

WILDERNESS EVALUATION

Twin Lakes - 617050

21,347 acres

OVERVIEW

History

This area has a history of unroaded and dispersed recreation. It was first studied under RARE II as part of Unit C6031 and was not recommended for wilderness at that time. Further consideration was given during preparation of the Washington State Wilderness Act of 1984 under which 5,661 acres of the inventoried roadless area, including Twin Lakes, were made a part of the Glacier Peak Wilderness.

The 2006 inventory removed approximately 1,786 acres from previous inventory due to nonconforming uses such as road construction and installation of permanent structures; 639 acres were added to the previous inventory as they met the criteria for a potential wilderness area (PWA) as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. Under the Northwest Forest Plan, the southwest portion of this area is primarily administratively withdrawn, with small portions of managed late-successional reserve, late-successional reserve, and matrix. The northeast portion of the area is primarily in the Chiwawa late-successional reserve, with small portions of administratively withdrawn, and matrix.

The following chart depicts the 1990 Wenatchee National Forest Land and Resource Management Plan direction for the 2006 potential wilderness area.

Table 1--Management area percentages (rounded)

Wenatchee National Forest					
GF	RE3	ST1	ST2	WS1	WS2
7%	66%	6%	13%	3%	5%

Location and Access

This area is located adjacent to the Glacier Peak Wilderness in Chelan County on the Wenatchee River Ranger District. It exists in two parts; the northeastern and southwestern portions are separated by the Twin Lakes additions to the Glacier Peak Wilderness. For the northeastern portion road access routes are the Chiwawa, Brushy Creek and Meadow Creek road systems, and trail access routes include the Schaefer Lake and Raging Creek Trails. The Raging Creek Trail is not currently maintained, is no longer accessible by road, and is difficult to find. For the southwestern portion, road access is from the White River Road, and trail access routes include the White River, and Twin Lakes Trails.

Geography and Topography

The Twin Lakes Potential Wilderness Area (PWA) lies along the northeastern edge of the White River and the southwestern edge of the Chiwawa River. Elevations range from 2,500 to 6,900 feet. The land types associated with this area are glacial troughs and scoured glacial troughs. Bedrock underlying this area primarily includes the metamorphosed Ten Peak pluton on the northwest end, biotite schist of the Chiwaukum Formation in the Twin Lakes area, and the metamorphosed Dirty Face pluton on the upper slopes of Dirtyface Mountain to the southeast. The far eastern edge of the roadless area includes Chumstick Formation non-marine sediments. Larger stream bottoms are filled with alluvium and reworked glacial outwash. Due to the proximity to Glacier Peak, some of the soils have formed in volcanic ash and pumice but most of the soils in this area have developed in granitic and glacial residuum.

Precipitation averages between 50 and 80 inches per year with the majority falling as snow.

Current Uses

The current primary use is dispersed recreation. The hiking is the most common activity; the area is also visited by stock users, hunters, and anglers. There are 7.5 miles of trail within the area including portions of the Twin Lakes Trail, Schaefer Lake Trail, White River Trail, and the Raging Creek Trail. All of these trails are closed to motorized use. Other than the trail corridors, most of the area receives very little use due to steep rugged topography. Local residents do some off trail scrambling in the area.

Appearance and Surroundings

The area has a high visual variety of landforms and rock forms, and a moderate to high variety of vegetation. It also contains numerous small creeks. Approximately one-half of the area is on a north-facing slope of the glaciated Chiwawa River Valley. The area has highly textured vegetation on steep slopes intermingled with cliffy rock forms. Approximately 15 small drainages bisect the area. The other half of the area is the south-facing slope of the glaciated White River Valley. The upper slopes have steep sides, avalanche paths, a variety of vegetative patterns, and ridge tops that are open and rugged.

Landforms include Dirtyface Peak, McCall Mountain, Crook Mountain, Chiwawa Ridge, and the White Mountains. The Twin Lakes Roadless Area is surrounded by the Glacier Peak Wilderness, the Chiwawa River drainage, and the White River drainage.

