

**SAPPHIRE WILDERNESS STUDY AREA  
WILDERNESS CHARACTERISTICS ASSESSMENT**

**BEAVERHEAD-DEERLODGE AND BITTERROOT NATIONAL FORESTS  
GRANITE AND RAVALLI COUNTIES, MONTANA**

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## **SAPPHIRE WILDERNESS STUDY AREA WILDERNESS CHARACTERISTIC ASSESSMENT**

### **INTRODUCTION**

This report describes the findings resulting from a 2003 to 2005 assessment of the Sapphire Wilderness Study Area. The assessment evaluated the changes in wilderness characteristics of the area between 1977 and 2005. The Beaverhead-Deerlodge and Bitterroot National Forests completed this assessment to help determine the current wilderness character of the area and to aid in identifying any restorative measures that may be appropriate or necessary to further the intent of the Montana Wilderness Study Act of 1977.

The Montana Wilderness Study Act of 1977 (PL 95-150) (MWSA) required the study of certain lands to determine their suitability for designation as wilderness in accordance with the Wilderness Act of 1964. These lands are referred to as Wilderness Study Areas (WSA). One of the nine areas identified in the MWSA was the 117,030 acre “Sapphire Wilderness Study Area” located on the Bitterroot Forest (44,416 acres) and the Deerlodge Forest (now the Beaverhead-Deerlodge Forest) (72,614 acres). For the study, the Sapphire WSA was grouped with the Blue Joint (Bitterroot National Forest) Wilderness Study Area. After study, analysis, and evaluation of public comments, the Blue joint and Sapphire Study Report and Draft Environmental Impact Statement was completed in 1985. This report was the administrative recommendation to Congress for the land allocation and management of the area. The report recommended that all 117,030 acres of the Sapphire Wilderness Study Area be managed as nonwilderness. Congress has not yet acted on the recommendations contained in the Study Report and Draft Environmental Impact Statement.

Language in the 1977 Act required that the areas be managed to maintain their presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System. In 1996 the Montana Wilderness Association (MWA) filed an eleven count complaint that this part of the Act had been violated. Four counts were carried forward to decision, the others being dismissed or considered superfluous. One of the four counts pertained only to the Hyalite-Porcupine-Buffalo Horn WSA on the Gallatin Forest. Another of the four counts only pertained to the West Pioneer WSA on the Beaverhead-Deerlodge Forest. On 5/20/01, U. S. District Court Chief Judge Molloy made a ruling that ordered one count dismissed and had orders for the remaining count.

Count I (the remaining count) alleged that the actions and inactions of the Forest Service have resulted in substantially increased motorized use of the WSAs, which resulted in increased environmental damage, all in derogation of the Wilderness Study Areas’ potential for wilderness designation and Congress’ management mandate.

Judge Molloy enjoined the Forest Service from taking any action that diminishes the wilderness character of the area as it existed in 1977 or that diminishes the area’s potential for inclusion in the National Wilderness Preservation System. It was further

ordered the Forest Service should take reasonable steps to restore the wilderness character as it existed in 1977 if the areas' wilderness character or its potential for inclusion in the National Wilderness Preservation System has been diminished since 1977. To determine if any changes had occurred, the Forest Service decided to make an assessment by comparing the conditions that existed in 1977 and the present time.

## **FINDINGS**

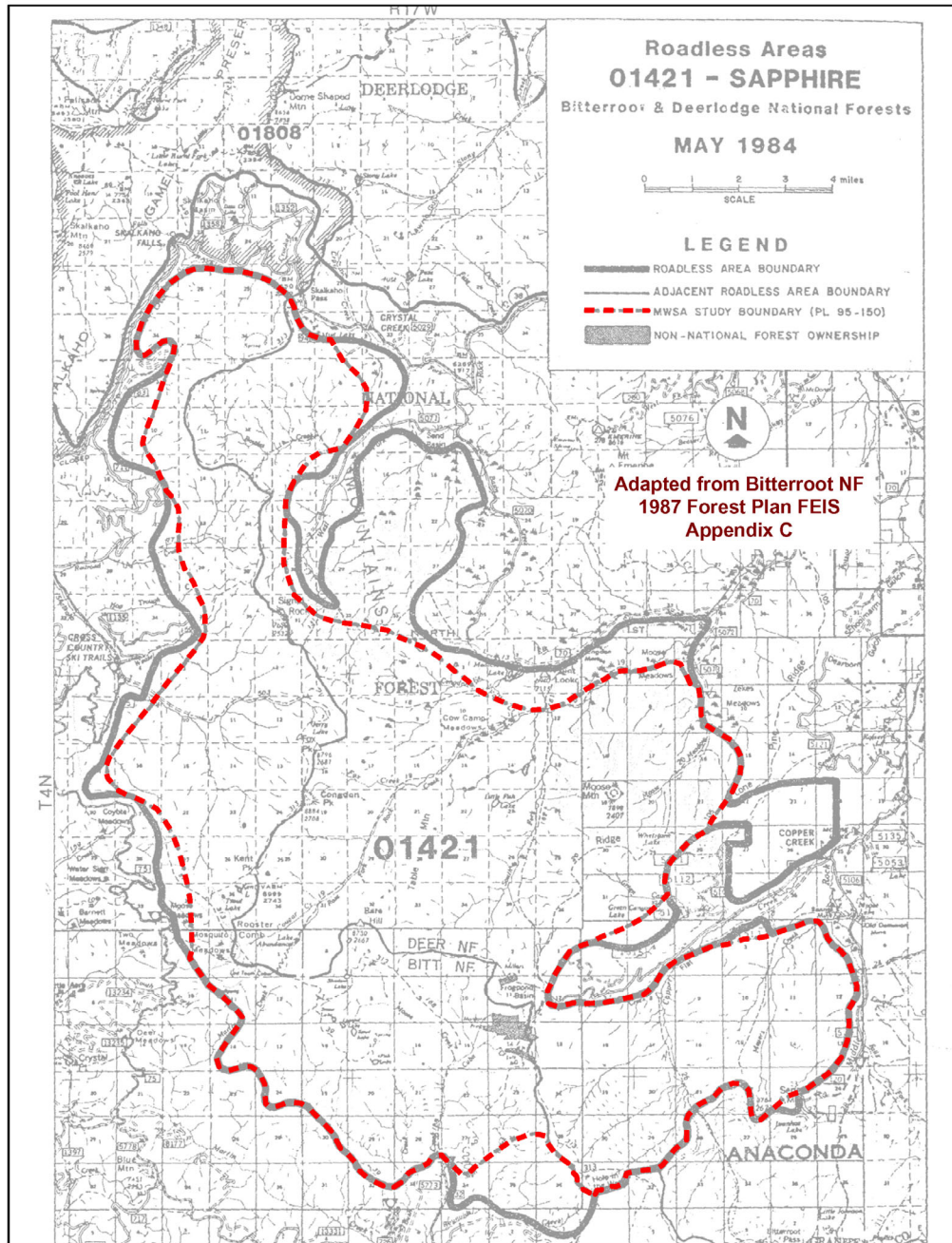
Based on examining the four wilderness characteristics mentioned in the Wilderness Act: *natural integrity*, *apparent naturalness*, *outstanding opportunities for solitude*, *outstanding opportunities for primitive recreation* and comparing changes between 1977 and 2005, neither the wilderness character of the area or the potential for inclusion in the National Wilderness Preservation System has diminished since 1977 when looking at the WSA as a whole. Within the Sapphire WSA, site-specific changes in resource conditions have occurred, but overall the character as defined by the Wilderness Act has not diminished.

