

# **Field Report of Wilderness Character**

Anaconda Pintler Wilderness

2013

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## Executive Summary

This report summarizes field measures of wilderness character collected in the Anaconda Pintler Wilderness on the Bitterroot and Beaverhead-Deerlodge National Forests in southwestern Montana. During summer 2013, Wilderness Institute crews hiked trails within and leading into the Wilderness and made detailed field observations of measures related to the qualities of wilderness character identified in the Wilderness Act of 1964: untrammelled, natural, undeveloped, and opportunities for solitude or primitive and unconfined recreation. The Wilderness Institute led eleven trips with 54 community volunteers and covered 238 miles of system trails and 3.7 miles of non-system trails.

### *Monitoring highlights include:*

- **Trail Coverage:** 93% (212 of 228 miles) of system trails within the Wilderness were monitored. Field crews also traversed 26 miles of trails leading into the wilderness, as well as 3.7 miles of non-system trails.
- **Weeds:** 170 weed patches from nine different species were recorded (75% within the Wilderness boundary). Canada Thistle, Tall Buttercup and Meadow Hawkweed were most prevalent (18%, 31% and 24% respectively, of all weed patches).
- **Wildlife:** 176 wildlife encounters were reported (85% within the Wilderness boundary). Canid species (e.g. coyote) were most prevalent (35%), followed by bear (22%). 60 pika were recorded at 35 different locations. The majority (73%) of encounters were indirect (e.g. tracks, scat, or other sign).
- **Erosion:** Erosion due to recreation was documented at 132 sites, all along streams. Eleven were located outside the Wilderness. 48 sites showed signs of moderate erosion, 72 had slight erosion, and 12 were severely eroded.
- **Installations and developments:** 195 installations and developments were reported, 159 (82%) within the Wilderness boundary. Developments recorded as “bridges” were most common (148), however analysis of photographs indicates that this category included culverts and trail structures across wet areas.
- **Signs:** 223 signs were encountered along trails, 152 within the Wilderness boundary. Most signs were trail junction/directions (54%), followed by recreational use (19%), and boundary signs (11%). Most signs were in acceptable condition (72% and 19% in good and faded-legible condition, respectively).
- **Trail width:** 73 deviations from single-track trail were recorded and collected as lines, representing 1.1 miles of impacted trails (< 1% of all system trails monitored). Braiding and double-tracks accounted for 74% and 18% of impacted trail locations.
- **Non-system trails:** 56 non-system trails or trail fragments covering 3.7 miles were mapped (94% within the wilderness boundary; 52% were incompletely surveyed). 43% were reported as an old route, 24% as newly created by recreation, and 18 were unclassified.
- **Solitude monitoring:** Using the new minimum national protocol, six monitoring zones were identified and sampling was conducted as routes allowed. Average number of trail encounters ranged from 0.25 people per hour in zone II up to 2.9 in zone IV. Opportunistic encounters included 62 separate groups, totaling 153 people (27 on horseback) and 13 packstock.

- **Trailheads and people encounters:** Vehicles were recorded for 14 of 17 trailhead samples. The highest vehicle numbers were on weekends at Moose Lake trailheads #28 and #29.
- **Noise intrusions:** A total of 69 noise sampling sessions were completed (24 morning, 27 midday, and 18 evening). No noise was heard during 30 (43%) of sessions, and more than one noise was heard during 17 (25%) of sessions. Additionally, 455 noise intrusions were opportunistically recorded across trails in the Wilderness, with 99% coming from airplanes.
- **Visual intrusions:** Only five visual intrusions were observed, including cities or towns (1), buildings (1), and dirt roads (3).
- **Campsites:** 86 campsites were recorded within the Anaconda Pintler Wilderness. An additional 5 were searched for and not found and 2 were recorded as naturalized and thus not inventoried. 9% of monitored campsites were scored as naturalized; 34%, 44% and 10% had light, moderate and heavy impacts (respectively) and a single campsite was extremely impacted.

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## INTRODUCTION

This report summarizes field measures of wilderness character in the Anaconda Pintler Wilderness on the Bitterroot and Beaverhead-Deerlodge National Forests in southwestern Montana. The Pintlers were first recognized as a Primitive Area in 1937, and the 158,615-acre Anaconda Pintler Wilderness was designated with the passage of the Wilderness Act in 1964. The primary mandate of the Wilderness Act, Section 4(b), states that “each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area.” Until recently, however, the lack of a consistent definition of wilderness character and standardized measures that can quantify its loss or preservation, precluded assessments of how stewardship decisions impacted wilderness character.

In 2009, in collaboration with the Aldo Leopold Wilderness Research Institute, the Forest Service, and several local non-governmental organizations, the Wilderness Institute developed protocols for selected field measures of the four qualities of wilderness character identified in the 1964 Act ([Pub.L. 88-577](#)) and described by Landres et al (2008) in *Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* (hereafter *Keeping It Wild*). This report summarizes 2013 field monitoring data in the Anaconda Pintler Wilderness for selected measures of the following four qualities: 1) untrammled, 2) natural, 3) undeveloped and 4) opportunities for solitude or primitive and unconfined recreation.

During summer 2013, Wilderness Institute crews hiked nearly every trail in the Anaconda Pintler Wilderness and made detailed observations related to these qualities. Measures of naturalness focused on invasive plants, wildlife, and lake and streambank erosion. Undeveloped measures included installations and developments (both recreational and non-recreational), signage, and trail closure devices. Measures of opportunities for solitude and primitive and unconfined recreation included trail conditions, non-system (user created) trails, encounters monitoring, campsite conditions, motorized noise, and visual intrusions. The single measure of the untrammled quality was opportunistic weed pulling by Wilderness Institute crews (all other measures of untrammled require non-field related work). Results for 18 features (attribute groups; see Appendix 1) are reported here, often accompanied by tables and figures.

The Wilderness Institute, which is part of the College of Forestry and Conservation at the University of Montana, founded its Citizen Science Program on the belief that including community members in on-the-ground stewardship of public lands builds community capacity, increases public involvement in nearby public lands, and improves the dialogue between local communities and managing agencies. Furthermore, declining federal budgets have resulted in widespread reductions in on-the-ground staff capacity, and collaborative, community-based efforts are potentially an important way to help wilderness managers meet their needs for wilderness character monitoring.

Since 2005, the Institute’s Citizen Science Program has recruited community volunteers to assist with field data collection. From June through August, 2013, Wilderness Institute field leaders led small groups of volunteers on multi-day backcountry trips, surveying all mapped trails within the Anaconda Pintler Wilderness as well as non-system (user-created) trails. Eleven trips were conducted with 54 volunteers.

Please note that this project emphasized collection of quantifiable field data appropriate for collection with GIS-based technology. Many aspects of wilderness character were not evaluated as part of this project, either because non-field measures were required (e.g. agency actions that impact trammeling or recreation opportunities) or because data collection was beyond the scope of this project (e.g. air and water quality data). This report does not attempt to infer how measured qualities of wilderness

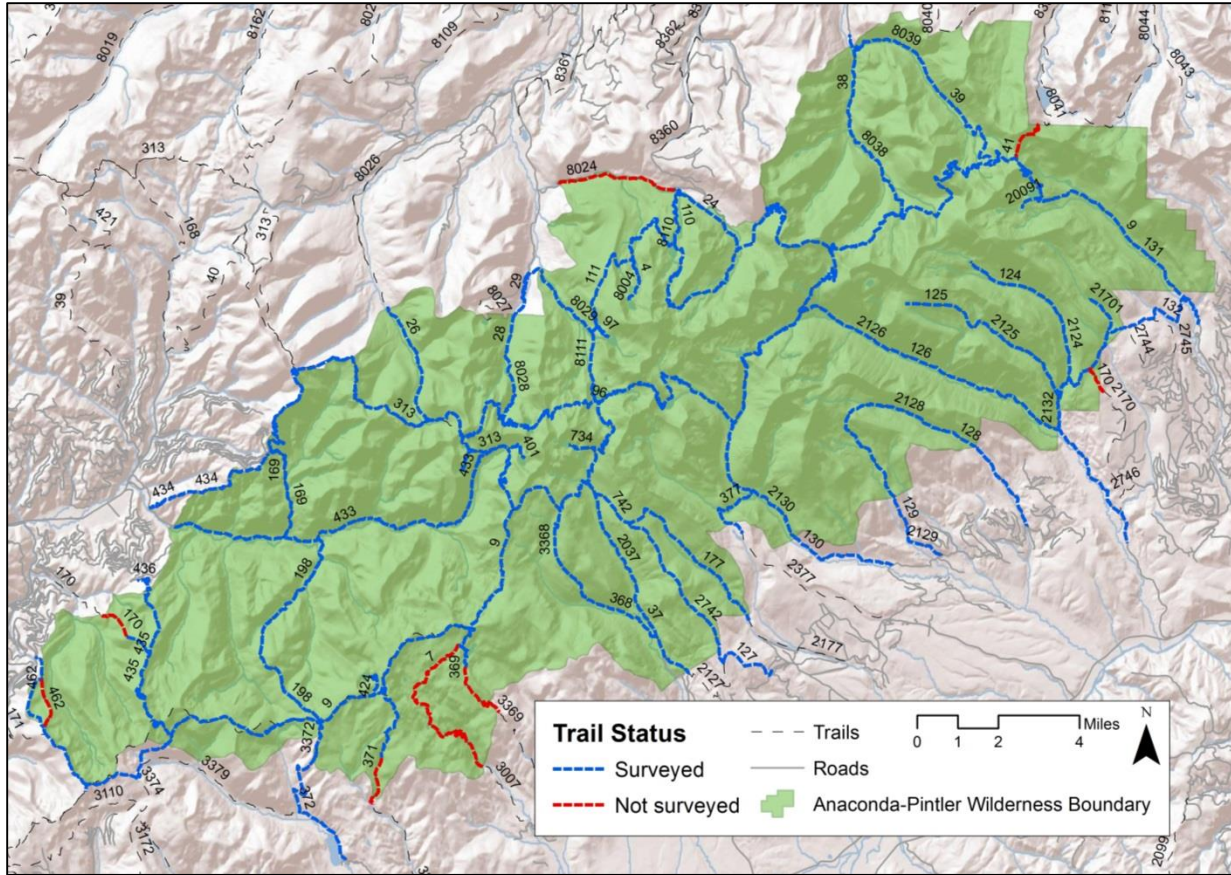
character may be changing over time, or evaluate the efficacy of current management approaches. To do so would require repeated monitoring efforts over a period of years, and the inclusion of non-field measures of wilderness character as outlined in *Keeping It Wild*. This report does, however, create a current baseline that will enable subsequent assessments to expose how certain measures of wilderness character may be changing. For a detailed description of wilderness character monitoring, please see: <http://www.wilderness.net/index.cfm?fuse=WC>.

This work was funded by the Forest Service, the National Forest Foundation, the University of Montana, and the Cinnabar Foundation. For more information please contact us at: [citizenscience@cfc.umt.edu](mailto:citizenscience@cfc.umt.edu) or (406) 243-6936.

## Trail Coverage

The Anaconda Pintler Wilderness has approximately 228 miles of system trails. Over the course of the 2013 field season, field crews traversed 212 miles (93%) of trails within the Wilderness boundary, not including 3.7 miles of non-system trails (NSTs; see p. 27 for more detail). In addition, 26 trail miles leading into the Wilderness were surveyed. For a variety of reasons, a small handful of trails or trail segments were not monitored. These are illustrated in Figure 1 and detailed here:

- #170 (East Fork Lamarche; eastern side of Wilderness) East Fork Lamarche south from junction with #132 to Wilderness boundary
- #170 (western end of Wilderness) from Forest Road 5764 up Swift Creek 0.9 miles inside Wilderness boundary
- #24 from Forest Road 5106 to trail #111
- #7 from Forest Road 1203 to Mystic Lake and #369 from Mystic Lake to Wilderness boundary
- #371 from spring south to Wilderness boundary and through to Plimpton Creek trailhead
- #41 Storm Lake Pass to Storm Lake
- #462 eastern alternate route



**Figure 1. System trails monitored within the Anaconda Pintler Wilderness, 2013.**

## Data Management

The following section describes steps taken to collect and analyze field measures of wilderness character in the Anaconda Pintler Wilderness: (1) protocol development, (2) field data collection, (3) data analysis and mapping, and (4) data reporting.

### ***Protocol Development***

The Wilderness Institute has been involved in mapping wilderness attributes since 2005 and has developed standardized protocols for that purpose. In 2009, measurement protocols and database design were expanded to specifically monitor selected elements of wilderness character as described in *Keeping It Wild*. These new and expanded measurement protocols were implemented within a menu-based data file containing all of the desired attributes with predefined categories for data entry. This data dictionary file was then loaded onto Trimble GeoExplorer units, utilizing Trimble Pathfinder software. A full list of the collected attributes is given in Appendix 1, along with their descriptions. Detailed protocols are available upon request.

Protocols were designed to ensure that data collected was compatible with pre-existing agency databases. In particular, invasive species and recreation site data collection protocols were carefully cross-walked with agency database requirements.

As wilderness character monitoring gains increasing traction across agencies that manage wilderness, protocols are being continuously refined and improved to reflect emerging standards. With the help of our agency partners, we have attempted to stay abreast of both emerging standards and regional priorities, and modify our field data collection accordingly. In 2013 our data collection included piloting new nationally endorsed solitude monitoring protocols, as well as a second year of standardized soundscape monitoring.

We have a strong interest in maximizing the impact of our on-the-ground presence, and have incorporated specific data collection protocols in response to partner research interests or needs. For example, the Craighead Institute (<http://www.craigheadresearch.org/pika-research.html>) is compiling observations of pika across their native range in an effort to understand possible long-term impacts of climate change on this high-elevation species. Since 2011 we have incorporated pika observations into our wildlife protocols, and provide the Craighead Institute with this data at the end of the field season. Not only does this add valuable observations to this study, it also engages volunteers in supplementary citizen science projects, further corroborating the importance of community-powered contributions to wilderness stewardship.

### ***Data Collection***

Data was collected between early June and early October 2013. Field crews recorded observations of each attribute when encountered and entered them into GPS units using the data dictionary. All attributes were mapped as point, line, or area features. Photos were taken of attributes, where relevant. After each trip, GPS data and digital photos were checked for quality control and uploaded to a network server. A Microsoft Excel database, as well as a geodatabase containing all attribute data and photos is available upon request. Field leaders summarized additional observations not captured by data collection protocols in trip reports. For example, snow cover, general trail conditions, route deviations, and any additional context are detailed in these reports. A summary of these qualitative findings, by trail number, is found in Appendix 2.

Attempts were made to revisit weed patches that had been previously inventoried, and field leaders carried maps with site locations and species. Although pre-existing data for isolated weed patches was used to inform search efforts, the high density of weed patches in certain areas made patch-specific re-inventory impractical. Instead field crews monitored all encountered patches, with an eye towards locating all species that had previously been recorded in that area.

Forest Service partners provided data on pre-existing recreation sites, and field crews used maps with recreation sites to revisit known sites, and to collect data on any additional sites encountered. In addition to electronic data collection, field leaders filled out recreation site inventory forms (see Appendix 4), in accordance with Forest Service procedures.

### ***Data Analysis***

GPS files were differentially corrected using Trimble Pathfinder Office software (Trimble Navigation Limited 2009). Differential correction is a process in which GPS coordinate data can be compared with a

fixed spatial reference and adjusted to reduce any systematic error in position that often occurs with field GPS data. After this process was completed and data for each attribute group combined from individual GPS units, all data were imported into a spatial geodatabase using ArcGIS (ESRI 2010). All monitoring data was re-projected into North American Datum 1983 as Universal Transverse Mercator (UTM) grid coordinates in zone 12. All spatial analyses were performed using ArcGIS (ESRI 2010). Travel route and special designated boundary information, including designated trails and roads, were imported from the National Forest Geospatial Library. Monitoring attribute summaries are provided in a combination of tables, figures, and maps.

### ***Data Reporting***

This report summarizes field data collected in 2013, and presents visual and/or numerical data from measures related to the four primary qualities of wilderness character (see Appendix 1). Note that this report does not summarize every attribute collected; for example, much more detail was collected for weeds, campsites, and wildlife observations than is summarized here. Furthermore, many attributes have associated pictures that are not compiled in this report. A comprehensive dataset and photographs of collected attributes are available upon request. Please note that this report does not attempt to discern trend or patterns of change, and represents a snapshot of on-the-ground conditions in the Anaconda Pintler Wilderness in 2013.

# FIELD MEASURES OF WILDERNESS CHARACTER

The following sections describe field measures used to assess the four primary qualities of wilderness character identified in the Wilderness Act of 1964: untrammeled, natural, undeveloped, and opportunity for solitude or primitive and unconfined recreation. After a brief explanation of each wilderness character quality, the data collected for each indicator is summarized. Please note that some aspects of wilderness character were not evaluated as part of this project (see introduction). A comprehensive list of database attributes and the associated qualities of wilderness character can be found in Appendix 1.

## I. UNTRAMMELED QUALITY

Wilderness is “an area where the earth and its community of life are untrammeled by man” (Wilderness Act, 1964). Untrammeled wilderness has come to signify areas free from modern human control and actions that manipulate nature, even when taken to restore natural systems (Landres et al., 2008). For this project, weed control action constituted the only trammeling data collected. Actions taken by field crews to manage weed infestations diminish the untrammeled character of the Anaconda Pintler Wilderness. Agency actions that affect the untrammeled quality of the Wilderness (e.g. any action that disrupts the naturally functioning ecosystem or the unencumbered nature of the area, such as fire suppression, herbicide treatment of invasive plants, and fish stocking) are beyond the scope of this field-based study and are not reported here.

### Weed Control Action

Hand pulling was undertaken on 24 of 169 patches encountered, 17 of which were within the Wilderness boundary. Twelve of these patches were Tall Buttercup, six were Spotted Knapweed, 4 were Oxeye Daisy, and 2 were Meadow Hawkweed (data not shown). Table 1 summarizes weed action and Figure 2 shows locations of patches where weed control actions were conducted.

