575 near Nicholson Creek. From Republic, access is provided by State Highway 21 and Ferry County Roads 501 and 502. There are no National Forest System trails within the area.

## **Geography and Topography**

Topography ranges from moderate slopes in the upper Cedar Creek drainage to rugged in the Jackson and Little Jackson Creek drainages and the Kettle River Breaks. About 75 percent of the area drains north into Myers Creek, which is a tributary to the Kettle River. Elevations range from approximately 2,000 to 4,300 feet at Graphite Mountain.

## **Current Uses**

The area is mostly used by hunters, particularly during the fall mule deer general rifle season. Firewood cutters use the areas adjacent to the few roads in the area. The entire area is grazed under livestock permits. Due to the proximity of the PWA to Canada, the area is heavily patrolled by the U.S. Border Patrol, both on the ground and from the air.

## **Appearance and Surroundings**

The area is very typical of forested lands within the Okanogan Highlands. Mixed-conifer timber stands dominate most sites within the PWA. Due to the adjacent Canadian border, there is a 40-foot cleared swath on the northern edge of the potential wilderness area. Several old un-maintained shake mill roads access the area from Canada.

## **Key Attractions**

There are no key attractions within the Jackson Creek PWA. The area is used primarily for livestock grazing and hunting.

## **CAPABILITY FOR WILDERNESS**

### **Level of Natural and Undeveloped Environment**

The most substantial impacts upon the natural integrity and appearance of the area include several drift fences, livestock driveways, old roads and shacks, and declining forest health attributable to fire exclusion and overstocked stand conditions. The old road grades extend from Canada, located along Cedar and Jackson Creeks, and remains of an old mill and cabins utilized in past logging operations are visible. Several of the ridgetops also contain old roadbeds used for mineral exploration activities up until the 1950s. The roadbeds are nearly obscured, and the mill site and cabins have deteriorated to the point they are no longer obtrusive signs of human use.

There has been substantial firewood cutting along immediately adjacent system roads #3575, #3575-040 and #3575-200.

The majority of the mining claims are located in the eastern portion of the potential wilderness area.

A swath of forest--perhaps 40 feet wide--has been cleared all along the north edge of the potential wilderness area to monument the international boundary between the United States and Canada.

Some vegetation diversity exists. Topography is not greatly different from surrounding areas.

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.

There are no known non-native plants or animal species, but the area has not been surveyed.

The Jackson Creek PWA is minimally impaired by light pollution. 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**

There is some opportunity for a sense of solitude and isolation in the interior portions of this potential wilderness area. In most areas, the area is no wider than about 3 ½ to 4 miles between private land and roads. For the most part, Jackson Creek PWA is surrounded by forested lands. The landscape transitions to farm lands and harvested forest lands north of the border. Timber management in the PWA ended more than 60 years ago, so the forest appears fairly natural and unmodified by humans. The notable exceptions are the firewood cutting areas adjacent to perimeter roads and the remaining signs of the old tie cutting operations. The livestock grazing activities are obvious during the months of June through September, and the permittees maintain a number of stock driveways that also serve well for non-system hiking and horseback riding trails.

The area is not particularly isolated, as most sites can be reached in less than one day and are no farther than two miles from existing roads, private lands, or harvested areas in Canada. The area provides some opportunities for solitude, though they are not outstanding. The area's relatively small size (i.e. 11,064 acres) and gentle, open south slopes, along with the nearby roads and private land, limit the opportunities for quality solitude and challenge. These same factors also limit the opportunity for primitive recreation. Easy access is provided by the old roads and stock driveways. There is a seasonal restriction on motorized vehicles (all-terrain vehicles and motor bikes) from December through March.

### **Special Features**

The *Cultural Resource Overview of the Tonasket Planning Unit* (Uebelacker, 1976) identified evidence of past tie logging activity and the remnants of a former mill site, tie cutters' cabins and road grades. Evidence of the trail used to smuggle alcohol between the United States and Canada during the prohibition era was also identified.

### **Manageability of Boundaries**

The location, size, and boundaries of Jackson PWA, and the fact that it is surrounded by major roads and private land, would make management as wilderness difficult. The most identifiable topographic features are Graphite Mountain and the ridges running roughly southwest to northeast. Placing boundaries on those features would greatly reduce the size

of the area and further reduce its capability for wilderness. The international boundary along the Canadian border is frequently patrolled by the U.S. Border Patrol, both on the ground and by air. The area's proximity to Canada and National Forest System roads to the south and west has made it attractive to drug runners and illegal immigrants. Due to homeland security concerns, those motorized patrols would continue.

## AVAILABILITY FOR WILDERNESS

### Recreation

There are no system trails in the area. Some old tie logging roads and stock driveways are used as trails and are partially maintained by range permittees, hunters and the occasional hiker. Present recreation use levels are low. Current users are mostly hunters, horseback riders, and firewood cutters.