Almost the entire area has a very natural appearance. The rugged area north of the Lake Wenatchee Highway and White River Road is the primary viewshed from the south shore of Lake Wenatchee. The area south of the Chiwawa River is the viewshed from the Chiwawa River Road.

Key Attractions

Scenic features include McCall Mountain, Chiwawa Ridge, Dirtyface Peak, Crook Mountain, Raging Creek, and Schaefer Creek. Primary use is of the trails which access the Glacier Peak Wilderness; White River, Schaefer, and Twin Lakes.

WILDERNESS CAPABILITY

Level of Natural and Undeveloped Environment

Some evidence of the impacts of past human activity is visible within the area. Portions of the White River Trail and Twin Lakes Trail are in the southwestern half, and about four miles and one half miles of the Schaefer Lake Trail and two miles of the Raging Creek Trail are in the northeastern half. The Twin Lakes Trail, White River Trail, and the Schaefer Lake Trail access the Glacier Peak Wilderness.

There are no known noxious weeds species within the PWA, but noxious weeds are established on roads that access the area. Non-indigenous fish species are in the outlet streams of lakes located in wilderness.

There are no water developments within the PWA.

The Twin Lakes PWA is partially impaired by light pollution from the Lake Wenatchee area. The northern portion of the PWA (29 percent of the PWA) rates a Class 2 on the Bortle Scale, whereas the southern portion (71 percent of the PWA) rates as a Class 3. A Class 2 Typical Truly Dark Sky represents the darkest skies viewed in the continental United States. The summer Milky Way is highly structured to the unaided eye. Any clouds in the sky are visible only as dark holes or voids in the starry background. No light domes from population centers are visible. A Class 3 Rural Sky has some indication of light pollution on the horizon. Clouds may appear faintly illuminated in the brightest parts of the sky near the horizon, but are dark overhead. The Milky Way still appears complex. Light domes from population centers may appear on the horizon (10-15 degrees above horizon). Visual observing is still relatively unimpaired. Time lapse photography could be impaired by light pollution.

Water quality data is not available for most of the PWA, however due to the relatively low level of disturbance water quality is assumed to be high. Portions of the Chiwawa River and White River are classified by the Washington State Department of Ecology as Category 1, which means the segments met tested standards.

Level of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

The Twin Lakes Trail is used by day hikers and receives high use. The White River and Schaefer Lake Trails receive moderate levels of use. Some hiking challenges are provided by steep trail grades and by trail switchbacks.

The trailless portions of the area offer outstanding opportunities for solitude and challenging cross-country travel. The southwestern half of the area is very narrow but there are some areas where a visitor could be free from the sights and sounds of human activity. The northeastern half is large enough and has several drainage basins where a visitor could feel separated from human developments.

Special Features

This area provides dramatic topography and alpine summits as viewed from Lake Wenatchee, the White River, and the Chiwawa. Scenic features include McCall Mountain, Chiwawa Ridge, Dirtyface Peak, Crook Mountain, Raging Creek, and Schaefer Creek.

The northeastern portion of the area abuts the Chiwawa River, which supports anadromous fish species including sockeye and Chinook salmon as well as bull trout. The lower Napeequa River also supports sockeye and Chinook salmon, and bull trout. Steelhead may also use the lower Napeequa River for rearing and possibly spawning.

The area has a moderate potential for the occurrence of archaeological resources. The backcountry between McCall and Crook Mountains was traditional huckleberry picking country. American Indian families camped there for two to three weeks each year to collect and dry huckleberries and undertake small hunting expeditions. Access was by way of a trail up Raging Creek. A portion of this historic trail still exists but it is no longer maintained. The upper Raging Creek area was also the scene of a reported encounter in 1858 between the Wenatchee Indians and the United States militia.