**Table 1. Number of weed patches where weed control action was taken, and proportion of patch pulled.**

<b>Control Action</b>	<b>Count of Weed Patches</b>
none	145
0-10% pulled	3
11-20% pulled	1
71-80% pulled	1
81-90% pulled	3
91-100% pulled	16
<b>Grand Total</b>	<b>169</b>

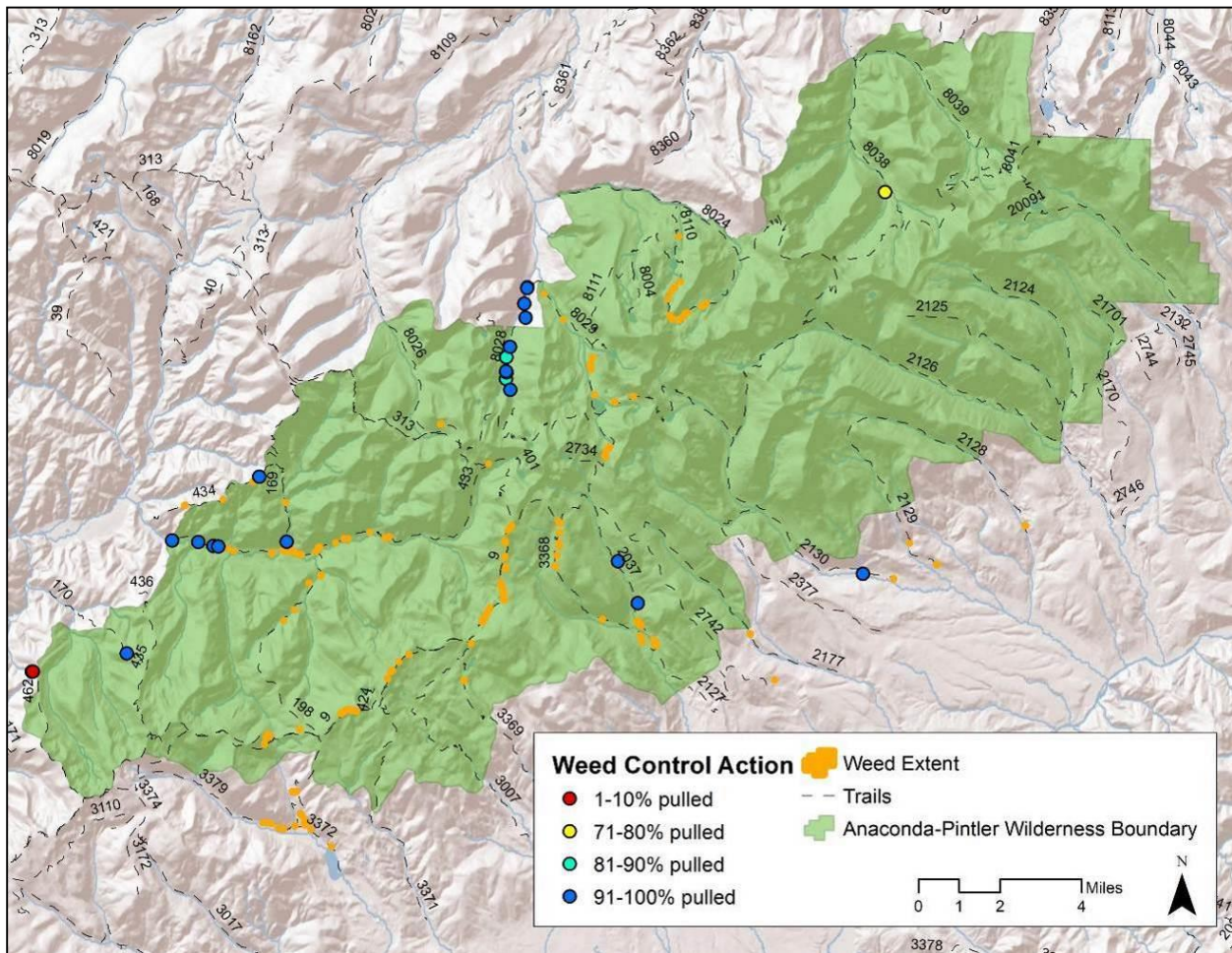


Figure 2. Location of pulled weed patches and extent of mapped weed infestations.

## II. NATURAL QUALITY

Natural quality reflects the extent “wilderness ecological systems are substantially free from the effects of modern civilization” (Landres et al., 2008). Natural quality is assessed by monitoring attributes that reflect the integrity of ecological systems, such as species composition and physical characteristics. For this project, we identified three measures of naturalness appropriate and feasible to monitor with field protocols: 1) distribution and prevalence of non-indigenous plant species (weeds) along trail systems; 2) visible sign of select wildlife populations (scat and/or other signs of carnivores, bears, other megafauna); and 3) user-created erosion associated with lakes and streambanks. Within these indicator categories, multiple attributes were recorded that capture the detail and context of weed infestations, wildlife signs, and erosion events (see Appendix 1). Please note that not all attributes are summarized in the following sections, but are available in the associated data files.

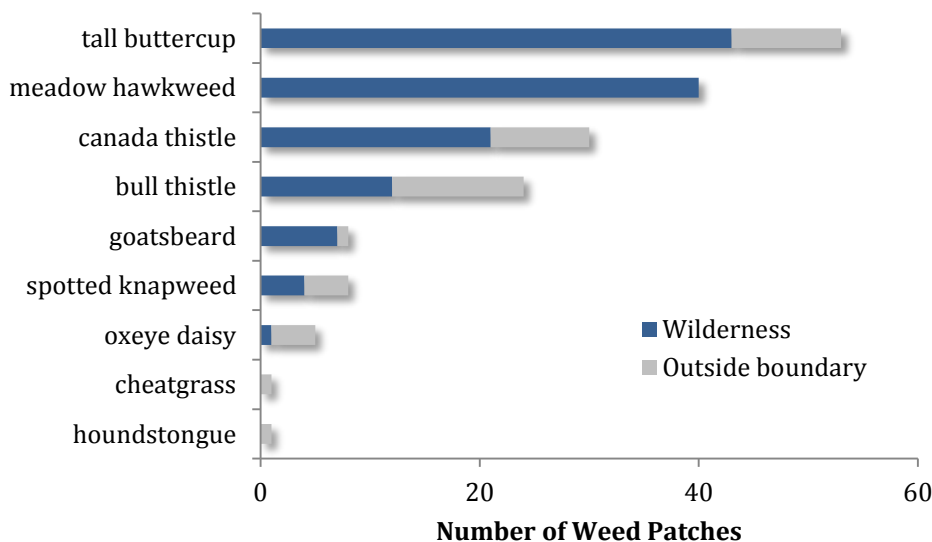
## **Weeds**

The invasion and spread of non-native weeds is a growing problem across western landscapes, and poses a serious threat to native biodiversity. Weeds have few, if any, natural controls on their reproduction and distribution, and occurrences closely follow areas of highest use and disturbance. By recording weed type, location, size and intensity of the infestation, land managers can identify priority areas for treatment and eradication. Furthermore, ecological, topographic and physical associations of weed patches can expose patterns of invasion and further understanding of the multiple factors that influence the spread of weeds in remote areas.

In the following section we highlight and summarize weed monitoring data; please note that we do not provide visual or graphical summaries of all attributes collected. Patch-specific information, as well as additional attribute data, is available in the associated electronic database. Weed patches occurring on trails leading into the Anaconda Pintler Wilderness but outside the Wilderness boundary are included (when collected) since they contribute to overall trail conditions, and could be a source for future infestations if left untreated. Please note, however, that not all trail segments from trailhead to the Wilderness boundary were covered (see Figure 1, above), and that monitoring was focused along trails and therefore patches not visible from the trail may have gone undetected.

### ***Weed Species and Patch Size***

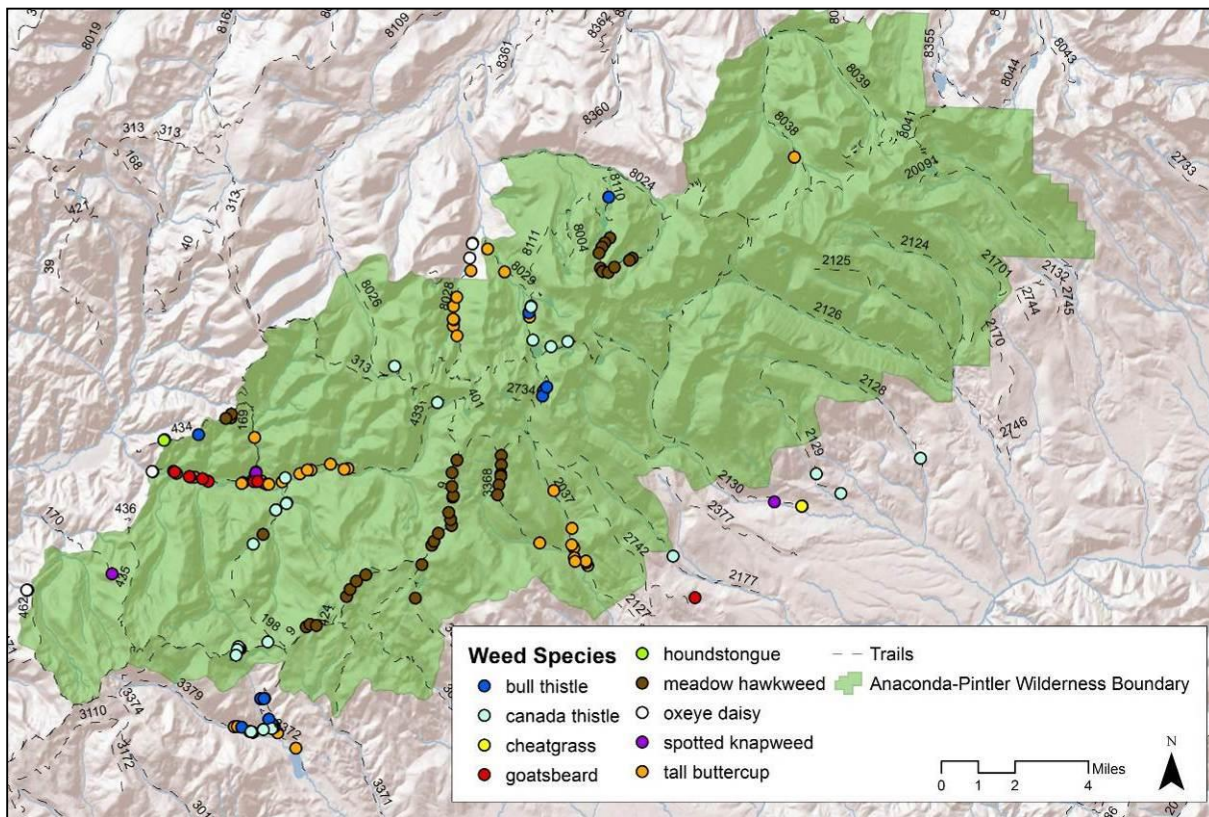
A total of 170 weed patches were recorded, representing 9 species (Figure 3). Of these, 75% were recorded within the Wilderness boundary, while the remaining 25% were found on trails leading into the Wilderness. Ten or fewer patches of Goatsbeard, Spotted Knapweed and Oxeye Daisy, and no patches of Cheatgrass or Houndstongue, were recorded within the Wilderness boundary. Canada Thistle, Tall Buttercup and Meadow Hawkweed represented 18%, 31% and 24% respectively of all recorded weed patches.



**Figure 3. Number of weed patches by species.**

Distinguishing between invasive and native hawkweeds can be exceptionally difficult, and field leaders noted some uncertainty in their ability to positively identify Meadow (invasive) versus Slender (native) Hawkweed. A sample was collected in the field, and taken to the Missoula County Weed District where the Weed District Manager keyed it out to Meadow Hawkweed. As Figure 4 illustrates, this species was present mostly along Trail #9 and at higher elevations. Please note, however, that because of uncertainty in field identification, not all patches of Meadow Hawkweed may have been recorded and it is possible that some recorded patches may in fact be Slender Hawkweed.

Weed infestations showed a strong pattern of intra-species spatial associations: commonly, multiple patches of the same species occurred along discrete trail segments (Figure 4). Notable exceptions, where multiple species were found intermingled, were East Fork Bitterroot trail #433 and Mussigbrod Lake area trails #372/379.



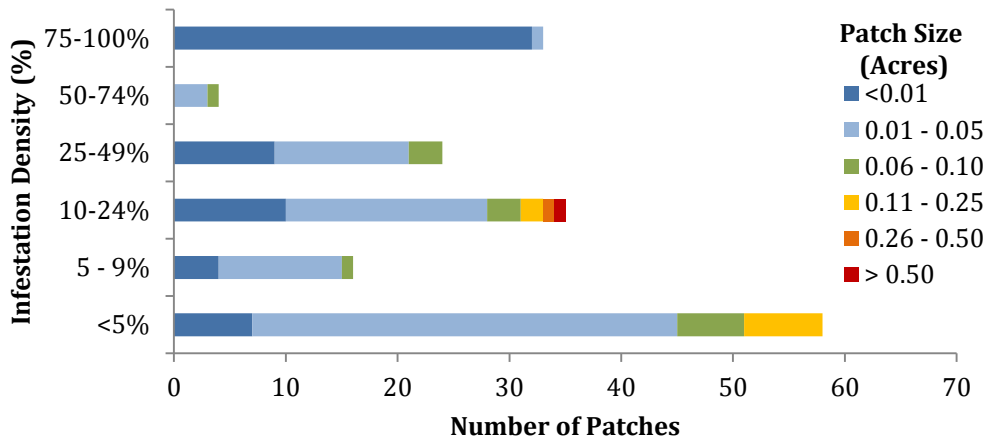
**Figure 4. Distribution of observed weed species across the Anaconda Pintler Wilderness.**

Whenever possible, the spatial extent of weed patches was measured in the field by walking the patch perimeter with a GPS. For patches recorded as a point or line, an ocular estimate of patch width was recorded and the total patch area was calculated using GIS analyses. A total of 4.8 acres of weeds were mapped, with 4.15 acres occurring inside the Wilderness boundary. All patches recorded were less than 1 acre in size, with 94% of patches estimated as smaller than 0.1 acre. Both patches over 0.25 acres in size were Tall Buttercup, with the largest estimated at 0.76 acres and occurring along trail #37.

**Spatial Distribution, Weed Density, and Acres Infested**

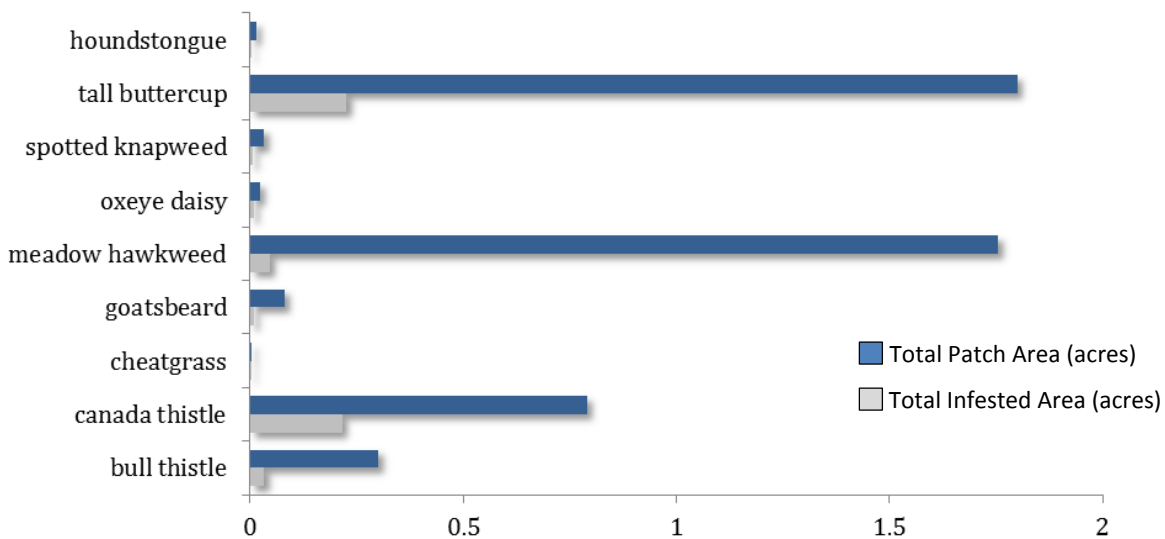
The spatial distribution of each weed patch was categorized as individual (a single plant), clumpy (one dense patch), scattered-even (evenly distributed across the infestation area), scattered-patchy (distinct patches scattered across the infestation area), or linear (along a trail or stream). The percent cover of weeds within each infestation was visually estimated from 0-100%. To account for any differences in how spatial parameters were collected in the field, the acres infested was estimated as the patch size multiplied by patch density. For example, a large scattered-patchy patch could also be recorded as several smaller distinct “clumpy” patches, but density estimates standardize the calculation of total infested area.

The vast majority of patches (78%) had weed densities <50%. All patches with weed density over 50% were small (<0.10 acre), whereas patches .10 - 1 acre in size had densities of 25% or less (see Figure 5). Significantly, all but three patches with density 75-100% were single individuals, and all but one of these three had a patch size < .01 acre.



**Figure 5. Number of weed patches by density and size.**

After accounting for the density of weeds within documented infested areas, there were an estimated 0.55 total acres infested, including 0.38 acres infested inside the Wilderness. The majority of acres infested were Tall Buttercup (0.23 acres) and Canada Thistle (0.21 acres), accounting for 42% and 38% (respectively) of total acres infested. All other weed species had infested areas of <0.10 acres (Figure 6).



**Figure 6. Total weed patch area and total infested area (in acres) by species. Please note that this includes patches found outside as well as within the Anaconda Pintler Wilderness.**

### ***Primary and Secondary Disturbance Types***

Weed patches are often associated with disturbance. We recorded up to two disturbance types that were present in the area and likely vectors of the infestation. The primary disturbance is the most likely vector for infestation, and the secondary disturbance reflects the broader disturbance matrix that may be present. For example, a weed patch found along a trail that passes through a burned area would have “trail” and “fire” listed as the respective primary and secondary disturbances.

The primary disturbances associated with most mapped weed patches were trails (96%; Figure 7). The remaining patches were associated with trailheads and stock use. Secondary associations were reported for 59 weed patches and were primarily stock use (59%) and recent flooding (19%).

Trails are the primary access routes through the Anaconda Pintler Wilderness, and it is important to recognize that the high proportion of weeds associated with trails is partly a reflection of sampling bias, although off-trail areas were sampled if any weed patches were opportunistically encountered. Nonetheless, the data clearly show that weeds commonly occur in close proximity to trails, trailheads, and areas of livestock use, and that these serve as important vectors for overall weed dissemination within the Wilderness.