**Table 2--Miles of recreation trails**

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	0	0

### Wildlife

Most of the area is winter range, where mule deer tend to concentrate during most winters. Approximately 1,500 to 2,000 acres of mixed-conifer old growth exists, providing some of the most productive habitat types for wildlife. High snag levels provide excellent habitat for many cavity-dwelling animals. Northern goshawk (a state sensitive list species) has been reported in the area. At least one ridge provides winter habitat for blue grouse. Numerous other wildlife species common to the national forest inhabit the area. Through consultation and site visits with U.S. Fish and Wildlife Service personnel, the Forest Service has determined that suitable habitat for Canada lynx is not present in the Jackson PWA. This potential wilderness area lies approximately 35 miles to the east of the North Cascades Grizzly Bear Recovery Zone and approximately 65 miles to the west of the Selkirk Grizzly Bear Recovery Zone. It is also possible that the area would be used by wolves, at least temporarily, despite its small size. The area provides habitat for wide-ranging carnivores, even if it is only used as a linkage between larger, contiguous blocks of better-suited habitat.

The PWAs provide varying levels of habitat for focal wildlife species. To help evaluate the habitat 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 this particular PWA.

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

Wildlife Species	Acres of Habitat	Habitat Priority Ranking (1=high, 2=mod., 3=low)	%Total Forest Habitat in Evaluation Area
American marten	354	3	<1
Wolverine	6,335	3	<1

## Water and Fish

Several small streams drain the area. Cedar, West Fork Cedar, and Little Jackson Creeks all have Class 3 perennial segments, though no fish have been found in them. Jackson Creek is a Class 4 intermittent stream. All these stream drain northeast and eventually into the Kettle River in Canada. No fish have been found in the area.

There are no agreements regarding minimum stream flow of Cedar or Jackson Creeks into Canada. Currently, no water right claims are listed with the Washington State Department of Ecology.

Water is of high quality; however, there may be localized disturbances due to grazing. There are no known limitations for potential water uses in the area. Water yield in the area is estimated at less than 1000 acre-feet/year. Much of this flow occurs during the spring runoff. During extreme dry periods, Jackson Creek may not flow. Potential for increasing stream flow from vegetative manipulation is low.

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

## Range

The Cedar Cattle and Horse Allotment is grazed by about 500 head of cattle for about 3,000 animal unit months under a deferred rotation management system. The Colville National Forest portion of the area is within the Graphite Cattle and Horse Allotment. Approximately 16 percent of the land within this allotment is unsuited for grazing. This allotment is grazed under a season-long management system.

**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
15	100	26	0

## Vegetation and Ecology

The north draining portion of the area is generally covered with trees, except where rock outcrops occur. Principal tree species are Douglas-fir, western larch, and ponderosa pine. Lodgepole pine, subalpine fir, and Engelmann spruce are also found in much smaller numbers. Very limited patches of western red cedar trees occur, particularly adjacent to the West Fork of Cedar Creek. South draining areas have many open grass slopes, with tree stringers in draws and on north slopes. Vegetation diversity is greater than for the

remaining eastern portion of the Okanogan-Wenatchee National Forest, especially in the rockier upper portions of north-facing drainages.

Due to the proximity of Canada and private lands, this potential wilderness area all falls within the wildland urban interface (WUI), as mapped by the Okanogan-Wenatchee National Forest. The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects in the WUI. The HFRA prohibits authorized projects in wilderness areas.

Generally, the priority for restoration treatments occurs within the WUI or within the dry, mesic forest groups. Because WUI represents over one-half of the potential wilderness area, the prohibition on restorative treatments is a concern. The concern is increased by recognizing that dry forest represents over 80 percent of the acreage of the area.

### ***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<sup>3</sup>/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 (< 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	2%	Total WUI
Cold Dry		0%	WUI in Dry and Mesic Forest	81%
Cold Moist		16%		
Mesic		0%		
Dry		81%		
Non-forest		2%		

### ***Fire***

The area has experienced one of the highest fire occurrence rates on the national forest since 1945. Since that time there have been 35 lightning and 3 human-caused fire starts within the potential wilderness area. The primary factors associated with this high rate are the predominance of annual grass fuel types associated with dry site stands of Douglas-fir and ponderosa pine. Application and use of unplanned ignitions (i.e. lightning and human-caused) to accomplish other resource objectives is not permitted under the current management direction. Years of fire exclusion have contributed to dense stand conditions. Accumulations of fuel above historic levels, along with the overstocking, are increasing fire hazard within the potential wilderness 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.”

An aerial survey of this PWA was completed in 2007. Douglas-fir beetle was the only damaging agent detected in the Jackson Creek PWA. Douglas-fir beetles commonly breed in blowdown Douglas-fir or in Douglas-firs that have been severely stressed by root disease, fire, heavy or repeated defoliation, or other damage. If substantial quantities of this breeding material are available the beetle population may build up to damaging levels, attacking and killing large, healthy Douglas-firs. Usually trees are killed in groups of five to 20, but group kills can become much larger during outbreaks. Removing Douglas-fir blowdown where possible can reduce tree-killing by these beetles. In 1997, Douglas-fir beetles built up high populations in Douglas-firs that were damaged during a winter storm which affected the Idaho Panhandle, the Colville National Forest, and the northeastern portion of the Okanogan National Forest. Many Douglas-firs were killed by beetles in 1998 and in subsequent years. The Douglas-fir beetle population is still high in some parts of the affected area. In 2007, eighteen pockets of Douglas-fir beetle activity were mapped, ranging in size from two to twenty-four acres.