This area also borders an area along the White River that was used both as an Indian fishery and as a spirit quest site. Because of this history, it is possible that there is a special spiritual link between the lands within the Twin Lakes PWA and the present day Wenatchee people of the Colville and Yakama Indian Reservations.

The Twin Lakes PWA includes one sensitive plant species, Seely's catchfly (*Silene seelyi*), which is an endemic species.

Manageability of Boundaries

The area is divided into two parts which are split by a road corridor and a finger of the Glacier Peak Wilderness. The northeastern half is about twice the size of the southwestern half. Both halves are bounded on two sides by the Glacier Peak Wilderness and surrounded by roads on all other sides. About half the boundary follows the Chiwawa River or White River Road. This portion would be easy to identify and would be an asset to managing wildland fire use. The remaining half of the boundary is mid-slope and follows a combination of private property boundaries, harvest unit boundaries, logging roads, and section lines. These portions would be harder to locate and manage. Motorized snowmobile incursions would be likely in the vicinity of Grasshopper Meadows.

AVAILABILITY FOR WILDERNESS

Recreation

The area has value for unroaded non-motorized types of recreation activities. All of the trails within this PWA enter wilderness after a short distance, and most of these trails receive high levels of use from hikers. Wilderness designation would preserve the primitive recreation opportunity on these trails, however the potential for increased publicity of the area may add to existing crowding of the Henry M. Jackson Wilderness.

The White River and Schaefer Lake Trails are open to hiker and stock use. The Twin Lakes Trail is open to hiker use, and also receives regular winter use from snowshoers and skiers. The Twin Lakes trail currently receives high use levels. The PWA adjoins the Tall Timber Ranch organizational camp, which makes ancillary use of the area for camp activities.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	7.5	0

Wilderness designation would make enforcing wilderness regulations easier in those areas where the trails currently begin in the potential wilderness area then enter wilderness. This is especially true for the Schaefer Lake Trail, where the wilderness boundary is currently just before the lake.

A trade-off is that the first half mile of the Twin Lakes Trail accesses a viewpoint often used as a short hike by large groups visiting Tall Timber Ranch. Inclusion in wilderness would likely result in a group size limit, thus displacing these larger groups.

The Wenatchee River Valley attracts tourism. For the central Puget Sound region, Chelan and Kittitas Counties are the first stop on the dry eastside. Leavenworth, a Bavarian theme town, has successfully promoted tourism since the 1960s. The wide variety of available outdoor activities has long provided a strong tourism draw and areas of concentrated car camping in the Icicle and at Lake Wenatchee. In recent years the town has promoted the proximity to high quality outdoor recreation experiences as a reason to visit Leavenworth and the Lake Wenatchee areas. PWA-based outdoor activities most commonly promoted include hiking, mountain biking, rafting, rock climbing, and bird watching. Tourism brochures and the chamber of commerce website are not directly marketing this PWA. Use of this PWA is most strongly associated with the Lake Wenatchee area where a number of small businesses cater directly to tourists.

Wildlife

In addition to deer, black bear, and other wildlife species, the area has mountain goats along Chiwawa Ridge, on McCall Mountain, and Dirtyface Peak. This area is summer range for a portion of the Oklahoma Gulch deer herd.

The area contains habitat for federally listed Canada lynx, gray wolf, grizzly bear, and northern spotted owl. The Canada lynx, gray wolf, and grizzly bear use a variety of successional stages across the landscape as their habitat, while the spotted owl primarily uses late-successional forests. Portions of the PWA are inside designated critical habitat for the northern spotted owl, as well as late-successional reserves allocated by the Northwest Forest Plan (NWFP). The overlap between critical habitat units (CHU) and LSR is approximately 70 percent on the Okanogan-Wenatchee National Forest. Providing connectivity among spotted owl populations may be the most important ongoing function of critical habitat, especially in areas where the risk of habitat loss from wildland fire is high. To maintain old-growth/late-successional habitat structure, recommendations from the LSR Assessments include suppressing wildfire at minimum acreage, while wilderness goals would be to mimic natural processes and allow wildfire to burn.