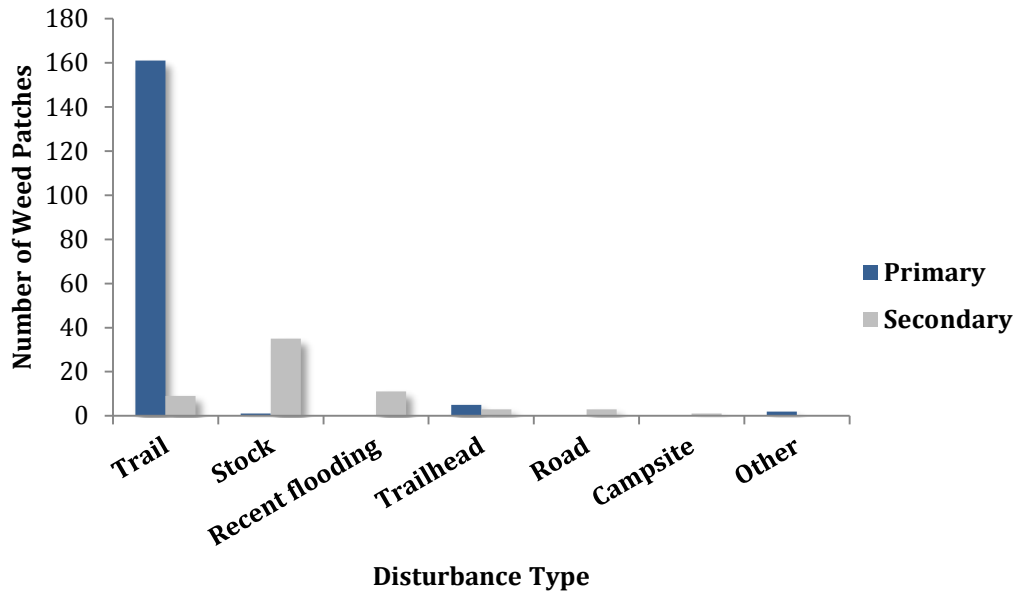
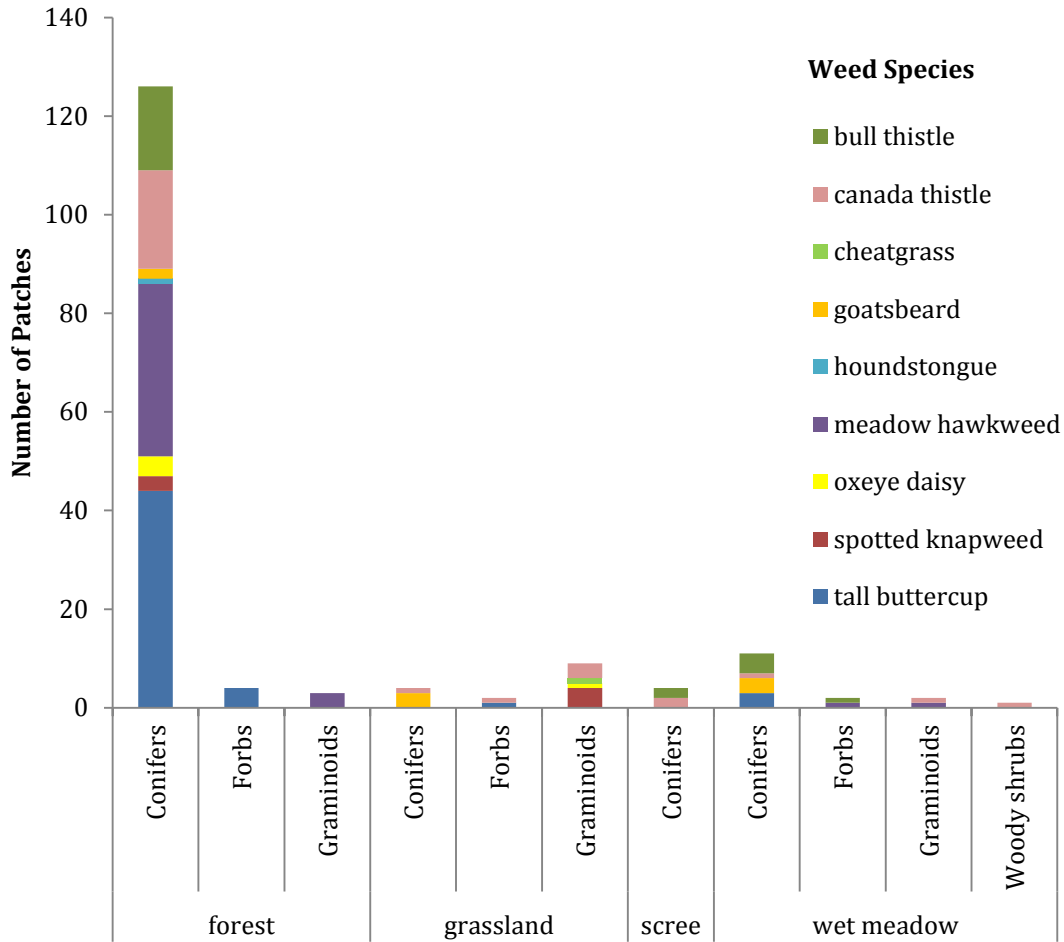


Figure 7. Primary and secondary disturbances associated with weed patches.

### ***Ecological Associations***

Ecological associations, including ecosystem type, dominant life form, and habitat were recorded for each weed patch observed to provide an ecological context for understanding weed distributions. Please see Appendix 1 for comprehensive list of ecological attributes collected and the associated database for detailed data on ecological attributes not covered in this report.

The majority of weed infestations (79%) were encountered in forest (>10% tree cover), with the remaining found in wet meadow (9%), grassland (9%), or scree (2%; Figure 8). However, across ecosystem types, the dominant life forms within the area of infestation were conifers (86%), graminoids (8%), forbs (5%), and woody shrubs (1%). Dominant life form information was missing for 2 patches. Some weed species were associated with specific life forms, for example, Tall Buttercup with conifers and forbs.



**Figure 8. Ecosystem type and dominant lifeform associated with weed species.**

***Distance to Water***

To assess basic physical associations with mapped weed patches, we measured distance to water in 3 classes (0-10 ft., 10-50 ft., and > 50 ft.). The majority (86%) of weed patches were located > 50 feet from water (Figure 9). Consistent with observed water-mediated disturbance, most patches < 50 feet from water were Tall Buttercup (34%), Meadow Hawkweed (26%), Canada Thistle (15%), and Bull Thistle (14%). Nine patches had no water distance information recorded.

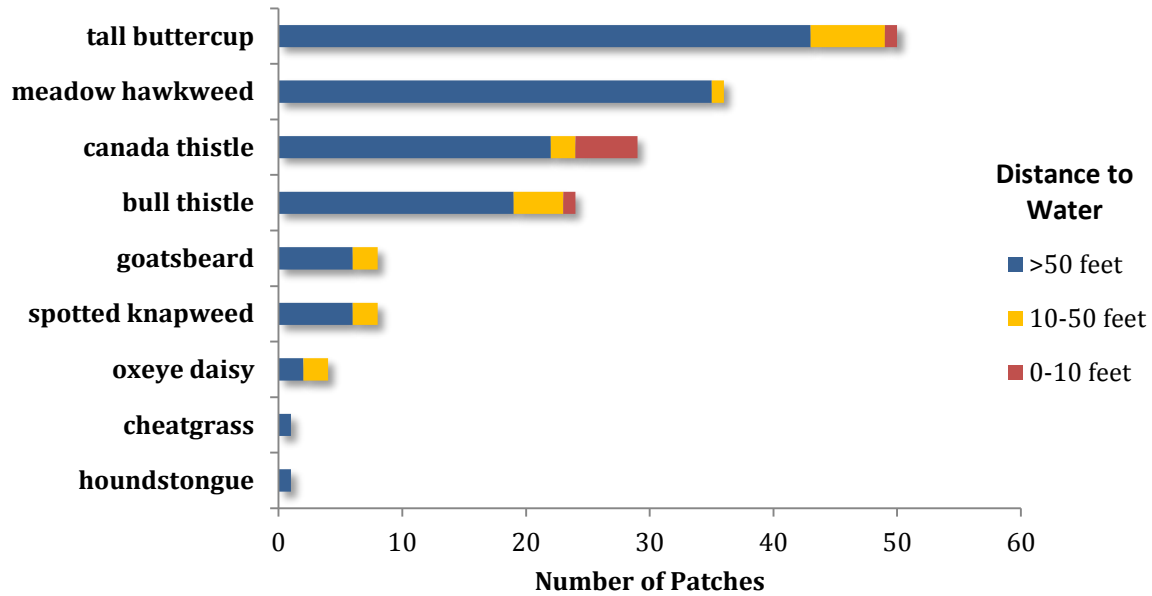


Figure 9. Distance from weed patches to water by species.

### Wildlife Encounters

Trails represent important corridors of travel for many wildlife species. We documented wildlife use of all trails within the Anaconda Pintler Wilderness by recording direct and indirect wildlife encounters with focal species (wolves, mountain lions, lynx, bobcat, wolverine, fisher, marten, bear, bighorn sheep, mountain goats, porcupine, hoary marmots, pikas, mule deer, elk, moose, and owls). Wildlife was identified by species if possible, and otherwise classified by family or major group (e.g. bear, canid, felid). The type of encounter was recorded as a sighting (e.g. visual), auditory, track, or scat. Scat and track data were only recorded for canids, felids and moose when they could be positively identified. Photos were taken when possible to verify identification, and are available upon request.

Given that nearly all monitoring occurred on trails, this attribute documents relative use along trails, not wildlife distributions across the Anaconda Pintler Wilderness. Also, sampling is opportunistic, and the number of encounters does not equate to the number of individuals, since one individual is capable of more than one sign (e.g. multiple scats along a trail segment may belong to one individual), or type of sign (e.g. tracks and scat).

### Wildlife Species & Encounter Type

A total of 176 wildlife encounters were reported (Figure 10); 149 (85%) of these were within the Wilderness (Figure 11). Canid species (e.g. coyote) were most prevalent (35%), followed by bear (22%). The majority (73%) of encounters were indirect (e.g. tracks, scat, or other sign; Figure 11). The two “other” observations included a black bear skull found on the East Fork Fishtrap trail (#241), and evidence of bear activity (e.g. destroyed anthill and claw marks).

One fisher was sighted on August 11<sup>th</sup> in the Flower Lake areas. It was reported as being “very dark with a 14 inch tail” and approximately “36 inches in length.” On July 12<sup>th</sup>, a herd of 20 elk cows and calves were observed near Ripple Lake (#403). Pika were reported in association with many higher-elevation talus slopes across the Wilderness, with a total of 60 individuals reported at 35 different locations (Figure 11). All other encounters included 2 or fewer individuals.

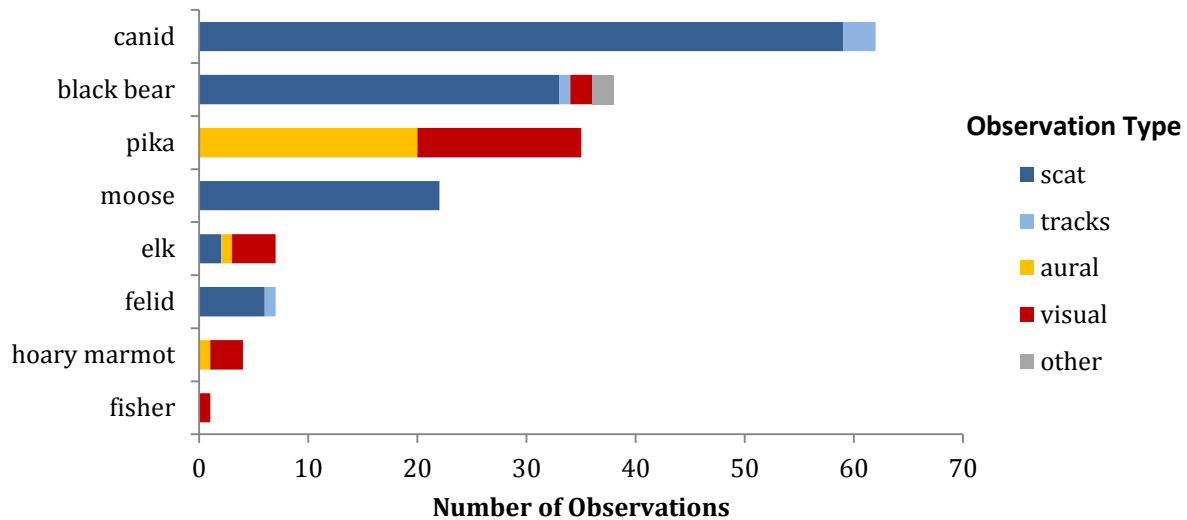


Figure 10. Number of wildlife encounters by species or family and observation type. Please note that some observations consisted of more than one individual (see text, above).

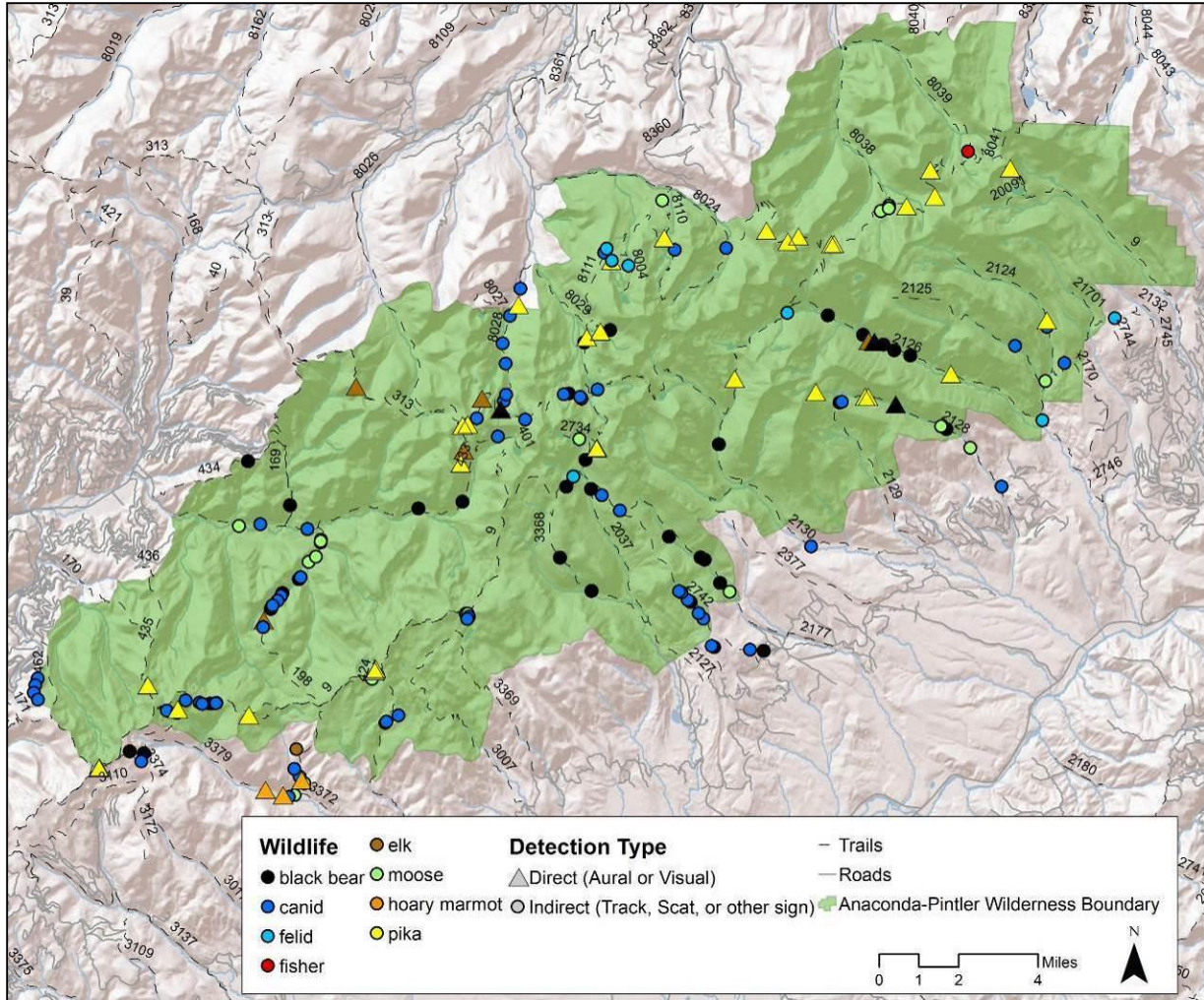


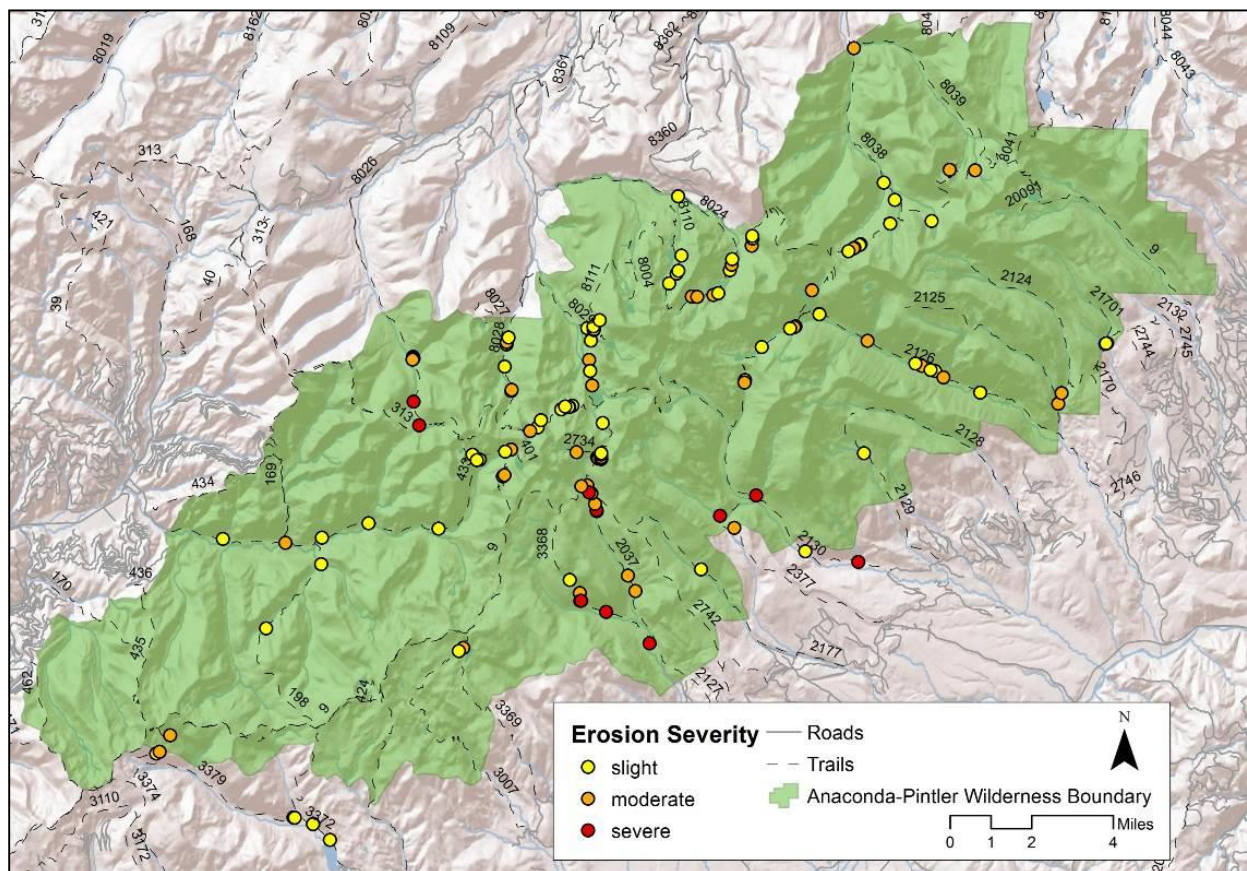
Figure 11. Location of wildlife encounters in the Anaconda Pintler Wilderness, 2013.