### ***Threatened, Endangered, and Sensitive Plant Species***

Sensitive plant species, *Talinum sediforme* (Okanogan fame flower) and *Platanthera obtusata* (Small northern bog orchid) have been found within the potential wilderness area.

### ***Noxious Weeds***

Within the vicinity of the Jackson PWA are found diffuse knapweed, common houndstongue, sulphur cinquefoil, orange and yellow hawkweed and musk thistle. Noxious weed inventories of the actual potential wilderness area have not been completed. All known sites outside the PWA have been inventoried. Those populations would continue to be treated and annually monitored.

### **Minerals and Soils**

Soils are derived primarily from glacial till. Areas of coarse textured soils may be intermixed with areas of fine textured lacustrine soils. These soils generally have high infiltration rates. Coarse textured soils have low to moderate erosion hazards and are considered generally stable for management activities. Fine textured soils have a high mass erosion hazard when undercut.

The Jackson Creek PWA is primarily underlain by Eocene volcanic rocks. Historic prospecting and exploration has been focused in the far eastern and western parts of the area as indicated by historic mining claim records. There are no known mines or prospects of significance located within the PWA. Approximately 500 acres of the area east of Graphite Mountain, on the Colville National Forest, have a high potential for exploration and development of gold (Grant, 1982). The remainder of the area has a low to moderate potential for the occurrence of gold, silver, and/or tungsten (Grant, 1982). At present (6/2008), large claim blocks encumber lands in the western part of the area in T. 40 N., R. 31 E., Sections 4, 5, 8, 9, and 16.

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**

The *Cultural Resource Overview of the Tonasket Planning Unit* (Uebelacker, 1976) identified evidence of past tie logging activity and the remnants of a former mill site, tie cutters' cabins and road grades. Evidence of the trail used to smuggle alcohol between the United States and Canada during the prohibition era was also identified.

### **Land Uses and Special Uses**

The area is regularly patrolled by the U.S. Border Patrol on the ground and in the air. Numerous illegal crossings have occurred in the Cedar and Jackson Creek areas. Range allotments are managed under term grazing permit.

### **Private Lands**

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

## **NEED FOR WILDERNESS**

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

There are three wilderness areas in the general vicinity. Jackson PWA is approximately 80 air miles west of the 41,335 acre Salmo-Priest Wilderness on the Colville National Forest, 50 air miles east of the 529,477-acre Pasayten Wilderness and 100 air miles northeast of the 151,435-acre Lake Chelan-Sawtooth Wilderness. Driving time to the Jackson Creek PWA is about five hours from the Spokane area and seven hours from the Puget Sound area.

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

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as moderate. The Jackson Creek PWA is in the Okanogan Highlands landform, which is underrepresented in wilderness. The lack of system trails and the limited public access limits recreational use of this area.

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

Overall, there is a continuous, slight increase in the number of people visiting wilderness areas. The user groups showing the most increase are day-hikers in the Pasayten and Lake Chelan-Sawtooth Wildernesses and day horse users in the Lake Chelan-Sawtooth Wilderness. There also appears to be a slight increase in off trail travel to specific destinations within these wilderness areas. There is also a trend to shorter multiple-day trips.

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

The Colville and Okanogan-Wenatchee National Forests provide large backcountry areas (that are not designated wilderness) within 100 miles of the Jackson Creek PWA that provide opportunities for unconfined outdoor recreation. These areas include the PWAs of the Kettle Mountain Range, the Long Swamp and Tiffany PWAs, and the Abercrombie-Hooknose PWA. These areas afford both motorized and non-motorized opportunities.

**The need to provide a sanctuary for 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 area provides habitat for wolverine and American marten. The area is too small to provide quality habitat for Canada lynx or wide-ranging carnivores on a long-term basis, although it may provide some temporary security habitat in an otherwise roaded landscape and provide habitat for animals to move through between larger blocks of primitive areas.

***Fish***

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

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

***Rare Plant Species***

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as moderate 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 high priority for preserving rare plant refugia with a wilderness designation.

### **Ability to provide for preservation of identifiable landform types and ecosystems:**

Jackson PWA is typical of landforms and ecosystems found throughout the Okanogan Highlands and Pasayten Wilderness. Wilderness lands are under-represented in the Okanogan Highlands Ecoregion as classified using Bailey's Ecoregion Classification system.

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 29 percent of the vegetative cover of this PWA (approximately 3,170 acres). These types include forb lands, non-alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as high for the portion of this area with underrepresented cover types, and also as high for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types well-represented in this PWA include quaking aspen stands. In addition, sparse amounts of cottonwood are represented in the PWA.

In particular, forb land, ponderosa pine, and quaking aspen cover types would make a significant contribution within the eastern Washington planning area.