Each PWA provides varying levels of habitat for focal wildlife species. To help evaluate the habitat this area provides, the following information was provided: the focal species emphasized in the area, 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 Habitat	Habitat Priority Ranking (1=high, 2=mod, 3=low)	%Total Forest Habitat In Evaluation Area
Grizzly bear	22,868	2	2
Canada lynx	56	2	<1
Wolverine	11,946	1	1
American marten	3,535	2	1

A key issue relative to the sustainability of wildlife habitats is the identification of the amount of dry forest that is in a late-successional habitat area (LSHA). LSHAs that occur in dry forests can be at high risk of high severity wildfire, and insects and disease that reduce the sustainability of the late-successional habitats. Active management, such as prescribed fire and thinning, may be needed to restore these habitats and enhance their sustainability.

Table 4--Acres of dry forest habitats that are present within the evaluation area and also within a Late Successional Habitat Area

Late Successional Habitat Area	Acres of Dry Forest
Chiwawa	Approx. 2,000

Water and Fish

The Twin Lakes PWA occurs in six different subwatersheds (6th field Hydrologic Unit Code): 12,735 acres (31 percent) of the 41,214 acre middle Chiwawa; 3,060 acres (6 percent) of the 46,305-acre lower Chiwawa subwatershed; 2,456 acres (4 percent) of the 58,773 acre upper White River subwatershed; 417 acres (2 percent) of the 25,875-acre Napeequa subwatershed, 3,188 acres (21 percent) of the 15,321 acre lower White River; and 1,017 acres (10 percent) of the 10,261 Lake Wenatchee subwatershed. In these six subwatersheds, the U.S. Forest Service manages the following percentages: middle Chiwawa River (more than 99 percent); lower Chiwawa (92 percent); upper White River (more than 99 percent); Napeequa (98 percent); lower White River (87 percent); and Lake Wenatchee (60 percent). All of these subwatersheds drain into the Wenatchee River subbasin (4th HUC).

Stream reach conditions in the middle Chiwawa that respond to natural and human-caused disturbances were evaluated as good because collected stream data values in middle Chiwawa were similar to expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were somewhat reduced from expected natural forest conditions; analyzed road effects were moderate. Vegetation condition and road effects considered cumulatively were rated fair. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, middle Chiwawa was rated good.

Stream reach conditions in the upper White and Napeequa subwatersheds that respond to natural and human-caused disturbances were evaluated as fair because collected stream

data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions match expected natural forest conditions; analyzed road effects were low. Vegetation condition and road effects considered cumulatively were rated good. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, upper White and Napeequa subwatersheds were rated fair.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, some vegetation condition has changed from expected condition and road density is moderate for lower White subwatershed. Considering changes in vegetation and road density in combination, this subwatershed was rated fair. Stream reach data has not been collected in sufficient quantity for analysis; therefore, watershed condition has not been evaluated.

Stream reach conditions in the lower Chiwawa River subwatershed that respond to natural and human-caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were altered from expected natural forest conditions; analyzed road effects were substantial. Vegetation condition and road effects considered cumulatively were rated poor. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, this subwatershed was rated fair.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, vegetation condition has changed from expected condition and analyzed road effects are substantial in the Lake Wenatchee subwatershed. Considering changes in vegetation and road density in combination, this subwatershed was rated poor. Stream reach data has not been collected in sufficient quantity for analysis; therefore watershed condition has not been evaluated.

Habitat supporting listed spring Chinook, steelhead, and bull trout in the Wenatchee subbasin, located downstream of the proposed of Twin Lakes PWA, was designated as critical habitat by the National Marine Fisheries Service in January 2006.

This area includes many small streams that flow into either the Chiwawa or White Rivers. The largest tributary to the White River, the Napeequa, bisects the Twin Lakes PWA. Sockeye, Chinook salmon (federally listed as endangered), and bull trout (federally listed as threatened) all are known to spawn in the lower river. Steelhead, listed as a federally threatened species, may also use the lower Napeequa River for rearing and possibly spawning.