## **Water Erosion**

Wilderness character monitoring included documenting erosion events along waterbodies that were a result of recreational use (please note that erosion mediated by uncontrolled run-off along the trail was not monitored here, but is captured in Trail Width and Condition, below). Impacted areas were categorized by landform as stream, spring, wetland, pond, or lake. The width of streams was measured at bankfull height. For wetlands, ponds, and lakes, size was estimated in acres. For each impacted waterbody, erosion severity was categorized as slight, moderate, or severe (please refer to protocols available with supplementary materials for detailed descriptions of categories). Photos were taken of all documented erosion sites and are available upon request.

### ***Landform and Erosion Severity***

Erosion due to recreation was documented at 132 sites, eleven of which were located outside the Wilderness (Figure 12). Forty-eight sites showed signs of moderate erosion, 72 had slight erosion, and twelve were severely eroded. All erosion sites in the Anaconda Pintler Wilderness were documented along streams. Additional measurements, including stream width, are available for each erosion point in the associated database.



**Figure 12. Location of erosion sites encountered and severity of erosion within and around the Anaconda Pintler Wilderness.**

### **III. UNDEVELOPED QUALITY**

Undeveloped quality is the third of four primary elements of wilderness character found within the language of the 1964 Wilderness Act. This quality refers to the extent to which “wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern occupation” (Landres et al., 2008). Non-recreational developments such as installations and signs are considered to affect the undeveloped quality of wilderness character. It is important to note that recreationally-focused developments, such as trails, campsites, shelters, etc. are considered in the next section, under the solitude or primitive and unconfined quality of wilderness character. This distinction is made so that developments are not double-counted under both qualities (Landres et al., 2008).

#### **Installations and Developments**

Types of installations and developments were reported in the following categories: bridge, restroom, corral, dam, repeater, fence, old mine, old cabin, lookout, pole stash, cairn, hitch rail, cache, insulated wire, mine adit, mine pit, mine trench. Photos were taken of all reported developments and are available upon request.

#### ***Development Type***

A total of 195 installations and developments were reported, 159 (82%) within the Wilderness boundary (Figures 13 and 14). Developments recorded as “bridges” were most common (148 total), however analysis of photographs indicates that this category was broadly used, and included culverts and trail structures across wet areas. Unfortunately, our data dictionary did not distinguish between these smaller features and proper bridges. Associated photos are available upon request if further clarification is required.

Twenty-seven cairns, six old cabins, five fences, four pole stashes, two mine pits and one corral were also recorded. One development, presumed to be an excavated platform for a wall tent, was classified as “other”.

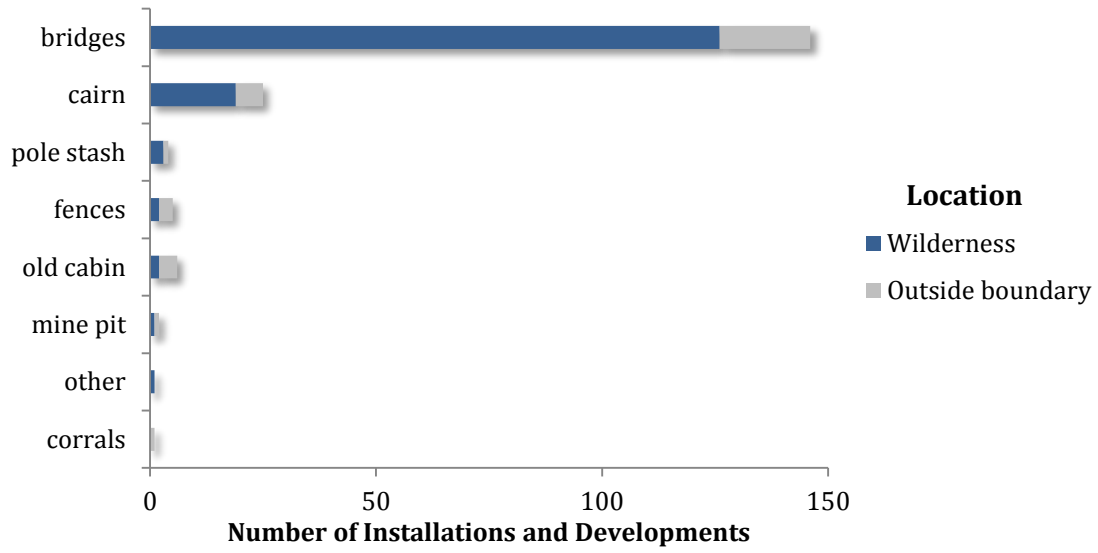


Figure 13. Number of installations and developments by type and location.

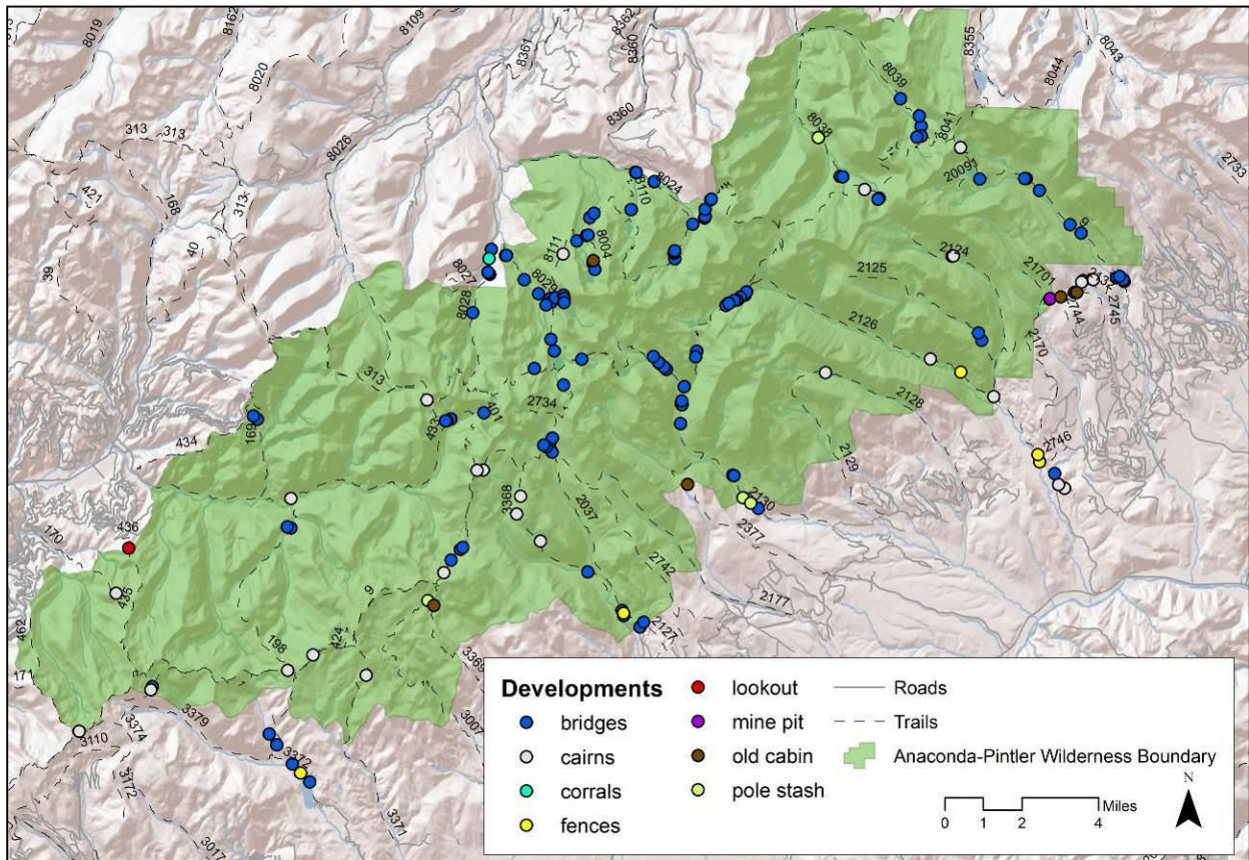


Figure 14. Location and type of installations and developments.

## Signs

All signs were noted by type and condition. Sign types included: trailhead, trail junction, interpretive, trail markers, flagging, survey marker, recreational use sign (i.e. allowable uses/closures), boundary, user-created, other, and unclear. Sign condition was categorized as: poor condition, vandalized-legible, vandalized-illegible, missing (post with no sign), faded-illegible, faded-legible, or good condition. Sign source was also assigned as user-created, agency-created or unclear. Signs with words were photographed for reference (digital files of sign photographs are available upon request).

### Sign Type and Condition

A total of 223 signs were encountered along trails, 152 of which were within the Wilderness boundary. Most signs were trail junction/directions (54%), followed by recreational use (19%), and boundary signs (11%). The remaining 16% included trail and trailhead markers, unclear signs, survey markers, and temporary flagging. Most signs were in acceptable condition (72% and 19% in good and faded-legible condition, respectively), while 1% each were faded-illegible, vandalized-legible, or vandalized-illegible. Figures 15 and 16 numerically and spatially depict these attributes.

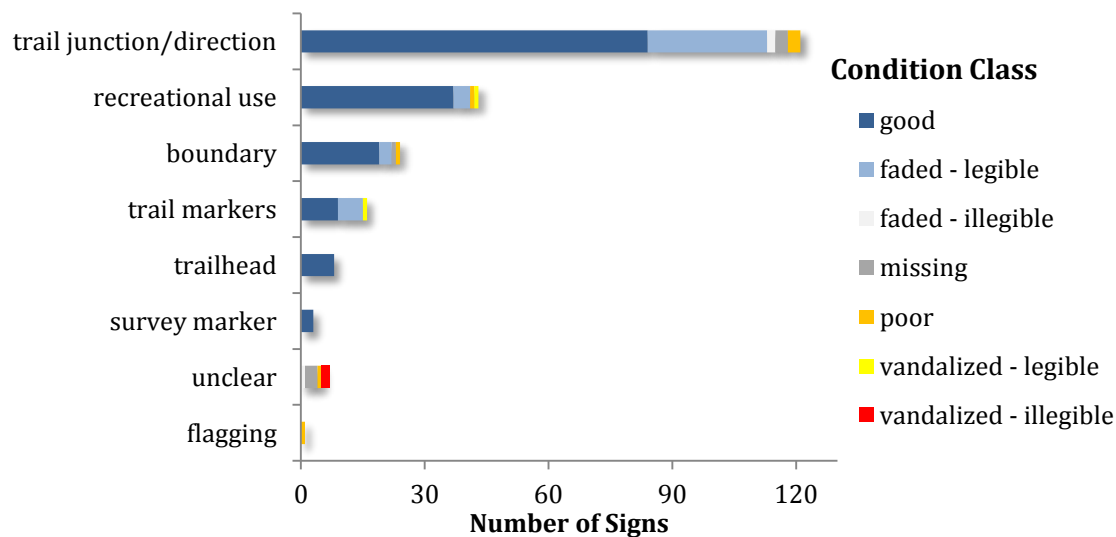


Figure 15. Number of signs by type and condition.

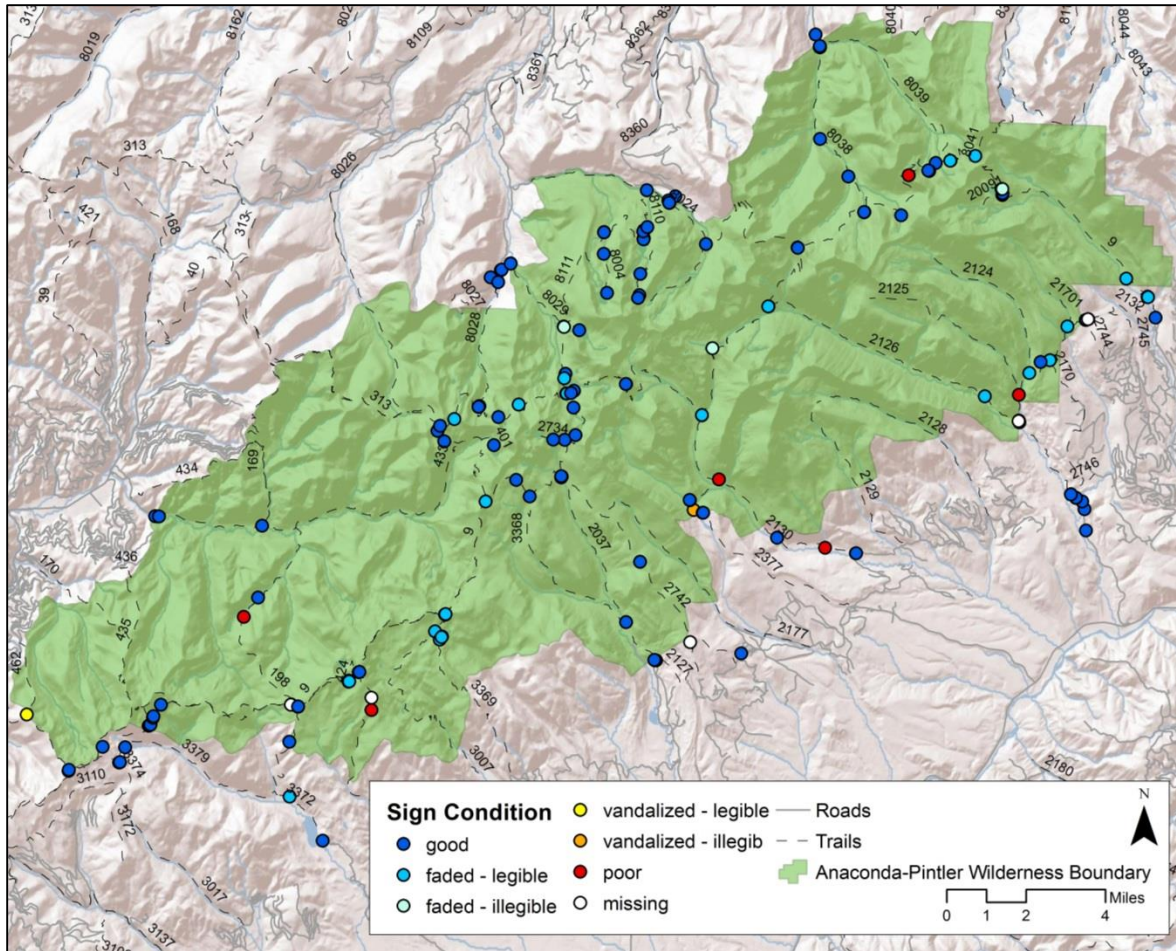


Figure 16. Location and condition of signs.

### Trail Closure Devices

Devices used to implement trail closures were reported according to the following categories: locked gates, unlocked gates, berms, boulders, or fences.

### *Trail Closure Type and Evidence of Violations*

No trail closures were recorded in the wilderness.

## **IV. SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION QUALITY**

Solitude or primitive and unconfined recreation quality is the last of four primary elements of wilderness character found within the language of the 1964 Wilderness Act. This quality refers to the extent to which “wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation” (Landres et al., 2008), and assesses recreationally-focused developments, such as trails, restrooms, shelters and campsites. Measured attributes that reflect this quality are: trail width, non-system trails, evidence of motorized or mechanized vehicle use, encounters with other users on trails, trailhead use, motorized noise, visual intrusions from developments outside of the Wilderness, and campsite characteristics and impacts.

### **Trail Width and Condition**

Trail conditions were recorded for trails leading into and within the Anaconda Pintler Wilderness (see trail coverage map, Figure X, above). Observations were made documenting places on trails where recreational use appeared to be impacting trail conditions. This field was also used to capture severe trail erosion events that result in significant impacts to either user experience (e.g. deep gullies make trail navigation difficult) or the natural environment surrounding the trail corridor (e.g. erosion is significantly impacting adjacent areas). When possible, the length of impacted trail was measured from point and line data recorded in the field. Please also see additional trail condition details provided in qualitative trail data summarized in Appendix 2.

#### ***Trail Width***

A total of 73 deviations from single-track trail were recorded and collected as lines, representing 1.1 miles of impacted trails (less than 1% of all system trails monitored). Braiding and double-tracks accounted for 74% and 18% of impacted trail locations. Figure 17 shows the location of impacted trails.

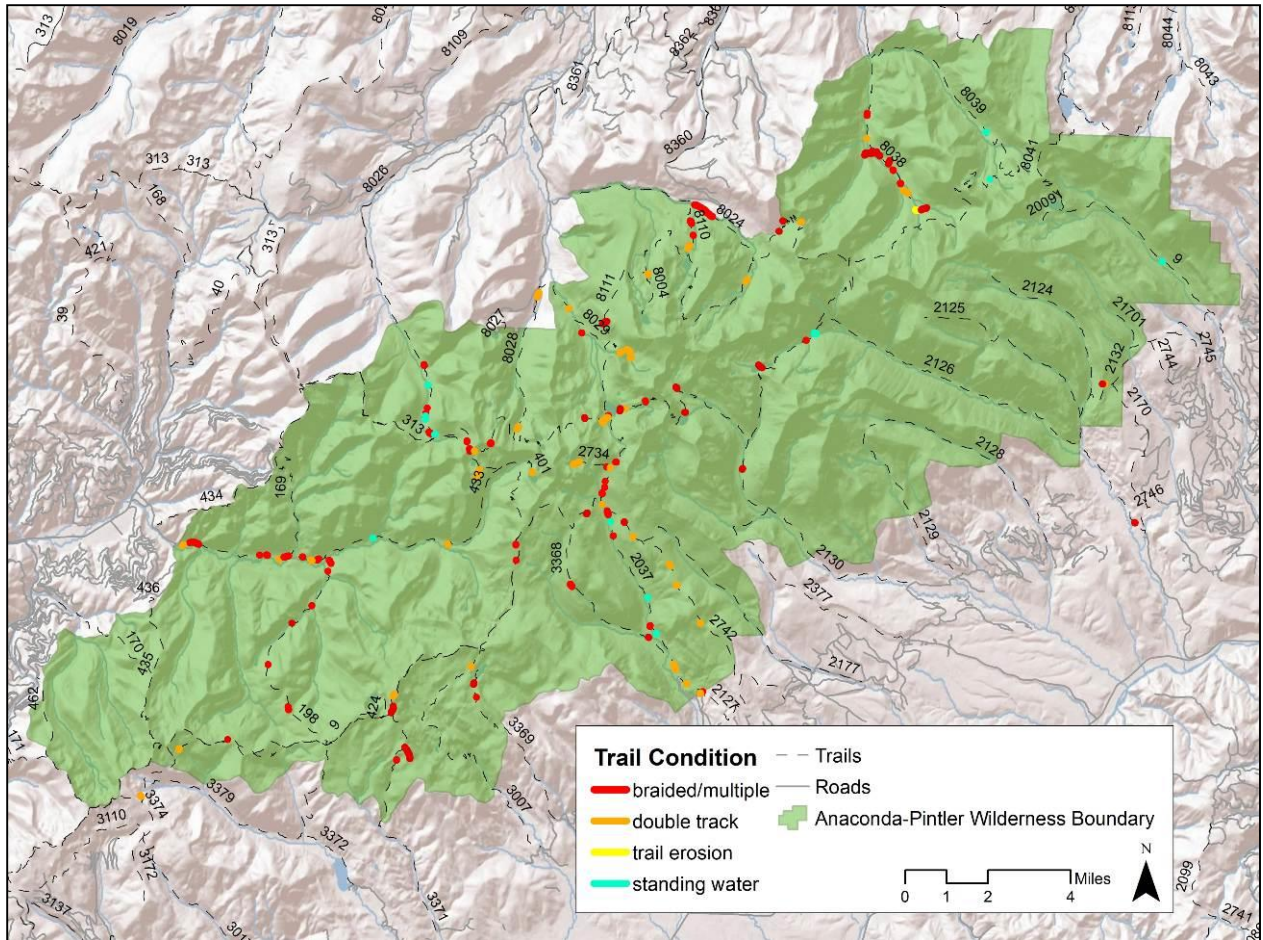


Figure 17. Trail width by condition category. All other trails were single track.