Positive management actions have been taken since 1977 to maintain the existing wilderness character. There are fewer roads than in 1977, with open roads reduced by 2.3 miles. An existing trail segment of both Whetstone Ridge Trail #20 and the South Fork Trail #162 have been relocated out of wet areas and are accessed by a new trailhead. One mile of the Whetstone Ridge road (through meadows in Frogpond Basin accessing the original trailhead for Whetstone and South Fork Trails) has been closed and is naturally revegetating. Trail #130 (0.4 mile) was obliterated and one mile of Trail 313.5 was closed to motorized use to protect cultural sites. Extensive erosion control work was completed on Chain of Lakes Trail #39 and part of Bitterroot/Rock Creek Divide Trail #313.5. The Sula Fish Lake Trail #420 and Faith Lake Trail #421 were rerouted to avoid steep erosive grades and have been closed to motorized use. The Whetstone Ridge and South Fork trails were closed to motorized wheeled vehicle use. Brush and trees have reestablished on approximately 3.8 miles of old fireline, old fire access roads, and trail, effectively reducing or prohibiting use as a travel route, and narrowing and providing a more natural appearance on others. Motorized wheeled cross-country travel is no longer permitted anywhere within the area. Overall, motorized wheeled access routes have been reduced by approximately 35% (a 42.5 mile reduction since 1977). In 1996, the 1,399 acre Sapphire Divide Research Natural Area was established. Total livestock grazing within the WSA has also been reduced slightly since 1977.

Snowmobile use has not had any lasting effect on the four wilderness characteristics. Any motorized use is a function of management and can be administratively eliminated if the area is made wilderness without any permanent or long lasting impacts on any wilderness attribute.

Negative impacts to potential wilderness values from private land activities include the construction of seasonal residences and cabins and timber harvest. Negative impacts on public land include the construction of a mining road up Meyers Creek (formerly a

primitive road) and the creation of two-track<sup>1</sup> trails by ATV use on 1.3 miles of the Copper Creek Trail #26, 0.4 miles of Mosquito Meadows Trail #102 (formerly single-track trail segments), and approximately 2.3 miles of new unauthorized, user-established two-track trails.



<sup>1</sup> In this assessment, “two-track” is used generically to mean any route wider than a “single-track trail” but not being managed as a road. In the Sapphire WSA, two-track trails range from literally two narrow wheel tracks to primitive roads and old excavated firelines that are or were dozens of feet wide. A single-track trail would normally accommodate foot, horse, mountain bile or motorcycle travel, but not wider vehicles without crushing vegetation adjacent to the bare trail tread.

## **GENERAL SETTING**

The Sapphire WSA is located about 25 air miles southeast of Hamilton and southwest of Philipsburg in Ravalli and Granite County, Montana. The WSA can be accessed from State Highways 38 or 472 and from forest roads in Rock, Copper, Moose, Martin, and Skalkaho Creeks. A network of trails and several roads provide access within.

The area has a north-south orientation of about 25 miles with width varying from 2 to 10 miles. Road corridors in Copper Creek and the West Fork of Rock Creek extend toward the crest of the Sapphires. These intrusions reduce the width of both the northern and southern portions. Practically the entire boundary is mid-slope, lying above existing roads, timber harvest or mineral development.

Glacial scouring has produced steep, rocky cirque basins and trough walls along the crest and southern boundary. Remaining lands, primarily in the West and Ross Forks of Rock Creek are rolling hills with flat creek bottoms. Glacial deposits reworked by flowing water characterize most valleys east of the crest. Elevations range from 5,000 feet at some points along the lower boundary to 9,000 feet at Kent Peak. Sixty percent of the area is above 7,000 feet.

Prominent landmarks include Bare Hill, Kent, and Congdon Peaks, and Signal Rock. Drainages flowing to the east are Copper Creek, and the Ross and West Forks of Rock Creek, a nationally recognized "blue ribbon" trout fishery. Moose, Martin, and Skalkaho Creeks flow to the west and are tributaries of the Bitterroot River. Twenty-four small lakes and numerous potholes occur along the crest. Geology is primarily granite intrusions. Landforms have been modified by past alpine glaciation with soils derived from the parent geology. Streamside meadows break the forested landscape at lower elevations; exposed bedrock and rubble predominate along the Sapphire crest, Whetstone Ridge, and the southern portion bordering the Anaconda-Pintler Wilderness. Douglas-fir and lodgepole pine are the primary tree species with whitebark pine and subalpine larch at the highest elevations. Bunchgrass with scattered Douglas-fir occupies severe south to west-facing sites. Douglas-fir is common on north exposures at lower elevations and lodgepole pine is common elsewhere. Ground cover is mainly snowberry, ninebark, and beargrass on drier sites, willow and redosier dogwood on cool moist sites, and grouse whortleberry or wood rush on severe cold sites at higher elevations (USDA, 1985).

The WSA has been managed under the direction of the Moose Creek (USDA, 1973), Skalkaho Gird, and Sleeping Child Unit Plans (USDA, 1974), the Upper Rock Creek Land Management Plan (USDA, 1978a) and subsequently the Deerlodge Forest Plan (USDA, 1987b) and the Bitterroot Forest Plan (USDA, 1987a).

## **CHRONICLE OF EVENTS**

Bitterroot National Forest Travel Plan approved November 16, 1976.