Schaefer Creek drains Schaefer Lake, which has been stocked in prior years by the Washington Department of Fish and Wildlife. Introduced eastern brook trout and native westslope cutthroat occur in Schaefer Creek. Raging Creek has a population of westslope cutthroat trout, and possibly rainbow trout.

The Twin Lakes PWA has a water source protection area totaling 6,864 acres that contributes to a community water system for the Cashmere Water Department.

Range

A portion of this area, located in the Chiwawa River drainage, is within the Lower and Upper Chiwawa Recreation Stock Allotments (recreation stock allotments are not depicted in Table 3, as they are annual approvals for recreation purposes and do not fall under the commercial cattle and sheep grazing permits). Historical range resource inventory maps do not show any forage vegetative types in this potential wilderness area. The dense timber vegetation, in addition to very steep topography, severely limits the potential for either recreation or domestic stock use even with vegetative manipulation. There are no range improvements.

Table 3--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
1	0	4	0

Vegetation and Ecology

Most of the suitable areas for timber harvest are located on north slopes except along the Chiwawa River. Most areas are classified as moist forest with an infrequent, high-severity fire regime. Douglas-fir is the major species. Western white pine, Engelmann spruce, western red cedar, western hemlock and Pacific silver fir are also present especially along the Chiwawa River.

The only low elevation non-forested areas are the open, rocky, south aspect along Big Meadow Creek and the smaller, steep, open, sandstone south-facing area north of Raging Creek.

Lodgepole pine has gradually encroached upon the open huckleberry fields near McCall Mountain, once important berry gathering areas for American Indians.

Wilderness designation would preclude fuel reduction where national forest lands adjoin private lands in the wildland urban interface (WUI).

Options to utilize mechanical treatments to manage vegetation would be precluded if designated wilderness. Generally, the priority for restoration treatments occurs within the WUI or within the dry, mesic forest groups. Because WUI represents nearly two thirds of the PWA, the prohibition on restorative treatments is a concern. The concern is decreased, however by recognizing that dry and mesic forest occupies just over one tenth of the area.

However, there may be a need to provide treatments in small portions of the WUI.

The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects in the WUI. The 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 ft³/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (<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 4--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
	0%	Parkland	16%	Total WUI
Cold Dry		1%	WUI in Dry and Mesic Forest	22%
Cold Moist		60%		
Mesic		7%		
Dry		4%		
Non-forest		12%		

Fire

Annual fire occurrence is moderate with most started by lightning. The vegetation type is mostly moist forest types with Douglas-fir, western white pine, Engelmann spruce, western red cedar, western hemlock and Pacific silver fir. Lodgepole pine stands are also developing here in former brush fields. Primary fire regime is one of 35-100+ year frequency, stand replacement type. Condition Classes II and III predominate. Higher elevations experience a longer fire interval (+200 years, stand replacement type) and are in Condition Classes I and II. A portion of the area in the northeastern part of the PWA is a mixed severity fire regime (35 to 100-year frequency, non-stand replacement type) of Condition Classes II and III. Fuel loadings are moderate to heavy accumulations throughout and grading to scattered accumulations in alpine meadows at higher elevations. Periodic large fires have occurred and are expected in the future, given the fire regime condition class (FRCC).

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 extensive damage reported was defoliation by western spruce budworm. Defoliation in the adjacent Glacier Peak Wilderness is also extensive, but is not included in this analysis.

Several pockets of Douglas-fir beetle activity were mapped. A 56-acre pocket was mapped in Big Meadow Creek.

Four pockets of fir engraver damage were mapped in the vicinity, totaling about 170 acres. This is about the same amount of damage mapped in 2006. Defoliation by western spruce budworm may be causing aerial survey to underestimate the true extent of bark beetle activity.