## Evidence of Mechanized and Motorized Use on Trails

Both mechanized and motorized use are prohibited in designated Wilderness, but violations do occur. The type and amount of motor vehicle, equipment, or mechanical transport use impacts the undeveloped quality of wilderness character (Landres et al., 2008). Evidence of mechanized or motorized use was monitored on all trails.

### *Type of Mechanized or Motorized Tracks*

Field crews found no evidence of mechanized or motorized use in the Anaconda Pintler Wilderness.

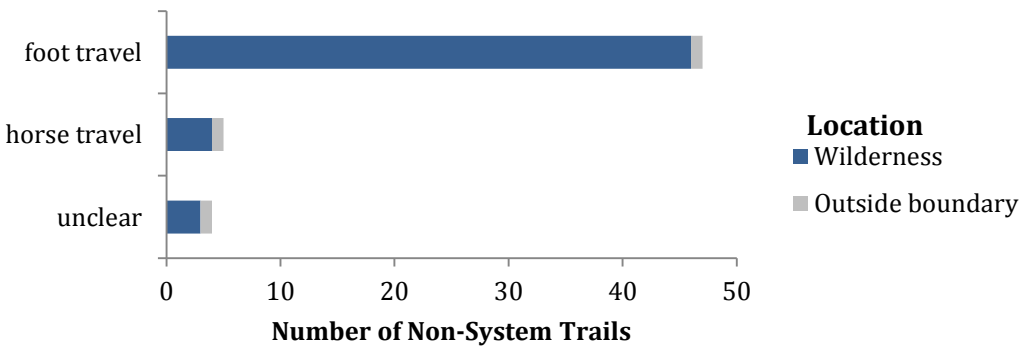
## **Non-system Trails**

Non-system trails (NSTs) are generally user-created and are not part of the official Forest Service trail system. When NSTs were encountered, the trail type was categorized as: motorbike, ATV/UTV, horse travel, foot travel, or unclear. The origin of each NST was classified as either a new route created by recreational use, or an old road from historic mining, fire access, or logging activities. The start of each NST was recorded and, when possible, the entirety of the trail was mapped (however, time constraints in the field commonly limited full documentation of NSTs).

### ***Non-system Trail Type, Origin, and Monitoring Status***

A total of 56 NSTs or trail fragments covering 3.7 miles were mapped in the field (Figures 18 and 19). The majority (94%) of these were within the Wilderness. A total of 47 NSTs were used for foot travel (3.2 miles), 5 were associated with stock use (0.43 miles), and 4 were unclear (0.09 miles). The origin of NSTs was reported as an old route (43%) or newly created by recreation (24%), with 18 trails unclassified.

Time constraints in the field limited complete surveying of NSTs. Of the 56 new trails located, 29 (52%) did not have their entire lengths mapped and measured (Figure 19).



**Figure 18. Number of non-system trails by trail type and location.**

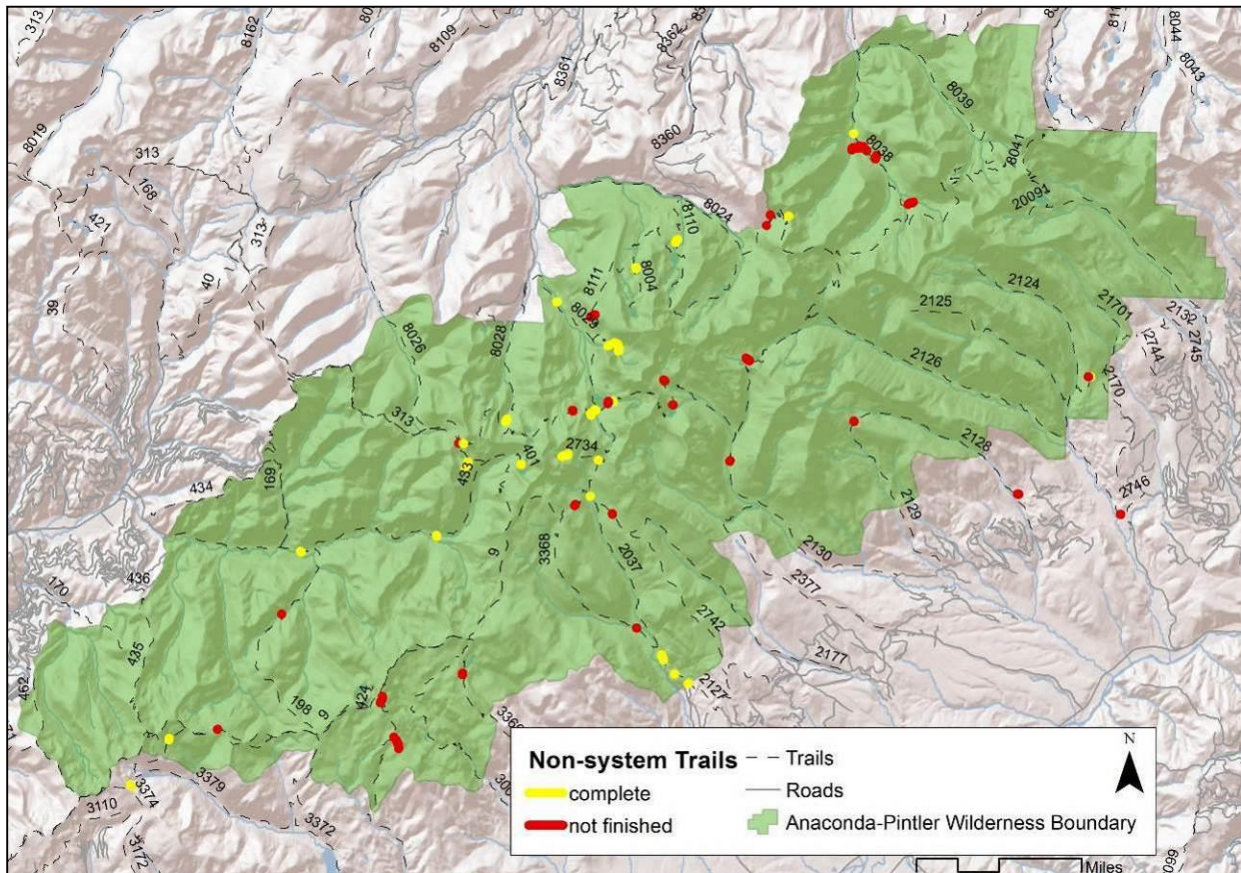


Figure 19. Locations of non-system trails and monitoring status (e.g. complete or not finished).

## Trailheads

Recreational use at trailheads was documented by recording the number of vehicles and horse trailers parked at the trailhead. These numbers are based on a single count, and therefore do not necessarily reflect use across the season.

### *Vehicles and Trailers at Trailhead*

Information on recreation use was recorded for 12 trailheads (Table 3). Mussigbrod Lake, Moose Lake (two trailheads), and Pintler Lake were each visited twice, for a total of 17 sampling sessions. Vehicles were recorded for 14 of 17 samples, excluding the van used by the field team. The highest vehicle numbers were documented on weekends (Fri, Sat, or Sun) at Moose Lake trailheads #28 and #29. Importantly, trailhead use is variable and influenced by time of day and week, as is illustrated by the difference between the Thursday and Sunday samples for Moose Lake #28 (6 and 15 vehicles respectively).

**Table 2. Summary of vehicles at trailheads.**

Trailhead Name	Date	Number of Vehicles	Number of Horse Trailers
Mussigbrod Lake #372	Thurs. 27-Jun	1	0
Bugle Creek #462	Thurs. 27-Jun	0	0
East Fork Bitterroot #433	Thurs. 11-Jul	5	3
Pintler Lake #37	Thurs. 11-Jul	1	0
Pintler Lake #37 (visit 2)	Sun. 14-Jul	1	1
Mudd Creek Ridge #127	Friday 19-Jul	1	0
Middle Fork #29	Friday 19-Jul	10	1
Middle Fork #29 (visit 2)	Sun. 21-Jul	11	0
Carp Creek #24	Thurs. 1-Aug	5	2
Fishtrap Creek #130	Sun. 4-Aug	0	0
East Fork Reservoir #38	Thurs. 8-Aug	0	0
Lower Seymore Lk #131	Thurs. 8-Aug	3	0
Lower Seymore Lk #131 (visit 2)	Sat. 10-Aug	3	0
Middle Fork #28	Thurs. 15-Aug	6	0
Middle Fork #28 (visit 2)	Sat. 17-Aug	15	3
Mussigbrod Lake #372 (visit 2)	Wed. 21-Aug	3	0
Lamarche Creek #126	Friday 4-Oct	1	0
<b>Total</b>		<b>66</b>	<b>10</b>

### **Solitude Samples and Encounters with People**

In the spring of 2013, the forest service distributed a new national minimum protocol for monitoring solitude in wilderness. With the support of the Bitterroot and Beaverhead-Deerlodge National Forests we incorporated these protocols into our data collection and route-planning for the 2013 field season. The new protocol provides a consistent process for monitoring the opportunities for solitude in wildernesses and is based on the assumption that encounters – specifically, the number of people seen or heard – is the best available indicator of opportunities for solitude.

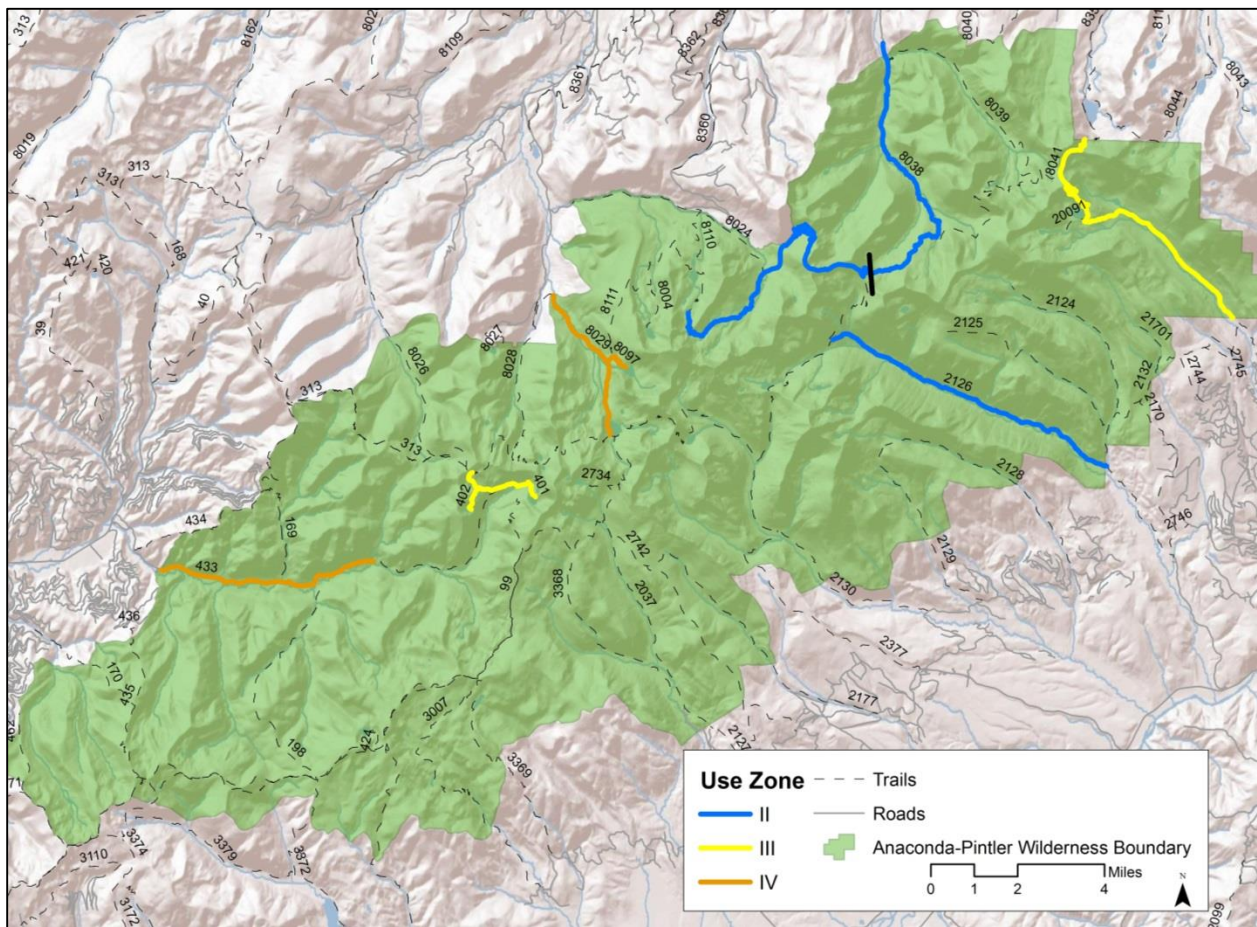
The basic framework for the monitoring protocol is to identify two locations (monitoring areas) within each opportunity class or zone; the goal is for five weekend and five weekday 4+ hour monitoring sessions per area. Data can be collected over 2-3 consecutive years and aggregated, if it is not possible to collect all the data in a single year. We worked with forest service staff to identify appropriate areas, and then structured our field season to optimize coverage of these areas, attempting to incorporate repeat sessions in areas whenever possible.

For each monitoring session, data is recorded for two types of encounters: 1) **traveling encounters** are people you see and/or hear while traveling in the monitoring area; and 2) **camp encounters** refer to the number of other camping groups visible or audible from each occupied campsite. Please note that this is a minimum protocol that will help managers identify situations where they may need to undertake additional monitoring or implement management actions.

Additionally, we recorded encounters with distinct groups of people on all trails covered (even outside solitude monitoring areas). This opportunistic data can add context to the standardized sessions and help identify areas for additional monitoring or management actions. Both the number of people and the type of activity (hiker/backpacker, mountain bike, horse, or Forest Service staff) were documented.

### **Standardized sampling**

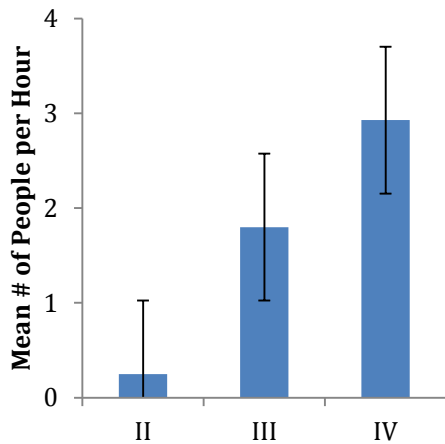
Standardized solitude monitoring was conducted in 6 monitoring areas (two in each use zone; Figure 20 and Table 3). Level of effort ranged from one to two sessions per monitoring area. The average number of trail encounters ranged from 0.25 people per hour in zone II up to 2.9 in zone IV (Figure 21). No campsites were occupied during monitoring sessions.



**Figure 20. Location of solitude monitoring areas and USFS trail use zones.**

**Table 3. Traveling encounters during solitude monitoring sessions.**

Date	Use Zone	Monitoring Area	Duration (hrs.)	Day of Week	# People	# Pack-stock	# People per Hour
11-Jul	IV	East Fork Bitterroot-Star Creek	4.0	Weekday	8	2	2.0
15-Aug	IV	Falls Creek-Edith and Johnson Lakes	6.5	Weekday	9	0	1.4
17-Aug	IV	Falls Creek-Edith and Johnson Lakes	5.0	Weekend	27	6	5.4
12-Jul	III	Kelly, Ripple, and Hidden Lakes	8.0	Weekday	0	0	0.0
8-Aug	III	Seymour-Mt. Tiny	5.0	Weekday	18	0	3.6
8-Aug	II	East Fork Rock Creek	4.0	Weekday	4	0	1.0
9-Aug	II	East Fork Rock Creek	4.0	Weekday	0	0	0.0
10-Aug	II	Lamarche Creek	No data	Weekend	-	-	-
1-Aug	II	Upper Carpp Lake-Cutaway Pass	5.0	Weekday	0	0	0.0
10-Aug	II	Upper Carpp Lake-Cutaway Pass	6.0	Weekend	0	0	0.0



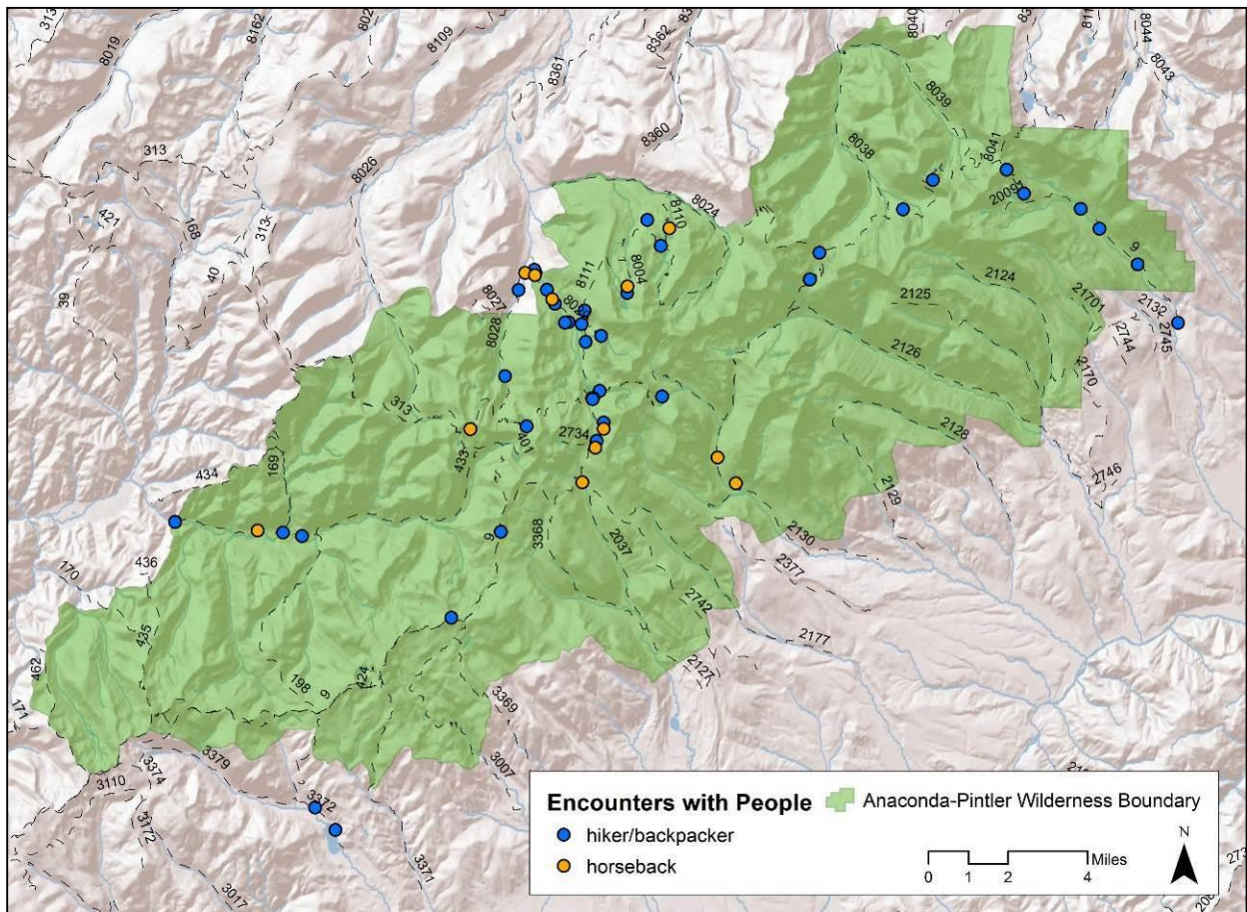
**Figure 21. Mean number of people per hour encountered during standardized solitude monitoring by use zone (II-IV). Error bars represent Standard Error.**

***Opportunistic sampling***

A total of 62 separate encounters (e.g. groups) were recorded, totaling 153 people (27 on horseback) and 13 pack stock (Table 4). The majority (80%) were hiker/backpackers. Most groups consisted of 3 or fewer people (82%), with the other 18% including 4 to 9 individuals. Encounters were not uniformly spread across the Wilderness Area, with the greatest number of people encountered on trails associated with the Moose Lake Trailheads (#28 and #29) leading to Johnson and Edith Lakes (Figure22).