In 1977, the first Bitterroot National Forest Travel Map issued.

Congress passed the Montana Wilderness Study Act on November 1, 1977.

In 1978, the Upper Rock Creek Land Management Plan and Final EIS (Deerlodge National forest) issued.

In 1981, Deerlodge National Forest Travel Map issued.

In 1983, Deerlodge National Forest Travel Map issued (replacing the 1981 travel map).

In 1984, Bitterroot National Forest Travel Map issued (replacing the 1977 travel map).

In 1985 the Draft Report and Proposal for the Sapphire Wilderness Study Area released.

In 1987, the Deerlodge National Forest Land Management Plan and Final EIS issued (replacing the 1978 plan).

In 1987, the Bitterroot National Forest Land Management Plan and Final EIS issued (replacing several previous unit plans).

In 1987, Deerlodge National Forest Travel Map issued (replacing the 1983 travel map).

In 1988, Deerlodge National Forest Travel Map issued (replacing the 1987 travel map).

In 1989, Bitterroot National Forest Travel Map issued (replacing the 1984 travel map).

In 1990, Deerlodge National Forest Travel Map issued (replacing the 1988 travel map).

The Beaverhead and Deerlodge National Forests combined into one administrative unit (Beaverhead-Deerlodge) in 1996.

In 1996, Deerlodge National Forest Travel Map issued (replacing the 1990 travel map).

In 1998, Addendum to 1996 Deerlodge National Forest Travel map issued.

In 1999, Bitterroot National Forest Travel Map issued (replacing the 1989 travel map).

In 2001, Bitterroot National Forest Travel Map supplemented with corrected trail access guide.

## **WILDERNESS CHARACTERISTICS ASSESSMENT**

This document evaluates the changes in wilderness characteristics between 1977 when the Montana Wilderness Study Act was passed and the present.

In his order, Judge Molloy mentions that the Wilderness Attribute Rating System (WARS) provides a benchmark for prospective management and specific criteria to guide the agency's exercise of its discretion (USDC, 2001).

WARS was developed in 1977 by the Forest Service to identify and evaluate wilderness character and was used in early 1978 to evaluate all 1,920 inventoried roadless areas in the Nation. WARS was applied to the Sapphire WSA during January 1978. Using WARS, the Blue Joint and Sapphire Study Report and Draft Environmental Impact Statement, and other information helps establish a 1977 benchmark. These references are also helpful to measure the amount of change from 1977.

WARS is based on four attributes derived from language in the 1964 Wilderness Act: *natural integrity*, *apparent naturalness*, *outstanding opportunities for solitude*, and *outstanding opportunities for primitive recreation*. In addition, the system provides for



rating four supplemental attributes: *outstanding ecological, geological, scenic, and historic features*. These last four do not pertain to wilderness character and will not be used in this assessment.

In WARS, *natural integrity* and *apparent naturalness* are closely related and use the same rating components. These components include physical developments, mineral developments, recreation, grazing, wildlife management, vegetative manipulation, insect and disease control, non-indigenous plants and animals, fire history, air pollution effects, water pollution, unimproved roads, and occupancies. Ratings are based on the effect of an impact, the percent of area impacted, and the duration of the impact.

Likewise in WARS, *opportunities for solitude and primitive recreation* are closely related and use some of the same components. Mutual components used are size of the area, presence of topographic screening, vegetative screening, and distance from the perimeter to the core. Additional rating components for *opportunities for primitive recreation* are diversity of opportunity, challenge (hazardous things like dangerous animals and cliffs), and absence of man-made facilities (USDA, 1977).

A review of the rating components of WARS and other information was used to assess change from 1977. Roads, trails, and snowmobile routes in existence in 1977 and 2003 were also identified on maps and aerial photos. From this, a comparison was made how physical features and type of use has changed over time.

### **Natural Integrity and Apparent Naturalness**

*Natural integrity* is looking at the degree to which the area retains its primeval natural integrity in a pure ecological sense. It is the extent to which long-term ecological processes are intact and functioning. Impacts to natural integrity include physical developments (e.g. roads, utility rights-of-way, fences, lookouts, and cabins), recreation developments, domestic livestock grazing, mineral developments, wildlife/fisheries activities, vegetative manipulation, and fire suppression activities.

*Apparent naturalness* is whether the area appears natural to most people. It considers if the environment looks natural to most people using the area. The area generally needs to appear to have been affected primarily by the forces of nature, even though some of the long-term ecological processes of an area may have been interrupted, the landscape of the area appears to be affected by the forces of nature. If the landscape has been modified by human activity, the evidence is not obvious to the casual observer, or is disappearing due to natural processes.

Another way of putting it is that *natural integrity* estimates the magnitude of an impact while *apparent naturalness* focuses in the importance of those impacts to most visitors (USDA, 1977).

Attributes considered in this assessment of natural integrity and apparent naturalness include physical developments such as roads, trails, fences, and mineral exploration, types of access, effects of other management activities, changes in vegetation, and land occupancy. Changes in these attributes since 1977 and their effects on the wilderness character are described in the following sections.

## Physical Developments

Most physical developments since 1977 within the Sapphire WSA are related to travel routes and fences.

Total travel routes (roads, single-track trails, and two-track trails) have increased an estimated 0.9 miles since 1977, although the total miles of travel routes open to wheeled motorized (ATV) use has decreased by an estimated 41.7 miles (Table 2).

**Roads:** There are now 2.3 fewer miles of road within the WSA than there were in 1977. The Forest Service converted 1.3 miles to two-track trail and obliterated an additional 1.0 mile. Of the remaining roads, 37% are now closed to motorized use. These road changes are described in more detail below and in Table 2.

In 1977, there were 9.1 miles of road within the WSA, all open to motorized use. These roads were located in Frog Pond Basin, Copper Creek (O'Brien Mine), and Meyers Creek (Meyers Mine) areas. In 2005 there were 6.8 miles of road, of which 4.3 miles were open to motorized use. Since 1977, the existing 3.0 mile road to the Meyers Creek Mine (Road #5057) was improved by developers of the Mine. The existing road to the mine was very primitive and not much more than a wide two-track trail and better access to the mine site was needed for mineral exploration (drilling). Following completion of mineral exploration, drainage work was done on the road and the upper 2.5 miles is now closed to all motorized vehicle use by a gated closure. The road has not been used for a number of years and is naturally revegetating.