Very little pine beetle activity was reported.

Threatened, Endangered, and Sensitive Plant Species

The Twin Lakes PWA includes one sensitive plant species, Seely’s catchfly (*Silene seelyi*), which is an endemic species.

Noxious Weeds

There are no known noxious weed species within the PWA, but noxious weeds are established on roads that access the area. The roads and trailhead that provide access to the area have small established noxious weed populations. The weeds are hand pulled at the trailhead and the roads receive infrequent treatment.

Minerals and Soils

This area is primarily underlain by metamorphosed granitic rock (gneiss) and schist of the Cretaceous period. Eocene Chumstick Formation sediments are exposed at the far eastern edge of the area. Separating the Eocene rocks from the Cretaceous rocks is the north-south trending Leavenworth Fault zone which defines the western and southwestern edge of the Chiwaukum Graben. The Napeequa River drainage, inside the Glacier Peak Wilderness, which lies adjacent to this area, has been investigated by the U.S.G.S. and the U.S. Bureau of Mines. As a result of their investigations, they have not identified this area as having any known mineral potential. An area in the vicinity of lower Raging Creek (east of the Leavenworth Fault zone) has been classified as prospectively valuable for coal resources and those portions of the area lying north of Schaefer Creek and north of White River Falls have been classified prospectively valuable for geothermal resources.

Over 30 lode and placer claims have been located within or immediately adjacent to the portion of this PWA lying along the Chiwawa River. However, based on Bureau of Land Management data (December 2, 2004) all have been abandoned.

The combination of geography, land type, and precipitation generally gives low inherent soil productivity. Productivity for wood fiber is generally low to moderate on the scoured glacial troughs, and moderate to high on the glaciated troughs. Due to parent material and soil development, most of the soils within this area have a moderate to high erosion hazard.

Cultural and Heritage Resources

The area has a moderate potential for the occurrence of archaeological resources. The backcountry between McCall and Crook Mountains was traditional huckleberry picking country. American Indian families camped there for two to three weeks each year to collect and dry huckleberries and undertake small hunting expeditions. Access was by way of a trail up Raging Creek. A portion of this historic trail still exists but it is no longer maintained. The upper Raging Creek area was also the scene of a reported encounter in 1858 between the Wenatchee Indians and the United States militia.

This area also borders an area along the White River that was used both as an Indian fishery and as a spirit quest site. Because of this history, it is possible that there is a special spiritual link between the lands within the Twin Lakes PWA and the present day Wenatchee people of the Colville and Yakama Indian Reservations. 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. Cultural sites are protected by law; however, a wilderness designation or a roadless designation would afford additional protection to cultural sites from ground disturbing activities.

Land Uses and Special Uses

Other than the occasional and temporary use of the area by outfitters and guides under permit, there are no special land uses occurring within the area.

The Twin Lakes Potential Wilderness Area falls entirely within lands ceded to the U.S. Government under the Yakama Treaty. Indian tribes hold rights reserved under treaty and recognized in statutes, executive orders, and policies. Generally, these included rights to fish at usual and accustomed grounds and stations, the right to hunt and gather on open and unclaimed lands, the right to erect temporary houses to cure fish, and the right to pasture horses and cattle on open and unclaimed lands.

Private Lands

There are non-federal lands adjacent to the southwestern portion of this PWA. These lands include Tall Timber Ranch, a private organization camp. Across the Napeequa River from Tall Timber are a number of small acreages with both summer homes and year round residences. Access to these lands is gained from the White River Road which is outside of the area. There is also a substantial amount of developed private land along the base of Dirtyface Peak at Lake Wenatchee.

NEED FOR WILDERNESS

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

This area is located immediately adjacent to the eastern boundary of the Glacier Peak Wilderness (570,573 acres). The area is within one to four hours of driving time from population centers such as Seattle-Tacoma, Yakima, Tri-Cities, Spokane, and Wenatchee.