**Table 4. Number of people encountered on trails by recreational activity.**

Activity	Total People	Number of Groups	Total Horse/Packstock
hiker/backpacker	122	49	1
horseback	27	12	12
other	4	1	0
<b>Grand Total</b>	<b>153</b>	<b>62</b>	<b>13</b>



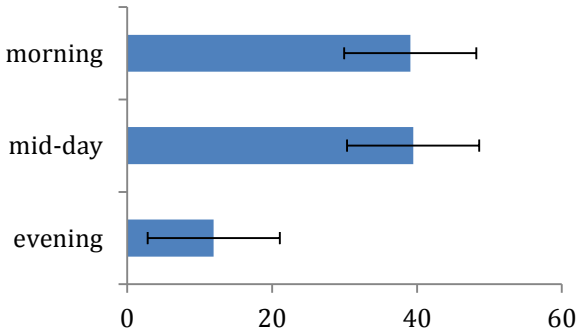
**Figure 22. Location of encounters with people along trails.**

## Noise

Noise intrusions were monitored throughout the field season using two methods. Standardized noise samples were collected daily during 15 minute sampling sessions conducted at approximately the same time in the morning (8:00 am), midday (1:00pm), and evening (7:00 pm). Noises opportunistically encountered within the Anaconda Pintler Wilderness were also recorded. During standardized sampling sessions, the duration of each noise detected was recorded in seconds, with up to four intrusions per 15 minutes sampling session. Total duration of all noise intrusions for each session was calculated subsequently by adding duration (time in seconds) for each individual intrusion together. Noises heard outside sampling sessions were classified as under 1 minute, 1-5 minutes, 5-10 minutes or >10 minutes. For both methods, the source of noise was recorded, and noise intensity was categorized as barely audible (far in the distance), clearly heard (moderately near), loud (<1 mile), or variable. When possible, a visual confirmation of the noise source was recorded.

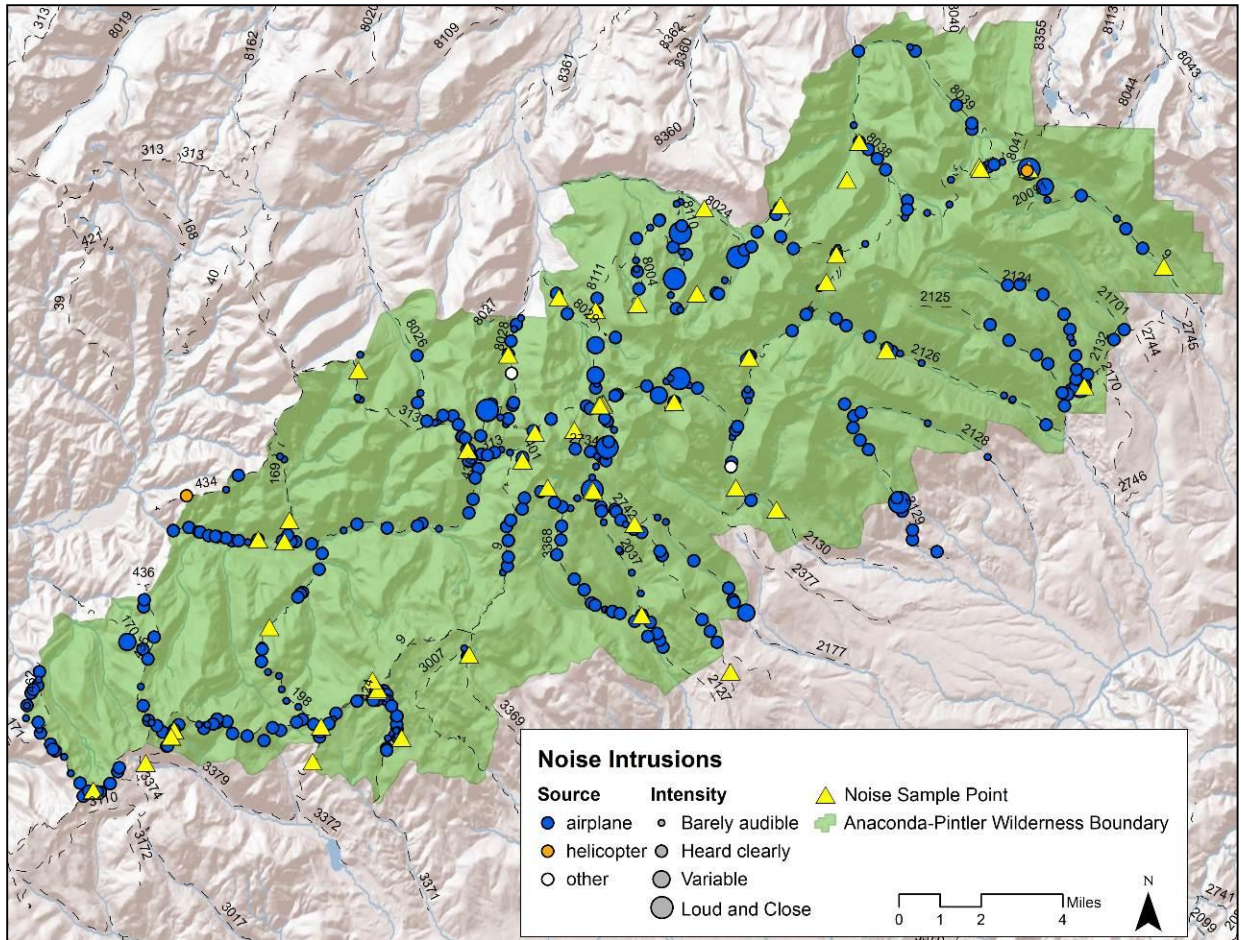
### ***Duration, Intensity and Visual Confirmation of Noise Intrusions***

A total of 69 noise sampling sessions were completed (24 morning, 27 midday, and 18 evening). No noise was heard during 30 (43%) of sessions, and more than one noise was heard during 17 (25%) of sessions. Three noise intrusions were from people, with all of the rest from airplanes. Duration of noise intrusions were, on average, longest during morning and midday sampling sessions (39 and 40 seconds, respectively), and shortest in the evening (12 seconds; Figure 23). Most noise intrusions were barely audible or heard clearly (39% and 41%, respectively), 14% were variable intensity, and 6% were loud and close. Visual confirmation was recorded for 19% of noise intrusions.



**Figure 23. Mean duration and standard error of noise intrusions by time of day. Note: results depict noise intrusions only from standardized sampling sessions.**

Outside of noise sampling sessions, an additional 455 noise intrusions were recorded across virtually all trails in the Anaconda Pintler Wilderness (Figure 24). The vast majority (99%) of intrusions were from airplanes, with two helicopters and two “other” sources documented (putative gun shot, and group of people). Visual confirmation was not possible for 386 detections, so the source of these noises was primarily based on auditory identification. All recorded noise intrusions lasted for 5 minutes or less, with 27% under a minute in duration. Variable, and loud & close sources both accounted for less than 2%, with barely audible and clearly heard accounting for 29% and 67% respectively.



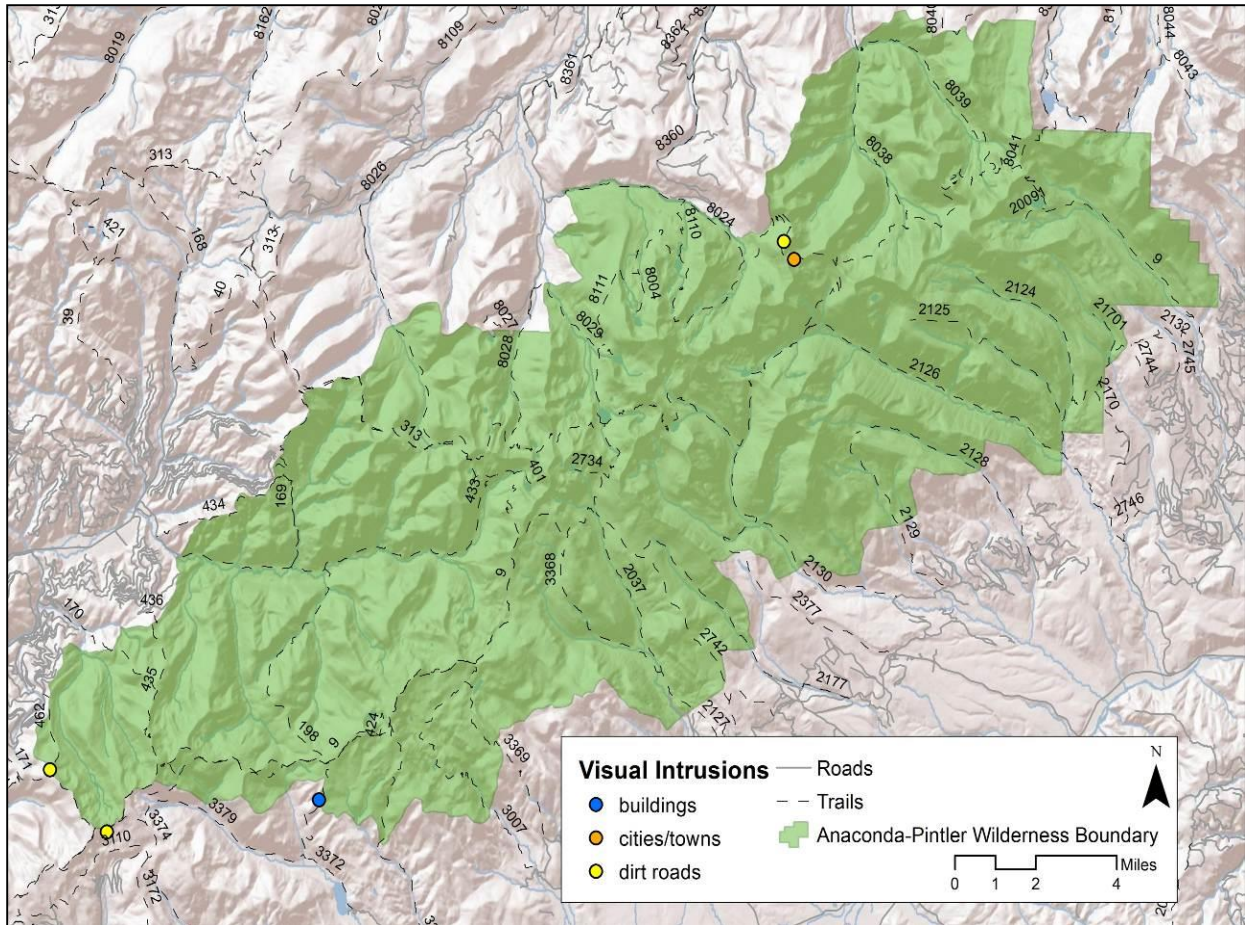
**Figure 24. Location, source, and intensity of all opportunistic noise intrusions heard within the Anaconda Pintler Wilderness.**

### **Visual Intrusions**

Human development that was visible from within the Anaconda Pintler Wilderness (but is located outside the Wilderness) was documented as a visual intrusion. The location where intrusions were visible was recorded, and the type of intrusion was categorized as: buildings, highways, power lines, lights at night, cities/towns, dirt roads, clear cuts, repeaters/towers, or railways. Photos were taken of visual intrusions and are available upon request.

#### ***Type of Visual Intrusion***

Remarkably few visual intrusions were recorded from trails in the Anaconda Pintler Wilderness. A total of five visual intrusions were observed, including cities or towns (1), buildings (1), and dirt roads (3). All of these intrusions were recorded within 1.0 miles of the Wilderness boundary. This data is shown in Figure 25.



**Figure 25. Visual intrusions by type seen from within the Anaconda Pintler Wilderness.**

## **Campsites**

Attributes recorded at each campsite reflect campsite conditions and human impacts, and were based on standard Forest Service Campsite Inventory & Condition Evaluation protocols (see Anaconda Pintler Wilderness Site Impact Worksheet – 2013 Edition; Appendix 4). We also reviewed inventory protocols utilized in 2005, and ensured that 2013 protocols would enable comparison with data collected previously.

Here, we provide a summary of all campsites monitored during the 2013 field season. Human impacts at each campsite were evaluated based on 1) number of damaged trees, 2) number of trees with exposed roots, 3) type and number of developments, 4) cleanliness, 5) the number of social trails, 6) barren area estimate, and 7) estimate of exposed mineral soil. For each campsite, the ratings assigned to individual impact attributes were combined to generate a summary impact index score. Appendix 3 provides detailed maps, individual campsite attribute measures, and photographs.

Please note that across the Bitterroot National Forest portion of the Anaconda Pintler Wilderness, field leaders were equipped with maps depicting pre-existing recreation sites to enable focused efforts to revisit specific sites. Across the Beaverhead-Deerlodge portion of the Wilderness, field crews monitored all encountered campsites, without the aid of maps of pre-existing sites to inform search efforts.

### Impact Evaluation

A total of 86 campsites were inventoried within the Anaconda Pintler Wilderness; 14 and 72 of these were within the Bitterroot and Beaverhead-Deerlodge National Forest portion of the Wilderness, respectively (Figure 26). Within the Bitterroot National Forest, an additional 5 preexisting campsites were searched for and not found, and 2 preexisting campsites were recorded as naturalized and therefore not inventoried. Search efforts for a portion of pre-existing sites were not well documented, and it remains unclear if certain campsites were searched for and not found, or not searched for at all. Conclusive results for Bitterroot National Forest sites are presented in Table 5.

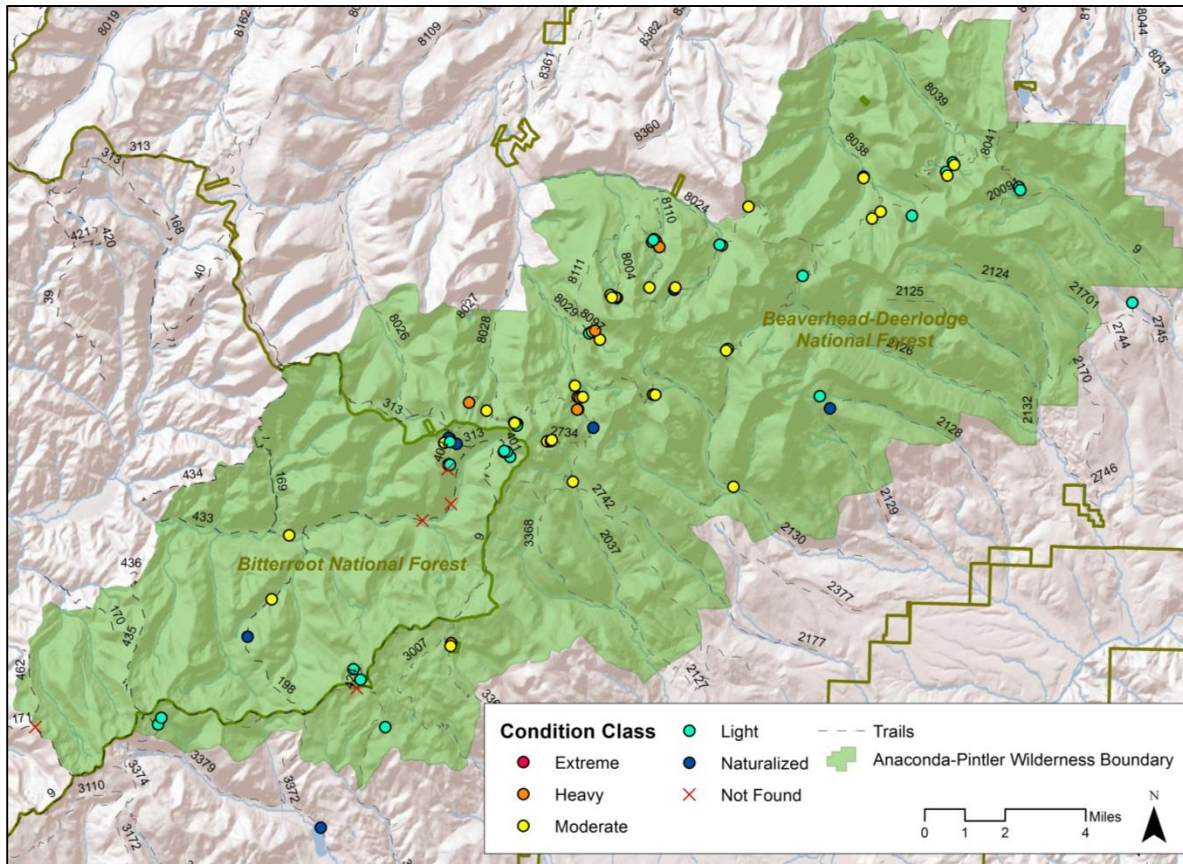
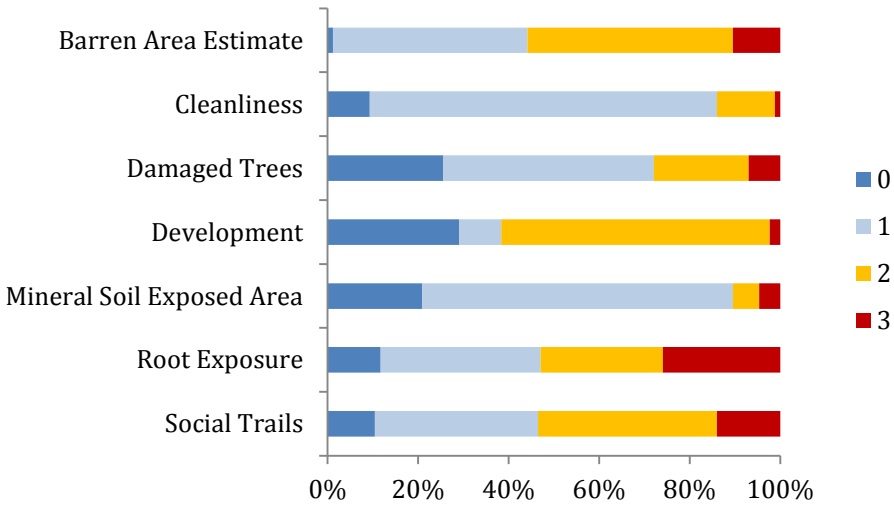


Figure 26. Location and impact class of campsites. Please see Appendix 3 for detailed campsite location maps and identification numbers.