Since 1977, Frogpond Road #80 (0.5 mile within the WSA) and Miller Mine Road #8671 (0.6 mile) have had spot surfacing and drainage work done. One mile of the Whetstone Ridge Road through wet meadows from its junction with Frogpond Road #80 to the junction of South Fork Trail #162 and Whetstone Ridge Trail #20 has been replaced by a trail on a different location to avoid wet areas and the road closed. The trail is closed to motorized wheeled vehicles. The Whetstone Ridge Road is now closed and is revegetating naturally.

**Trails:** In 1977, there were approximately 86 miles of single-track and 25.4 miles of two-track trails within the WSA. In 2005, there were an estimated 85.3 miles of single-track and 29.3 miles of two-track trails. There is now approximately 0.7 mile less single-track trail than in 1977. The Forest Service constructed about one mile of new single-track trail but also obliterated another 0.4 mile single-track. Users have established a poorly defined trail around Rooster Comb for about 0.5 mile new single track. The remaining reduction is due to widening of about 1.7 miles of single-track trail into two-track tread since 1977, primarily through ATV use. Wheeled motorized use is now not permitted on approximately 44% of the remaining single-track trails within the WSA.

There are now approximately 3.9 miles more two-track trail than existed in 1977. The Forest Service converted about 1.3 miles of road into two-track trail, constructed another 2.8 miles of new two-track trail, and obliterated 0.4 miles of two-track trail. An estimated 3.8 miles, primarily old firelines and access routes constructed during the 1961 Sleeping Child Fire, appear to have brushed in sufficiently to restrict or prohibit use. About 1.7 miles of two-track trail had previously been single-track trail, as noted above.

The remaining 2.3 mile increase is the result of two user-created routes, 2.25 miles of which is one new trail apparently established in 2003. Use of this new route is legally prohibited and has been signed as closed, resulting in 8 percent of the existing two-track trails being restricted today. These trail changes are described in more detail below and in Table 2.

The Bitterroot/Rock Creek Divide Trail #313 traverses the length of the Sapphires crest within the WSA from Skalkaho Pass to the Anaconda Pintler Wilderness boundary, meandering on both sides (Bitterroot and Beaverhead-Deerlodge Forests) of the divide. The portion of the trail from Frogpond Basin north to the Ross Fork saddle on the ridge above Lake Abundance follows an old fireline constructed for the Sleeping Child fire in 1961 (approximately 8 miles) (USDA 1961, Moore 1974). Approximately five miles of this “two-track” trail was reconstructed in 1995 to reduce erosion and safety problems (junction trail #39 south to Frogpond Basin). (USDA 1993, Campbell 1996).

Chain of Lakes Trail #39, also an “access road” constructed during the Sleeping Child fire, received heavy reconstruction along with the Bitterroot Rock Creek Trail #313. As with trail #313, the work on trail #39 was designed to reduce erosion problems including some extremely excessive grades and wide running surfaces.

Since 1977, several new trails have been constructed and/or added to the Forests’ trail system. One new trail is a 2.1 mile single-track trail (part of Whetstone Ridge Trail #20) constructed from just below the Miller Mine private land on Frogpond Road #80 to the junction of South Fork Trail #162 and Whetstone Ridge Trail #20. This trail replaced 1.0 miles of road and .9 miles of trail and moved the trail location out of wet areas. This road and trail has been closed and the trail obliterated. The new trail segment is closed to motorized wheeled vehicles. A trailhead for Whetstone Ridge Trail #20 was constructed on Frogpond Road #80 and consists of a widened spot on the road with parking for three vehicles.

A 2.25 mile single-track trail was constructed from trail #313 to Kent Lake in 1991 or 1992. While motorized use has not been legally restricted, trail monitoring indicates only light overall use and little or no ATV use at this time.

In 1993, two separate, steep, single-track motorized trails to Fish Lake and Faith Lake were obliterated and rerouted with a single, non-motorized route for the first mile and then continued with separate new lower gradient, non-motorized routes to each lake (Trails #420 and #421).

In 1995, erosion control drainage was added to a 0.1 mile user-developed two-track route, from trail #39 to an overlook above Charity Lake basin, and the route was added to the forest’s trail system (#332) for continued monitoring and maintenance.

The other trail that has been constructed since 1977 is a 2.7 mile portion of Bitterroot/Rock Creek Divide Trail #313. The new trail starts on Frogpond Road #80, goes past the O’Brian Mine, and connects with the existing Bitterroot/Rock Creek Divide Trail #313 on the top of the divide. This trail was constructed to replace the jeep road portion that people used to follow through the Montana Prince Mine private land. There is no public access right-of-way through the private land. This new trail is two-track and open to ATV use.

Since 1977, the 1.3 mile Copper Creek Trail #26 has had the tread width widened by ATV use and is now a two-track trail. A 1.3 mile portion of the O'Brian Mine Road is now a two-track trail.

Similarly, a 0.4 mile portion of Mosquito Meadows Trail #102 within the WSA has widened into a two-track trail tread through ATV use since 1977. There are reports of annual but intermittent use by ATVs beyond this point, but recent field monitoring showed little evidence of trail widening or new trail establishment beyond this point.

A new, unauthorized user-created two-track ATV route was discovered in 2003 running cross-country along ridge tops north from the Skalkaho-Sleeping Child Divide Trail #87 for approximately 2.25 miles. Use of this route is legally prohibited based on the 2001 prohibitions on motorized wheeled cross-country travel. This two-track was signed closed to motorized use in 2005 and continued monitoring is planned.

**Fence:** In 1977, there was less than one mile of fence within the WSA. Since 1977 less than one quarter mile of new fence associated with the livestock grazing allotments has been constructed in the WSA. No livestock water developments are within the WSA.

### **Mineral Developments**

Since 1977, additional mining exploration work has taken place at the Meyers Mine. The road leading to the mine was improved for the exploration work. When the exploration work ended the road had drainage work done and the upper 2.5 miles closed to all motorized vehicles. Four new mining claims have been established in the WSA since 1977.

### **Recreation**

By 1977, both summer and winter recreational use of the Sapphire area was well established. This included both motorized and non-motorized activities.

**In 1977, most of the 117,030 acre Sapphire WSA was open to yearlong unrestricted motorized use on roads, trails, as well as cross-country travel.** The only restriction in 1977 was on the use of full sized wheeled vehicles (cars and trucks) in the area between Martin Creek, Sign Creek, and the Sapphire divide (USDA 1976, Bitterroot Forest Travel Plan Map 1977). The remainder of the WSA was legally open to all types of motorized use.