The Twin Lakes PWA flanks a narrow thumb of the Glacier Peak Wilderness that was a wilderness addition in 1984. This thumb is only two miles wide and was added to the wilderness system to protect the watershed of a fish spawning facility operated by the Washington State Department of Fish and Wildlife at Twin Lakes. The addition of the Twin Lakes PWA to the Glacier Peak Wilderness would preserve the sense of vastness, and separation from the sights and sounds of human activities. The "thumb", flanked by the White River Road and Chiwawa River, would become six miles wide.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as high due to adjoining the Glacier Peak Wilderness. Many trails entering the wilderness pass through this PWA enroute. The west side of the area is very accessible from Lake Wenatchee, and the east side of the PWA is situated in the popular Chiwawa Valley. The PWA provides high quality scenic destinations that would attract wilderness users.

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

Nearby wildernesses include the Glacier Peak (570,573 acres), Henry M. Jackson (100,356 acres), and Alpine Lakes (362,789 acres). These and other wildernesses throughout the state serve a growing population from both sides of the Cascade Range. Most of the users are from the greater Puget Sound area. The portions of these wildernesses with easy access to spectacular destinations receive heavy use. In general, there is already adequate wilderness on the east slope of the Cascades to absorb current and future recreation demand while maintaining moderate to low levels of use. The addition of this area as wilderness would not create any significant new destinations that would attract more use.

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

Inclusion of the Twin Lakes PWA as wilderness would enhance opportunities for unconfined outdoor recreation by preserving the primitive recreation setting, since existing trails access wilderness destinations in the Glacier Peak Wilderness.

Nearby Nason Ridge is the highest quality backcountry area that provides a trail system to high lakes, ridges, and peaks. The Nason Ridge area fulfills an important niche on the district for users that aren't wholly wilderness compliant (large groups or cyclists) but otherwise want an alpine natural environment in which to recreate. Nason Ridge receives moderate levels of use.

The Heather Lake PWA lies west of the Twin Lake PWA. This area is adjacent to the Henry M. Jackson Wilderness, which is accessed via the Heather Lake, Top Lake, and

Minotaur Lake Trails. Heather and Minotaur Lakes receive moderate to high hiker use, and Top Lake receives light use from hikers and horse users.

To the north the Rock Creek portion of the Entiat-Chelan PWA provides a network of non-motorized and motorized trails, also adjoining the Glacier Peak Wilderness. Most of the non-motorized trails in this area receive less use due to the absence of lakes, but due attract light levels of use. The Carne Mountain Trail attracts high levels of use from hikers, climbers, and hunters. The motorized trails are among the most popular in the state and attract high use.

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 Twin Lakes PWA provides habitat for species that require primitive surroundings; northern spotted owl, mountain goat, Canada lynx, American marten, grizzly bears, and wolverines. 2,000 acres of the PWA has late successional habitat in dry forest. For this area, a higher priority wildlife issue is the need to restore dry forest habitats for the northern spotted owl, and reduce the risk of habitat being burned in high severity fires. Active management, such as prescribed fire and thinning, may be needed to restore these habitats and enhance their sustainability, and would not be compatible with wilderness designation. The wildlife sustainability index is 25.1 (a moderate relative ranking) and the habitat connectivity index is 18.9 (also moderate relative ranking).

Fish

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

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

Rare Plant Species

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

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

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

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

This area represents the East Cascades Ecoregion using Bailey's Ecoregional Classification System. This ecoregion type is well represented in existing wilderness lands in the Cascade 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 14 percent of the vegetative cover of this PWA (approximately 2,880 acres). These types include forb lands, alpine meadows, and non-alpine meadows. Taken as a whole, the contribution of underrepresented vegetation types ranks as moderate for the portion of this area with underrepresented cover types, and also as moderate for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

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

In particular, the cottonwood, alpine meadow, and non-alpine meadow cover types, which comprise approximately 1,700 acres in this PWA, would make a significant contribution within the eastern Washington planning area.