Based on the summary impact evaluation scores, 9% of campsites were not considered a site or naturalized, 34% had light impacts, 44% had moderate impacts, 10% had heavy impacts, and a single campsite was ranked as extremely impacted (Figure 26; located on Tamarack Lake). A single campsite was missing data for one impact attribute. For this campsite an impact evaluation score was calculated using data averages for the missing value. The relative contribution of individual impact attributes varied, with root exposure most often considered highly impacted, followed by social trails (Figure 28).

**Table 5. Monitoring status and impact class of revisited campsites within the Bitterroot National Forest (campsite number referenced in Appendix 3).**

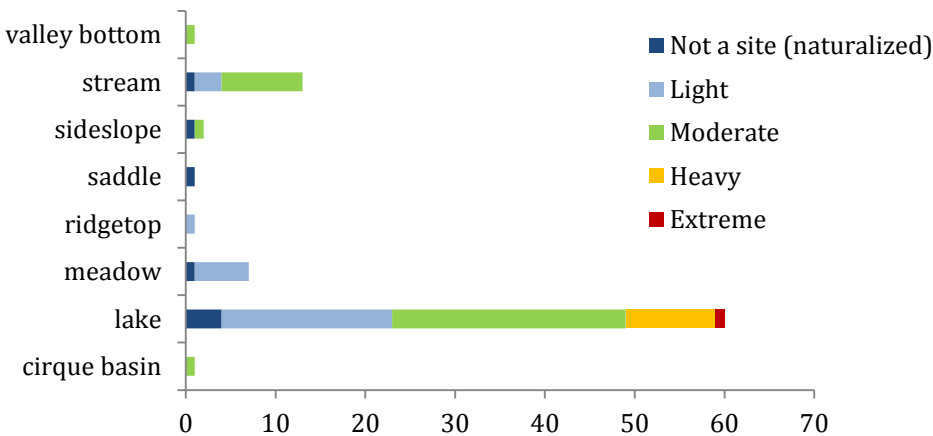
Campsite #	USFS ID	Impact Class
14	EFBR06	Moderate
15	EFBC01	Moderate
20	CAS14	Not found
42	EFHL04? or 02?	Light
43	EFHL06	Light
44	no number	Light
45	EFHL05	Light
46	EFKH01	Not a site (naturalized)
47	EFRL02?	Moderate
48	EFRL03?	Moderate
49	EFRL?	Light
50	EFRL04	Not found
51	EFKL02 or 01	Not a site (naturalized)
52	EFKL07	Not a site (naturalized)
53	EFKL06	Moderate
54	EFKL08	Light
55	EFBR11	Not found
56	EFBR10	Not found
58	CHLK01 or 02	Light
59	UNK1	Not found
73	NEW SITE?	Not a site (naturalized)
81	HPTR01 or 04?	Light



**Figure 27. Proportion of campsites with impact ranking of 0 = none, 1=low, 2=moderate, or 3=high for individual impact attributes (shows the relative contribution of each attribute).**

**Location**

The majority (66%) of campsites were associated with lakes, followed by streams (11%), meadows (9%), with less than 5% associated with ridgetops, saddles, and sideslopes. Campsite-specific ecological attributes are detailed in Appendix 3. Campsite location and landform was associated with the level of impact observed, with the majority of moderately impacted and all heavily and extremely impacted sites occurring near lakes (Figure 29).



**Figure 28. Number of campsites by landform category and impact class.**

## V. FOREST SPECIFIC ATTRIBUTES

No forest specific attributes, such as sensitive plant species, were recorded within the Wilderness.

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## APPENDIX 1. MONITORING ATTRIBUTES

List of monitoring attributes recorded in the field in 2013. Detailed protocols are available upon request.

### I. UNTRAMMELED QUALITY

#### Attribute group: Weed Point

Weed_Action	Action taken to manage infestation
-------------	------------------------------------

### II. NATURAL QUALITY

#### Attribute group: Weed Point

Weed_Collector	Wilderness Institute default
Weed_Landowner	USFS default
Weed_Unit	National Forest number
Weed_Species	Common name of weed species
Weed_Distribution	Distribution of weeds in patch (e.g. clumpy, scattered, linear)
Weed_Radius	Width of linear patch or radius of non-linear patch (in feet)
Weed_Density	Percent coverage of weeds within area of infestation
Weed_Phenology	Life history phase of weeds in infestation
Weed_Disturb1/Disturb2	Primary and secondary disturbance/vector of infestation
Weed_DomLife	Dominant lifeform within area of infestation
Weed_Ecotype	Ecosystem type (e.g. wet meadow, grassland, forest, riparian)
Weed_Treecov	Estimate of % treecover over infestation
Weed_HabSeries/Type/Phase	Forest habitat series, type and phase (Pfister et. al 1977)
Weed_DomOver1/2/3	Up to three Understory species if >10% plot representation
Weed_DomUnder1/2/3	Up to three understory species if >10% plot representation
Weed_Struct1/Struct2	DBH class of largest tree <15 ft/ <50 ft from infestation

Weed_Water	Distance (ft) of infestation from nearest water
Weed_Biocontrol	Presence or absence of biocontrol notes
Weed_Photo	Photograph of infestation
Weed_Notes	Additional notes

Attribute group: Wildlife Point

Wild_Species	Species of wildlife encountered
Wild_ObsType	Type of wildlife sign encountered
Wild_Group	Individual, family, pair, etc.
Wild_Repro	Reproductive status, if evident
Observ_Qual	Degree of observer expertise
Wild_Total	Numeric total of individuals detected
Wild_Notes	Description or additional details of siting
Wild_Photo	Corresponding photo number from camera
Pika_Behavior	Select behavior category
Pika_Habitat	Select habitat category
Pika_Notes	Note presence and # of green haystacks

Attribute group: Water Erosion (human-caused)

Water_Landform	Landform (stream/lake) associated with erosion point
Water_Width	Width class at erosion point (streams only; high water mark)
Water_Acres	Acre estimate of all non-stream water features
Water_Severity	Severity rating of erosion (see protocols for details)
Water_Photo1/2	Corresponding photo1/2
Water_Notes	Describe site and any concerns identified

**III. UNDEVELOPED QUALITY**

Attribute group: Development Point

Dev_Type	Type of installation or development encountered
Dev_Cond	Select condition class from drop-down menu
Dev_Source	Choose from user or agency created, or unclear
Dev_Photo	Corresponding photo number
Dev_Notes	Additional notes

Attribute group: Sign Point

Sign_Type	Sign type
Sign_Condition	Sign condition
Sign_Photo	Corresponding photo number
Sign_Source	Choose from user or agency created, or unclear
Sign_Notes	Additional notes

Attribute group: Trail Closure Point

Closure_Type	Type of trail closure device encountered
Closure_Violation	Description of evidence that closure is violated
Closure_Photo1/2	Corresponding photo 1/2
Closure_Notes	Additional notes

**IV. SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION QUALITY**

Attribute groups: Trail Width and Condition Point or Line

TrailWidth_Name	Name of trail point
TrailWidth_Type	Select type of trail from drop-down menu
TrailWidth_Start/Finish	Start/Finish of trail
TrailWidth_Notes	Additional notes

Attribute group: Motorized or Mechanized Use Point

MotorMech_Point	Name evidence with trail number and ID
MotorMech_Width	Select track width from drop-down menu
MotorMech_Photo	Indicate if photo is taken
MotorMech_Notes	Additional notes

Attribute group: Non-system Trails Line

Nst_Type	Type of non-system trail encountered
Nst_Vector	Source of non-system trail (e.g. recreation, old logging road)
Nst_Finish	Non system trail surveyed to its end or not
Nst_Notes	Additional notes

Attribute group: Campsite Point

Camp_ID	Enter pre-existing site ID, or "new"
Camp_Class	Summary description of user impact (e.g. high, low, naturalized)
Camp_Occupied	Choose yes or no from drop-down menu
Camp_Solitude	For occupied camp, enter # of occupied camps within sight or sound
Camp_Landform	Associated landform (e.g. lakeshore, streamside, meadow)
Camp_Type	Choose from foot, river, stock, outfitter, multiple, or other
Camp_Watersource	Choose from creek, river, lake, other
Camp_Waterdist	Numeric estimate in feet of distance to watersource
Camp_Dam_Trees	Rating of tree damage (see detailed protocols)
Camp_Root_Exp	Number of trees with exposed/damaged roots in campsite
Camp_Develop	Level of development; select category from drop-down menu
Camp_Clean	Level of cleanliness within and around campsite; select category
Camp_Trails	Number of social trails associated with campsites
Camp_Barren	Barren area estimate within and around campsite
Camp_Veg_Off	Offsite estimate of ground cover canopy coverage
Camp_Min_On	Estimate of exposed mineral soil in core area
Camp_Min_Off	Offsite estimate of exposed mineral soil
Camp_Photo1/2	Photo number 1/2
Camp_Notes	Additional notes

Attribute group: Solitude Sample (used to record data within pre-specified sampling area)

Sample_Start	Start time of sample using 24h clock
Sample_Stop	End time of sample using 24h clock
Sample_Notes	Additional notes

Attribute group: People Point

People_Activity	Type of user encountered
People_Number	Number of people seen in encounter
Packstock_Number	Number of packstock in party
Ridingstock_Number	Number of riding stock in party
Trip_Length	Select overnight or day trip
People_Notes	Additional notes

Attribute group: Trailhead Point

TH_Name	Assigned name and/or number
TH_TotNumber	Total number of vehicles
TH_HorseNumber	Total number of horse trailers
TH_Notes	Additional notes

Attribute group: Noise Roving Point

Noise_Source	Select source from drop-down menu
Noise_Duration	Duration of noise (select from categories)
Noise_Intensity	Intensity rating of noise (select from categories)
Noise_VisConf	Indicate if source was seen
Noise_Notes	Additional notes

Attribute group: Noise Sample Point

Noise_Session	Select morning, mid-day or evening
Noise_Sample_Start	Start time for 15-minute sample on 24h clock
Noise_Heard?	Select Yes/No; if yes continue, below
Noise_Source_1	Select source from drop-down menu
Noise_Duration_1	Enter numerical value in seconds
Noise_Intensity_1	Intensity rating of noise (select from categories)
Noise_Vis_Conf_1	Indicate if source was seen
Noise_Notes_1	Additional notes

\*\*REPEAT above attributes for up to 2 additional noises recorded\*\*

Attribute group: Visual Intrusion Point

VI_Type	Visible evidence of human impact outside WILDERNESS
VI_Photo	Photograph
VI_Notes	Additional notes

**V. FOREST SPECIFIC ATTRIBUTES**

Attribute group: Sensitive Plant Species

Sensitive_Name	Species name of plant identified
Sensitive_Pop	Population size class
Sensitive_Phenology	Life-history phase of plant from drop-down menu
Sensitive_Ecotype	Ecosystem type (e.g. wet meadow, grassland, forest, riparian)
Sensitive_Treecov	Estimate of % treecover over infestation
Sensitive_HabSeries/Type/Phase	Forest habitat series, type and phase (Pfister et. al 1977)
Sensitive_Photo	Photograph
Sensitive_Notes	Additional notes

## APPENDIX 2. SUMMARY OF FIELD NOTES AND TRAIL CONDITIONS

This appendix summarizes relevant field information from trip reports written by field leaders following each monitoring trip. Information is organized by trail number and includes notes on trail conditions, weed distributions, and other observations that provide additional context to monitoring data collected.

**Trail 4 (Tamarack Lake):** This trail was maintained very recently by SCA volunteers and is in great condition for both foot travel and stock.

**Trail 7 (Thompson Creek):** The southern start point of trail 7 (off FS road 1203) is virtually non-existent. There are some very faint old cuts, but no evidence of blazes or any recent use. We were unable to monitor this trail because we could not follow it; it appears that the trail has not been maintained or used between the Wilderness boundary and Lion Lake. The upper end of this trail, at Mystic Lake, is visible and the trail seems clear. It is possible that the trail continues from Mystic Lake to Crystal Lake or even Lion Lake, but time constraints prevented following this trail to its end point (and efforts to do so from the southern end were unsuccessful).

**Trail 9 (Continental Divide Trail):** In general, this trail is well maintained, well signed, and easy to follow, save for somewhat confusing re-routes near its junction with 379. Many sections of trail are marked with a small wooden CDT sign as well. The section of trail between the junctions with 198 and 368 are heavily braided, likely from stock use; about 50% of the trail deviates from single-track. The section of trail east of Warren Lake is washed out in some areas and rife with bridges and turnpikes in order to manage standing water. Although previous weed data suggested Canada thistle, Salsify/Goatsbeard, and Common Tansy, we found the weeds to be less pervasive than expected. In the burn area just east of Johnson Lake, we found two small patches of Canada Thistle. We also encountered some evidence of a yellow-flowered hawkweed with black involucre bracts; there is some uncertainty as to whether it is Meadow Hawkweed (invasive) or Slender Hawkweed (native). (We also encountered evidence of this species along trail 742.)

**Trail 26 (Copper Creek):** This trail is in good condition from the junction of trail 313 to the Wilderness boundary. It was not surveyed from the boundary to the trailhead.

**Trail 28 (Middle Fork Rock Creek):** This trail is in great condition from the trailhead south to Kelly Lake. There are numerous patches of Tall Buttercup and a single patch of Oxeye Daisy close to the trailhead. We were able to pull most of these patches.

**Trail 29 (Falls Creek):** This trail is well maintained, free of downed logs, and appears to get a lot of both foot and stock use. There are a couple patches of Oxeye Daisy near the trailhead.

**Trail 37 (Pintler Creek):** This trail is in great condition from the trailhead at the campground all the way to the junction with trail 9. There were several patches of Tall Buttercup along this trail.

**Trail 38 (East Fork Rock Creek):** This trail is in good condition and easy to follow. We encountered a few patches of Tall Buttercup along this trail, just west of Queener Basin.

**Trail 39 (Page Creek):** This trail is in good condition and is easy to follow.

**Trail 41 (Storm Lake Pass to Goat Flat):** This trail was not monitored due to time constraints and volunteer limitations.

**Trail 97 (Edith Lake):** This trail has been rerouted from what is showed on the quads and on the forest map. It now intersects with trail 111 about a half mile further north, and contours south toward Edith Lake without the use of switchbacks. The trail also continues around the circumference of the lake, leading to several campsites. Overall, it is in good condition and appears to get a lot of use.

**Trail 110 (Lower Carpp Lake):** This trail was well maintained and very easy to follow. It appears to get a lot of use from both foot travel and stock.

**Trail 111 (Highline Trail):** This trail is in excellent condition from Phyllis Lake east to Cutaway Pass. The section of trail between Carpp Lake and the junction with trail 4 was maintained this season by SCA volunteers. Of the weeds previously recorded, we did not find Cheatgrass, Common Mullein, or Houndstongue. We did record Canada thistle, Bull Thistle, and Tall Buttercup north of Johnson Lake before the junction with trail 97.

**Trail 124:** From the junction of 126 to the junction with 132 this trail is in decent condition. Although it is relatively easy to follow, there are a number of downed trees along the trail. From its intersection with trail 132 to within ¼ mile of Lamarche Lake, the trail was fairly clear of trees and downfall, although was made more difficult to follow due to snow cover (early October). The blazes are faint and there is no noticeable trail corridor cut through trees as is distinctive with other trails.

**Trail 125:** The trail up Trout Creek was in good condition and well-established for most of the route. There were a few downed trees and it seems to have been maintained recently (recent axe cuts on fallen logs). The quad map denotes a very small rectangle at the terminus of the trail in a meadow. We reached the meadow, but did not notice any distinguishing features such as developments, etc.

**Trail 126 (West Fork LaMarche Creek):** This trail is well-maintained and easy to follow. The trail is in good condition and appears to have been recently maintained. There are some junctions north of the private land parcel that do not correlate well with the trail that is shown on the forest map and quads. This is perhaps due to the presence of well-traveled social trails originating on private land. The trail is re-routed to the east from the trailhead to circumvent the private land. Access to the trailhead does not require crossing private land as indicated on the forest map.

**Trail 128 (East Fork Fishtrap Creek):** From the junction of 128 and 129, trail 128 descends into the East Fork Fishtrap Creek drainage and becomes difficult to follow. We lost the trail approximately halfway down to the creek and ended up on a game trail that contours along the hillside to the east rather than dropping down into the drainage. From there, we bushwhacked down to the creek, crossed it just south of Needle Peak, and found the actual trail on the north side of the creek. The trail continues on the north side of Fishtrap Creek and intermittently fades in areas of moist vegetation. Once the trail crosses back to the south side of Fishtrap Creek, it becomes harder to follow and occasionally appears as a corridor for seasonal runoff from small drainages upslope. The trail was covered in moss and had several downed logs until the Wilderness boundary. Near the Wilderness boundary, the dryer forest type is more conducive to better-established trail conditions and the trail is easy-to-follow from there to the trailhead. Outside of the Wilderness boundary, however, cattle sign is evident and the trail becomes heavily braided with three or more areas of moderate erosion and swampy/muddy conditions around

stream crossings. The trailhead for 128 was visible primarily due to recent thinning in the surrounding forest.