In 1977, motorized vehicle use consisted mostly of full sized vehicles, motorcycles, and snowmobiles. With the advent of three and four wheel all terrain vehicles (ATVs) in the 1970's, ATVs became popular. By 1977, ATVs may have begun to use the WSA.

**From 1977 to the present time, the Forest service has increasingly restricted wheeled motorized vehicle use in the WSA.** Today, all motorized wheeled cross-country travel is prohibited. Use of full-sized cars and trucks is prohibited entirely except on 4.3 miles of road. Approximately 44 percent of all the single track trails are now closed to wheeled motorized use. Overall, over one third of all travel routes within the

MWSA are now closed to ATV use, when none were closed in 1977. There is now no motorized wheeled cross-country travel allowed (USDA, 2001a).

In 1977, snowmobile use in the WSA was unrestricted. Most of the snowmobile use in 1977 was in the Frogpond Basin area, on a marked trail to the O'Brien Mine, on several unmarked trails, and in the Sleeping Child, Martin, and Moose Creek areas (Bass 1974, Morgan 1985). Though no data exists on how much snowmobiling use was occurring in 1977, we can assume there was less than there is now. Presently, snowmobiling is still a popular winter recreation activity in the Frogpond Basin area of the WSA and on the Bitterroot/Rock Creek Divide Trail #313 to Shadow Lake and beyond. There is no longer a marked snowmobile trail to the O'Brien Mine. There never has been any Forest Service authorized grooming of snowmobile trails in the WSA. Since 1977, some snowmobile restrictions have been implemented, mostly seasonal. Snowmobiling is now restricted during the fall hunting season, October 15 to December 1 in the area north of Fox peak-Cow Camp Meadows and on the Ross fork, South Fork, and Whetstone Ridge Trails. Snowmobiling is also prohibited yearlong on 2.5 miles of the Meyers Creek Road #5057. Other than these restrictions the WSA continues to be open to snowmobile use.

There is typically no ground disturbance associated with snowmobiling. While the amount of snowmobile use in the WSA has increased since 1977 the areas being used by snowmobiles in 1977 and at present remain essentially the same. To a large degree snowmobile riding in the WSA involves playing in the meadows in the Frogpond Basin and Mosquito Meadows to Martin Creek areas, trail riding on the old firelines and high marking on open slopes. This use was occurring to some extent in 1977.

### **Grazing, Watershed, and Wildlife Management**

In 1977 there were portions of three cattle grazing allotments within the WSA. The number of grazing allotments have remained the same since then. Since 1977, livestock (cattle) numbers in the WSA have been slightly reduced.

Since 1977, watershed projects have focused on roads and trails located on primitive access roads and firelines. Mud holes on the road to the Miller Mine (private land) in the Frogpond Basin area were filled in with rock and native material and drainage installed (culverts). Drainage was also installed on the road leading to the Meyers Mine. Extensive drainage, trail relocation, and spot narrowing was done on Chain of Lakes Trail #39 and part of the Bitterroot/Rock Creek Divide Trail #313 to mitigate chronic erosion and safety problems in 1995 (Campbell 1996, USDA 1993).

There have been no wildlife or fisheries improvement projects in the WSA.

### **Vegetative**

In 1996 the 1,399 acre Sapphire Divide Research Natural Area was established within the WSA. The natural area was set aside to preserve a representative sample of an ecological community primarily for scientific and education purposes.

There have been no timber sales on national forest lands in the WSA. Since 1977, timber harvest has occurred on private land within the WSA (Montana Prince Mine).

There have been no prescribed fires in the WSA.

Bark beetle mortality has increased recently, primarily in the Moose Creek and Skalkaho Creek portions of the WSA. Douglas-fir bark beetle is active in the lower elevations and the western balsam bark beetle is currently active in the upper elevations of Moose Creek.

White pine blister rust, an exotic pathogen, continues to cause increased mortality in white bark pine.

### **Noxious weeds**

There are relatively few noxious weeds in the WSA. Spotted knapweed has been increasing in extent and density along trails on the Bitterroot portion, although native species remain dominant.

On the Beaverhead-Deerlodge side of the divide, some spotted knapweed is found along the road into the Miller Mine in the Frog Pond Basin area. This infestation has been treated annually. The roads accessing the WSA and the adjacent private ranchlands also receive annual treatments, all of which help keep weeds from spreading to the WSA. Due to the annual treatment, the amount of spotted knapweed in the WSA has slightly decreased on the Beaverhead-Deerlodge portion since 1977. Since 1977 ox-eye daisy has moved into the lower Ross's Fork area, but has not yet spread to the WSA.

### **Fire**

There were approximately 155 wildfires within the Sapphire WSA between 1978 and 2005 burning approximately 43,000 acres (59% of the area). Almost all of these burned acres are a result of the fires of 2000 and 2005. In the year 2000 large wildfires burned over much of the upper portion of the Ross Fork and Skalkaho Creeks as well as portions of Daly, Bowles, Martin, and Moose Creek drainages. In 2005 another fire burned the headwaters of the West Fork Rock Creek and Railroad Creek north and south of Signal Rock. In some areas the fires were very intense, burning all the vegetation. In other areas the fires were patchy, leaving a mosaic of burned and green vegetation. There has been no record of prescribed burning in the WSA.

### **Occupancy**

There are approximately 450 acres of private land within the WSA. These private lands include the Miller Mine, the Montana Prince Mine, the Lutz Mine (Gold Leaf), and a portion of a homestead in lower Moose Meadows. In 1977 there was one cabin located on private land at the Miller Mine. By 2003, one additional cabin had been constructed on the Miller Mine private land. There are several cabins located on the Montana Price private land. Since 1977, two occupancy trespass cabins on national forest land in Frogpond Basin have been acquired by the Forest Service.

In 1977 there were three hunting outfitters, with base camps, operating during the fall hunting season. Since 1977, outfitter use has decreased and as of 2002 there were two outfitters operating without base camps

### **Overall Rating (Entire Area)**

The overall rating for *Natural Integrity* remains Low, essentially the same as it was in 1977 (USDA 1978c). Low means the effects on natural process were rated as low or medium with generally less than 25% of the area impacted and the duration of impacts usually 5-10 years with high or moderate feasibility of correcting (USDA 1977).

Similarly, the overall rating for Apparent Naturalness remains Moderate, essentially the same as it was in 1977 (USDA 1978c). Moderate means the area is viewed as natural to many visitors, but unnatural impacts may be apparent to many others nevertheless. Apparent Naturalness is usually only in terms of sight, sound, or smell (USDA 1977).

### **Outstanding Opportunities for Solitude and Opportunity for Primitive Recreation Experience**

These two criteria are based on the potential (opportunities) for solitude and primitive recreation if the area was made wilderness.

Solitude is defined as being isolated from the sights, sounds, and presence of others and from the development and evidence of man. WARS focuses on those intrinsic features of roadless areas that offer users *outstanding opportunities for solitude*—size of the area, presence of topographic screening, vegetative screening, distance from the perimeter to the core, and the degree of permanent off-site intrusions perceived from the area. Noise and human density, though important to solitude, can be changed by management decisions, and are therefore not included in the WARS rating (e.g. by future closing or opening of trails or campsites, controlling uses, etc) (USDA, 1977).

*Outstanding opportunities for primitive recreation* considers the sense of remoteness, closeness to nature, serenity, spirit of adventure, using outdoor skills, high degree of challenge, and risk. In addition to access and the number of people along with the associated noise considered above, this characteristic considers the type of use and mode of travel. It is characterized by meeting nature on its own terms, without comfort and convenience facilities (USDA, 1977). Some of the characteristic primitive-type wilderness recreation activities are hiking, camping, fishing, hunting, cross-country skiing, winter camping, and nature study.

### **Size of Area**

Size of the WSA in combination with other criteria is an important component of an area's overall potential for solitude and primitive recreation. A large area has more potential for solitude than a small one (USDA, 1977). The four-part rating scale ranges from VERY LOW to HIGH. The original WARS rating for Size of Area is HIGH (80,000 acres or larger) (USDA 1978c).

The size of the WSA has not changed since 1977.

### **Topographic Screening**

The assumption here is that diverse relative relief in the WSA enhances opportunities for solitude by increasing opportunities for screening (USDA, 1977). The four-part rating scale ranges from MINIMAL/NONE to HIGH.

The original WARS rating for topographic screening is HIGH (contains a diversity of highly dissected topography that easily screens people from one another within short distances) (USDA 1978c).

Topographic screening in the WSA has not changed since 1977

### **Vegetative Screening**

This component represents the collective vegetative cover that offers opportunities for screening parties from one another. In areas where vegetative cover is heavy, the sight of other people is reduced (USDA, 1977). The four-part rating scale ranges from MINIMAL/NONE to DENSE.

The original WARS rating for vegetative screening is DENSE (most of the area has dense vegetation, which screens people from one another, even within a quarter mile, but there is sufficient opening to permit travel and camping without undue concentration) (USDA 1978c).

Fires burning in the year 2000 and 2005 removed vegetation in some areas, but when looking at the entire area the overall vegetative screening has basically not changed since 1977. It is still dense overall.

### **Distance from perimeter to the core**

The distance from the perimeter of the roadless area to the core or approximate geographic center is a measure of the potential for solitude and escape from the evidence of man (USDA, 1977). The four-part rating scale ranges from LOW to OUTSTANDING.

The original WARS rating for distance from perimeter to the core was a HIGH (from 3 to 5 miles from the core to the perimeter) (USDA 1978c).

Distance from the perimeter to the core of the WSA has not changed since 1977.

### **Permanent Off-site intrusions**

This includes off-site evidence of man's activities likely to be seen, heard, or smelled by visitors from within the area such as from a transportation corridor (USDA, 1977). The three-part rating system ranges from MINIMAL/NONE to MANY.



The original WARS rating for permanent off-site intrusions was SOME (off-site intrusions perceptible, but relatively distant and generally not permanent. Some off-site intrusions are close-by, but generally not permanent) (USDA 1978c).

Permanent off-site intrusions of the WSA today are similar to those found in 1977.

### **Diversity**

Diversity of vegetation, fish and wildlife, terrain, lakes and streams, and climate improves opportunities for a larger variety of primitive recreation activities (USDA, 1977). The three-part rating system ranges from LITTLE DIVERSITY to VERY DIVERSE.

The original WARS rating for Diversity was VERY DIVERSE (has much diversity in nearly all the above categories) (USDA 1978c).

Diversity of the WSA has not changed since 1977.

### **Challenge**

This component is measured as the number and extent of challenging features such as dangerous animals, climatic disturbance, avalanche potential, terrain features (cliffs, quicksand, sink holes), fast moving water, glaciers, and a lack of dominant visual features on which to orient oneself (USDA, 1977). The three-part rating system ranges from RARE to MANY.

The original WARS rating for Challenge was FEW (features commonly considered hazardous encountered in area) (USDA 1978c).

Challenge in the WSA has not changed since 1977.

### **Absence of Recreation Facilities**

The absence of facilities component denotes a freedom from man's developments, which is important in affording opportunities to develop and test outdoor skills and to be free of the evidence of man (USDA, 1977). The rating system ranges from MINIMAL/NONE to HIGHLY DEVELOPED. Recreation facilities are considered campsite development and trails.

The original WARS rating for absence of recreation facilities was MINIMAL/NONE (either no or very few recreation facilities in area; low standard trails, logs over streams, etc) (USDA, 1978c).

While the original WARS rating of MINIMAL/NONE adequately describes the campsite facilities as they existed in 1977, it does not adequately describe the trail standards, as they existed in 1977. The problem is how the four-part rating scale lumped recreation campsite development and trails together. The rating scale assumes that the level of campsite development (fire rings, fireplaces, toilets, tables, etc) and level of trail development (low to high standard, log crossings to bridges) are in relation to one another. This was not the case in the Sapphire WSA in 1977. Many of the trails were of a

higher standard than fits MINIMAL/NONE and would have better fit MODERATE DEVELOPMENT (trails, at least some built to high standards, some were on primitive roads and excavated firelines, and there were bridges over most streams). The raters either favored rating campsites over the degree of trail development or made the rating after considering certain areas and impacts as “separable” (USDA 1978b) and picked a rating description they felt best described the remaining area.

The overall level and type of recreational facilities are essentially the same as in 1977 and, for the same reasons just noted for the original rating, would still fit MODERATE DEVELOPMENT for trails.

### **Overall Rating**

In 1977, the overall WARS rating for *Opportunity for Solitude* was: **Very High** (USDA 1978c). This means three components (size of the area, presence of topographic screening, vegetative screening, distance from the perimeter to the core, or the degree of permanent off-site intrusions perceived from the area) in top category, remainder no more than one scale position away (USDA 1977). This rating basically has not changed.

In 1977, the overall WARS rating for *Opportunity for Primitive Recreation* was: **Very High** (USDA 1978c). This means five components rated in the top category, remainder rated only one scale position away (size of the area, presence of topographic screening, vegetative screening, distance from the perimeter to the core, the degree of permanent off-site intrusions perceived from the area, diversity of opportunity, challenge, and absence of recreation facilities) (USDA 1977). This rating basically has not changed.

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**COMPARISON TABLES: ROADS AND TRAILS IN 1977 AND 2003**

**NOTE:** The “Open” and “Restricted” status in these tables only reflect restrictions to motorized wheeled “trail” vehicles (i.e. trail bikes, four-wheelers, etc.) on routes the vehicle width fit at the time of the 2001 OHV decision. **The table does not directly reflect the two most comprehensive travel management changes since 1977:**

1) The use of full sized vehicles is now prohibited off open roads. In 1977, almost the entire area was legally open to full sized four wheeled vehicles (i.e. Jeeps, trucks, etc) except for the Bitterroot National Forest Area Closure #15. Area Closure #15 restricted the use of full sized vehicles only in part of the Martin Creek and Moose Creek drainages. Now, except for a few specific roads, the entire area is closed to these full sized vehicles.

2) The 2001 OHV decision and subsequent closure orders prohibit cross country travel by all wheeled motorized vehicles. The tables do not reflect that, while in 1977 all vehicle types were generally permitted to travel all routes and cross country, since 2001 vehicles must physically fit the trail width as it existed at the time of the decision. So, for example, even though some single track trails are listed as open to motorized use today, certain types of motorized use, such as ATVs that can’t keep all wheels on the single-track tread, are in fact restricted while a motorcycle would be permitted.

**ST**=single track trail and **TT**=two-track trail In this assessment, “two-track” is used generically to mean any route wider than a “single-track trail” but not being managed as a road. In the Sapphire WSA, two-track trails range from literally two narrow wheel tracks to primitive roads and old excavated firelines that are or were dozens of feet wide. A single-track trail would normally accommodate foot, horse, or motorcycle travel, but not wider vehicles without crushing vegetation adjacent to the bare trail tread.

**TABLE 1  
SAPPHIRE WSA - SUMMARY OF ROADS AND TRAILS IN 1977 AND 2005**

	<b>1977</b>	<b>Percent Restricted 1977</b>		<b>2005</b>	<b>Percent Restricted 2005</b>
Total Miles of Travel Routes	120.5	0%		121.38	35%
Total Miles of Road	9.1	0%		6.8	37%
Total Miles of Single-Track Trail	86.0	0%		85.3	44%
Total Miles of Two-Track Trail	25.4	0%		29.28	8%

**TABLE 2**  
**SAPPHIRE WSA**  
**STATUS OF ROADS AND TRAILS IN 1977 AND 2005**

Listing starts at northern end of WSA and proceeds more or less southerly

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
313.2, Bitterroot Rock Cr Divide: N. end of MWSA to Trail 102		19					-1933 – 1993 maps all show it. - BNF Travel Plan Map. 1977. -1978 Deerlodge Forest Map - Moore, 1974		19					Little to no ATV use Skalkaho Pass to jct. Trail 83. Mountain bikes use as a loop, begins at Skalkaho Pass and down trail 77. Suspected occasional ATV use from Jct. Trail 83 to Trail 102, but segment remains single track.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
313.5, Bitterroot Rock Cr Divide: Junction Trail 102 to FR 80		2	8				-1933 – 1993 maps all show it. - BNF Travel Plan Map. 1977. -Portion on BNF is within area closure 15. -1978 Deerlodge Forest Map - Two-track portion is “dozer trail” (Moore, 1974).		1	8		1		Some ATV use Tr. 102 to Rooster Comb, but remains single track. Trail south of Rooster Comb hard to find. User trail drops into basin to east (see “User Rooster Comb bypass” below). Some limited ATV encroachment west of Abundance Saddle. Closure 2005 to motorized Abundance Saddle to Tr. 39 to protect cultural sites. -Jct Trail #39 to FR 80 (5-6 miles) reconstructed in 1995 to reduce erosion.
313.6, Bitt Rock Cr Divide: FR 80 to Anaconda Pintler Wilderness Boundary		4					-1974 USGS topo map. - BTR Travel Plan Map. 1977. -1978 Deerlodge Forest Map		3.9	2.7				Constructed 2.7 miles two-track to provide access around private land.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
User Rooster Comb bypass – non- system		0										0.5		With 313.5 difficult to find south of Rooster Comb, users have dropped into basin to east. Trail beaten into basin then disperses to near bushwhack conditions to rejoin 313.5 to south.
Trail 14, Bowles Creek		4.1					-1981 Deerlodge Forest Travel map Forest					4.1		Closed to all motorized vehicles except snowmobiles
Trail 132, Bowles Creek Spur		1.5					-1981 Deerlodge Forest Travel map					1.5		Closed to all motorized vehicles except snowmobiles
Trail 77, Railroad Creek		2.4					-1972 Bitterroot Forest base map (correct location) - BNF Travel Plan Map. 1977 (incorrect location)		2.4					New mountain bike use as loop route, begins at Skalkaho Pass.
156, Weasel Creek		2					- BNF Travel Plan Map. 1977.		2					Now may also serve as mountain bike loop route; light use.
Trail 131, Signal Rock		1.0					-1981 Deerlodge Forest Travel map					1.0		Closed to all motorized vehicles except snowmobiles
Trail 18, Fox Peak		4.0					-1981 Deerlodge Forest Travel map					4.0		Closed to all motorized vehicles except snowmobiles



ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 503, Skalkaho- Jerry Lake		4.6					- BNF Travel Plan Map. 1977.		4.6					
Trail 87, Skalkaho- Sleeping Child Divide		2	1.75				-1972 Bitterroot Forest Base Map, -1974 USGS (not altogether accurate.) - BNF Travel Plan Map. 1977. -TT portion appears to be 1961 fireline.		2	1.75				
User built on ridge- top from trail 87 north to a saltlick			0.0										2.25	Unauthorized ridgetop user-built discovered 2003, established 2002 or 2003. Restriction based on 2001 OHV decision prohibiting cross country travel. Signed closed 2003, 2005
83, Kent Lake		0.0					-1912, 1933; 1972, 1984 maps show no trail to lake; -1993, trail to lake on map. - BNF Travel Plan Map. 1977 incorrectly shows trail 313 on this location.		1					Constructed approximately 1991 or 1992; light use, no known ATV use.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
102, Mosquito Meadows		1.6					- BNF Travel Plan Map. 1977.		1.2	0.4				0.4 mile shift from ST to TT.
User built Moose Meadows – Tr. 102 to Tr. 313			0.0							0.0				Suspected intermittent ATV use off trail, but 2003 survey found little sign on ground off of trail 102. Documented here for future monitoring.
Trail 19, Ross Fork		10.0					-1981 Deerlodge Forest Travel map					10.0		Closed to all motorized vehicles except snowmobiles
Trail 162, South Fork		6.0					-1981 Deerlodge Forest Travel map					5.6		Closed to all motorized vehicles except snowmobiles. A portion of this trail (.4 mile) closed and obliterated
Trail 20, Whetstone Ridge		7.0					-1981 Deerlodge Forest Travel map					7.0		Closed to all motorized vehicles except snowmobiles. A 2.1 mile section of new trail was constructed on a different location. A portion (.5 mile) section of old trail closed and obliterated.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 26, Copper Creek		1.3					-1978 Deerlodge Forest Map			1.3				Trail is now a two- track
User built (331), Martin Cr Connect - FR 73097 to Trail 330			0.0							0.03  (approx. 50 -70 yards between Martin Ck. and Trail 330)				This trail may or may not be within MWSA (given imprecise definition of MWSA boundary). This short route was cleared for snowmobile access and later used by ATV's. Bridge added over Martin Ck. early 1990s.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 330, Martin Creek			6.25				-“Access roads” and fireline (USDA 1961). -Identified in various 1970’s documents and maps as “primitive roads”, “excavated fireline”, “pack trail”, “dozer trails”, etc . -1970 aerial photos. - Within 1977 BNF Travel Plan Map area closure 15 -1978 WARS rating identifies this trail, trail 39, and nearby fire roads as “highly impactive” and “separable” impacts.			6.25				
Other fireline and fire access routes within Martin Creek Area			3.8				- 1970 aerial photos - Strong, 1974 - Lindquist, Pandell, Banner, Strong 1978			1.5				-Some, but not all of these routes have brushed in over time, excavated templates still exist, just not readily passable routes. -Mileage is a rough estimate based on limited field monitoring.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 130			0.4				- "Pack trail" on 1974 Kent Peak USGS 7.5 min quadrangle map -1970 aerial photo (line 8, #132) shows some ridgetop clearing - probably 1961 origin fire line. -Within 1977 BNF Travel Plan Map area closure 15			0.0				This route was obliterated in 1996 to protect an historical site.
Trail 332, Lakes Overlook			0.0							0.1				User developed to a viewpoint over- looking Charity Lake. Drainage improved and segment added to forest trail system about 1995.
Trail 420, Sula Fish Lake		1					- 1977 location established between 57 and 72 -Within 1977 BNF Travel Plan Map area closure 15 - Viavant, 1978						1	In 1993 it was relocated to its current location and restricted to non- motorized uses in 1995.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 421, Faith Lake		2.6					1974 topographic map. -Within 1977 BNF Travel Plan Map area closure 15. - Viavant, 1978.					2.6		Rerouted to reduce erosion. Closed to motorized use 1995.
Trail 39, Chain O' Lakes			3.7				- "Access road" and fireline in 1961 (USDA 1961). -1970 aerial photos - "It was felt that 4x4 use was causing serious damage, but that vehicles under 40" were not causing serious damage at this time. This area has been managed this way for the past 3 years" and "The 40" width criteria permits distinguishing between trail cycles and larger vehicles (cars and trucks)," (USDA 1976a -Within 1977 BNF Travel Plan Map area closure 15 -Identified in various 1970's documents and			3.7				Reconstruction 1995 – erosion control: structures, seeding, some rerouting and narrowing (2300 letter, D. Campbell. 7/30/96).

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
							maps as “primitive roads”, “excavated fireline”, “pack trail”, “dozer trails”, etc. -1978 WARS rating identifies this trail, trail 330 and nearby fire roads as “highly impactful” and “separable” impacts.							
Fish Lake Peak			1.5				- 1933, 1957, 1972, 1974 topo. Maps - BNF Travel Plan Map. 1977 and within area closure 15. - Air photo 1970, line 8, #131, likely excavated during 1961 fires.			0.0				- Not on Forest trail system and not maintained. Some tread/trail may still be passable, but the junction/start of the trail is not evident from trail 39.

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Trail 168, Moose Creek		5.4					- Maps since 1933 - WARS rating worksheet #1 and notes 1-9-78 notes that 3 miles are “moderate” and “inseperable impacts” without explanation (Lindquist, Pandell, Banner, Strong, 1978), but 1974 Bud Moore field notes give no indication of impacts (Moore, 1974)		5.4					Puncheon structure removed in 2002.
Trail 40, Sign Creek		4.5					-On maps since 1933 in same location		4.5					Some tread loss in open meadow MP 3- 4.
Road 50571, Meyers Creek	3.0						-1978 Deerlodge Forest Map -1988 Deerlodge Forest Map -Interviews	.5			2.5			Existing road improved to Meyers Mine. Upper 2.5 miles of road subsequently closed to all motorized vehicles.
Road 78388, Copper Creek	1.9						-Interviews -1988 Deerlodge Forest Travel Map	1.9						No change



ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977
	Open Road	Open Trail		Rest. Road	Rest. Trail			Open Road	Open Trail		Rest. Road	Rest. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT	
Road 78389, O'Brian Mine	2.1						-Interviews	.8		1.3				1.3 mile of road is now a two-track trail. Bridge width at start of trail at Copper Creek limits use to ATVs.
Road 80, Frogpond	.5						-1978 Deerlodge Forest Map	.5						Some spot resurfacing
Road 8671, Miller Mine	.6						-1978 Deerlodge Forest Map	.6						Some spot resurfacing
Road, Whetstone Ridge	1.0						-1988 Deerlodge Forest Travel Map -Interviews							Road replaced by new nonmotorized trail on a different location. Road has been closed and is naturally revegetating.
<b>TOTAL</b>	9.1	86	25.4	0	0	0		4.3	47.5	27.03	2.5	37.8	2.25	