**Trail 129 (Middle Fork Fishtrap Creek):** The trailhead for 129 is difficult to find. It is just off the side of USFS road 1297 with a very small parking area and one very inconspicuous sign set back in the trees. This trail is in good condition from the trailhead to the saddle where it becomes trail 128. There were a couple sections through high-elevation meadows that were slightly hard-to-follow due to abundant vegetative growth in the trail, but for the most part, the trail is well-established, especially on the dry ridge. There is some minimal trail braiding as the trail leaves road 1297, but the trail remains predominately single-track.

**Trail 130 (West Fork Fishtrap Creek):** This trail was recently cut out and very easy to follow. There is about a mile, just northeast of the junction with trail 133, where it is difficult to see where the well-maintained reroute veers away from the non-maintained old route. There are a few patches of Bull Thistle and Spotted Knapweed on the southern portion of the trail and at the trailhead (#19). There is also a small patch of Cheatgrass at the trailhead.

**Trail 131 (Seymour Creek):** This trail is in good condition from the trailhead to the junction with trail 9. There are no weeds present on this trail.

**Trail 132:** This trail skirts the Wilderness boundary and appears not to get very much use. The section of trail that descends to the Lower Seymour Lake drainage is quite steep and thickly covered with recently-fallen, small diameter Lodgepole Pines.

**Trail 133:** This short trail was well maintained and easy to follow.

**Trail 169 (Clifford Creek):** This trail is in good condition, showing evidence of recent trail maintenance. Near the junction with trail 433 there are a few patches of Canada Thistle and Tall Buttercup.

**Trail 170:** Starting at the southern end at the junction with trail 9, this trail is in good condition and easy to follow. West of the junction with trail 435, it is difficult to find where the trail continues out of the meadow and we did not continue to the Wilderness boundary.

**Trail 177 (West Fork Mudd Creek):** From its junction with trail 742, trail 177 heads through a series of marshy meadows, where it is difficult to follow. There is also a moderate amount of downed trees. The last few miles of this trail, between the Wilderness boundary and the trailhead, continues through sagebrush flats and is heavily braided due to cattle use.

**Trail 198 (Buck Creek):** Heading south from the junction with 433, this trail has several creek crossings, an increased number of downed logs across the trail. It is somewhat brushy in places, yet is still relatively easy to follow. Weeds present include Bull Thistle, Canada Thistle, Tall Buttercup, and Meadow Hawkweed. We hiked to Buck Lake west of trail 198 in order to look for campsites, social trails, or other signs of human use. There is no discernable trail leading down to the lake from any point off of trail 198. The lakeshore is pristine and we did not see any signs of human use.

**Trail 313:** This trail is in decent condition but becomes very difficult to follow on the far west end near the Wilderness Boundary. The area has been burned and there are numerous downed logs and unreliable tread. There was one patch of Canada Thistle along this trail.

**Trail 368:** There is no sign indicating the start of trail 368 from the CDT although the trail junction is readily apparent. Trail 368 does not switchback as indicated on the northernmost segment on the quad map, but continues to descend steeply. There are a couple of switchbacks toward the southern end of the trail that are present, but are not indicated on the map. There are a couple of cairns and more-recent trail blazes to indicate trail presence and location. The trail is riddled with large rocks and roots and is braided in several long segments. At least 60% of its length deviates from single-track. In one portion, about halfway along its length, small tributaries of Beaver Creek have criss-crossed with the trail, obliterating the tread and undercutting the sides so the trail appears more as a seasonal streambed than an avenue for walking. The trail becomes better established south of its farthest-south crossing of Beaver Creek and appears to get fairly heavy day-use by stock. The trail fades as it crosses Pintler Meadows and the presence of cattle in the meadows has led to the development of several braided trails that obfuscate any system trail presence. Meadow Hawkweed and Tall Buttercup are present along trail 368 during the descent to Pintler Meadows. Several NSTs branching from trail 368 appear to be either created by game, water runoff, misguided hikers, or reroutes.

**Trail 369 (Mystic Lake):** From Mystic Lake to the Wilderness boundary, this trail is in good condition with a few downed logs. The trail from the Wilderness boundary to the trailhead was not monitored.

**Trail 371 (Plimpton Creek):** This trail was only monitored from its northern junction with 9 to the spring approximately 1.5 miles north of the Wilderness boundary (due to volunteer limitations and time constraints). The monitored portion of the trail is in decent condition, with some downed logs.

**Trail 372 (Mussigbrod Creek):** This trail is entirely through a burn area. However, it has been recently cleared and is in good condition. There are a few patches of Canada Thistle along the trail.

**Trail 377 (Mudd Lake):** From the trailhead, 377 is in very good condition until the junction with trail 133, about one quarter mile inside the Wilderness boundary. At this point, a sign indicates that the trail is unmaintained. The only maintained option here is to continue east on trail 133.

**Trail 379 (Hell Roaring Creek):** This trail crosses a burn area and is in very bad condition. It is riddled with downed logs and is difficult to navigate. Weeds species encountered include Canada Thistle, Bull Thistle, and Tall Buttercup.

**Trail 401:** This short trail to Hidden Lake is in good condition.

**Trail 402:** This short trail to Ripple Lake is in good condition.

**Trail 424 (Hope Lake):** Trail 424 from the junction with Trail 9 is in good condition until approximately halfway down to Hope Lake. Here, there are two well-established campsites at the base of a talus slope that appear to be the main campsites in the Hope Lake area. From these forested campsites, the trail continues across a mossy, wet meadow and follows the inlet creek for Hope Lake for approximately 100m. The trail crosses the creek a couple of times and becomes increasingly faint. Once Hope Lake is visible, there is no visible trail, likely due to the old burn and abundant deadfall in the entire lake basin. Access to the lake requires bushwhacking over downed logs and there are extremely limited camping opportunities near the lake itself, which likely attributes to the lack of trail. There is one copse of green trees surrounding the inlet stream where a small party could safely erect a couple tents, but

otherwise the standing burned trees make for hazardous camping, difficult lake access by foot, and seemingly impossible lake access for stock.

**Trail 433 (East Fork Bitterroot River):** This trail is in very good condition. It is clear of virtually all downed trees and seems to be used often by both people and stock. The following weed species are present along trail 433 between the trailhead and the junction with 198: Canada Thistle, Cheatgrass, Salsify (or Goatsbeard), Oxeye Daisy, Spotted Knapweed, and Tall Buttercup. We did not find Common Mullein, Houndstongue, Sulfur Cinquefoil or St. Johnswort, although we had data suggesting that they were present. Further east, at Star Falls, we did not find the Spotted Knapweed, St. Johnswort, or Houndstongue that our data suggested we would find.

**Trail 434:** This trail is in good condition. Above Lick Creek Saddle we found Bull and Canada Thistles, Houndstongue, and Spotted Knapweed in a very isolated patch. On the south facing slope coming down trail 434 to FS road 742 (outside the Wilderness boundary) we found that nearly the entire hillside is covered in Spotted Knapweed.

**Trail 435 (McCart Lookout):** This trail is in good condition and showed no evidence of invasive weeds.

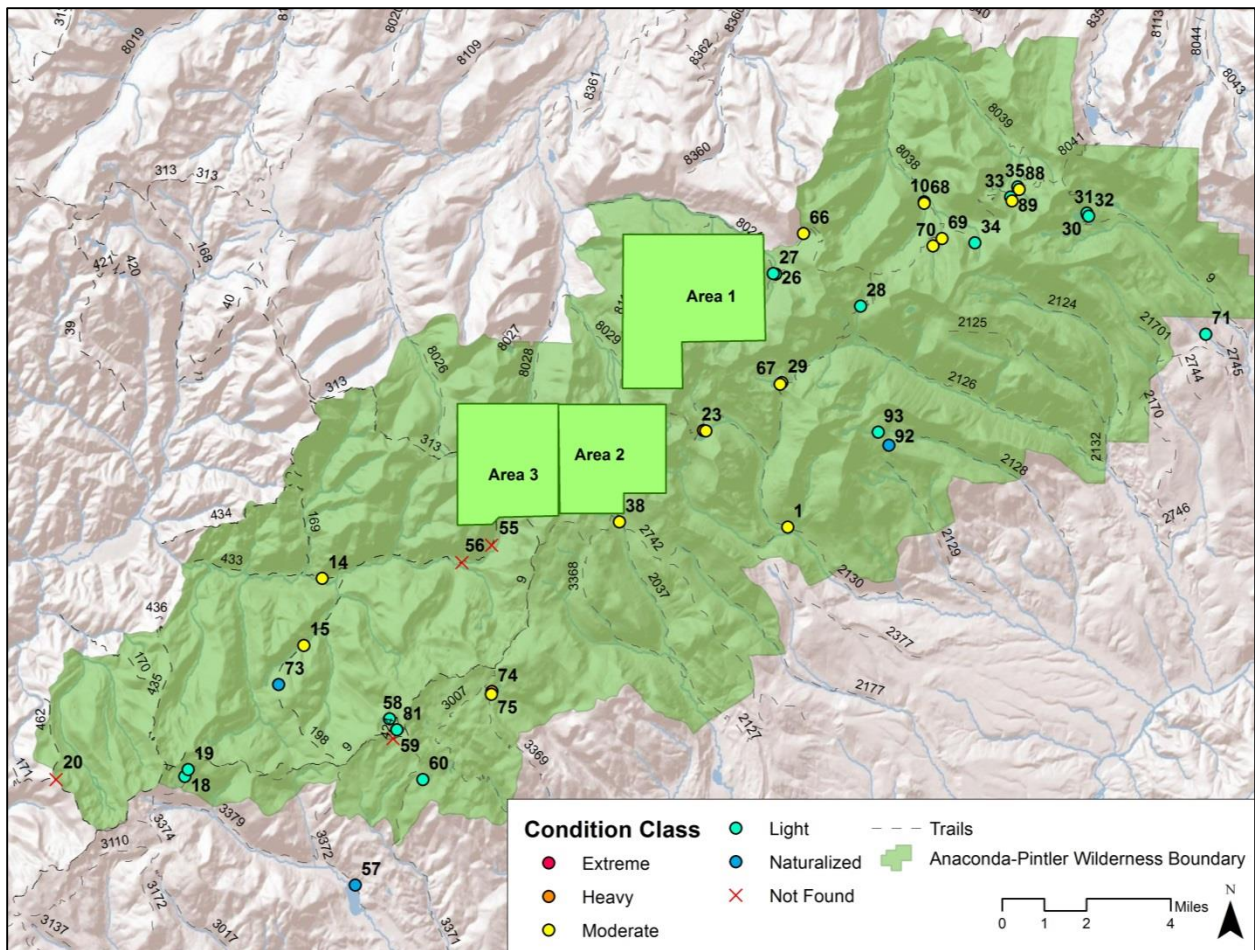
**Trail 462 (Meadow Creek):** From the trailhead (off FS Road 5762), this trail is well-cleared and easy to follow for approximately the first half mile. After this, the trail enters a burn area and becomes much more difficult. There are many downed trees across the trail, and in most places the tread is invisible as well. A few blazes are left on the trees that are still standing, which aid in navigation. The trail remains in this condition until its end, at the junction with trail 9 (CDT). We found a small amount of Spotted Knapweed at the trailhead and trace amounts of Oxeye Daisy as well. These petered out within a few hundred yards.

**Trail 742 (Mudd Creek Ridge):** This trail is in great condition. There is one patch of Salsify at the trailhead off Forest Service road 1223. We also encountered some evidence of a yellow-flowered hawkweed with black involucre bracts along trail 742. There is some uncertainty as to whether it is Meadow Hawkweed (invasive) or Slender Hawkweed (native).

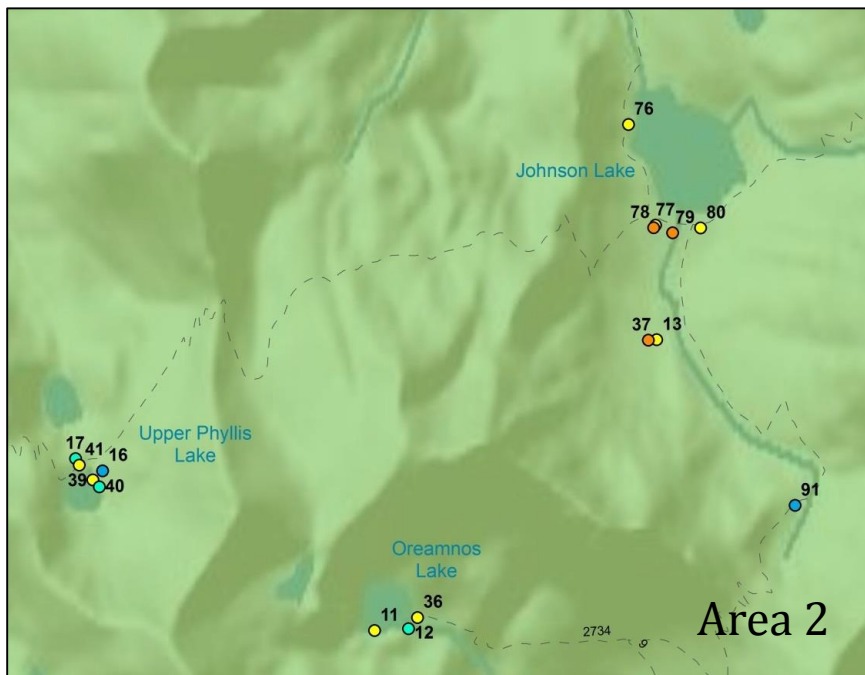
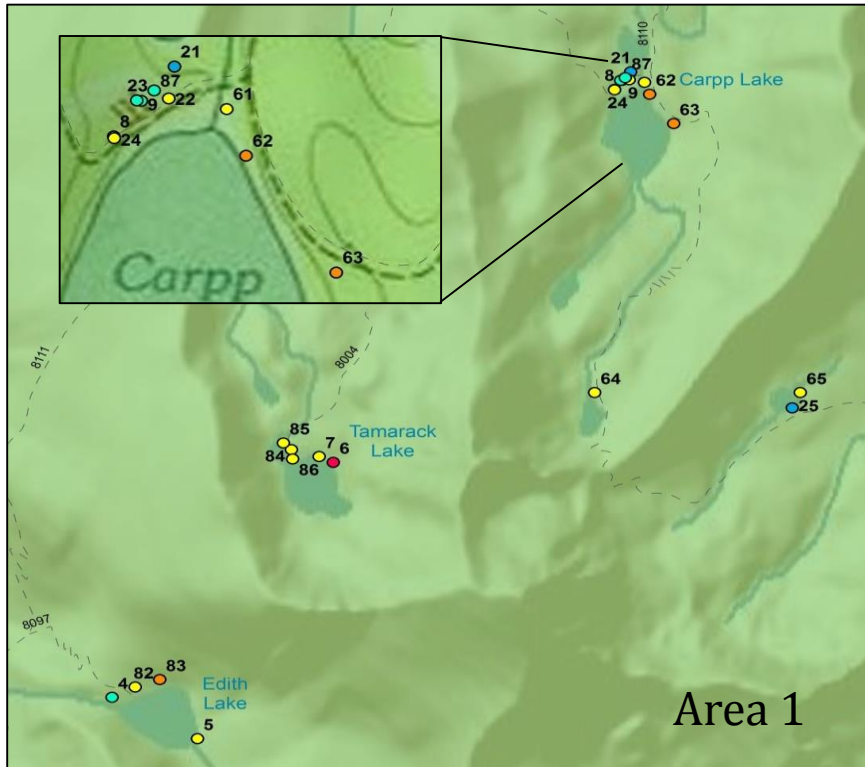
**Oreamnos Lake Trail (734?):** This trail is in good condition from the junction with trail 9 to Oreamnos Lake. It continues further than indicated on the forest map, circling the lake to the south side and providing access to several campsites.

### APPENDIX 3. CAMPSITE INVENTORY & CONDITION

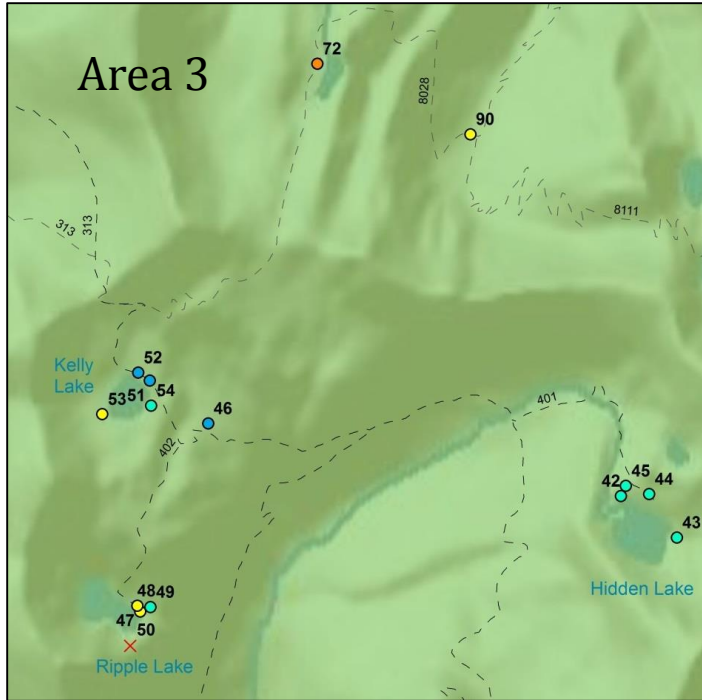
This appendix summarizes campsite inventory and condition information for all inventoried campsites. Information is organized by campsite number, as referenced in the maps below. When possible we indicate the USFS identification code (or site number) for pre-existing campsites assumed to correspond with the inventoried site (for Bitterroot National Forest only). Note: Preexisting campsites that were either not found or considered naturalized are located on maps, but are not presented individually below (this includes campsites #20, 21, 51, 52, 55, 56, and 59).



Location of inventoried campsites and assigned number (1-93). Numbered campsites correspond to inventory summaries, below. See area of detail maps (1-3) below.



Area of detail maps 1 (top), and 2 (bottom)



Area of detail map 3

## Campsite #1



### Location

Easting (m)	313,203
Northing (m)	5,088,730
Landform	valley bottom
Type of Use	Stock
Closest Water Source	Creek
Distance to Water	200

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	23
Site Condition Class	Moderate

## Campsite #2



### Location

Easting (m)	309,994
Northing (m)	5,092,419
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	0

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	>150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	35
Site Condition Class	Heavy

## Campsite #3



### Location

Easting (m)	310,081
Northing (m)	5,092,403
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	0

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	>150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	6-25%

### Impact Evaluation

Impact Index	27
Site Condition Class	Moderate

## Campsite #4



### Location

Easting (m)	307,439
Northing (m)	5,094,867
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	200

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #5



### Location

Easting (m)	307,866
Northing (m)	5,094,618
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	50

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	76-100%

### Impact Evaluation

Impact Index	23
Site Condition Class	Moderate

## Campsite #6



### Location

Easting (m)	308,544
Northing (m)	5,096,283
Landform	lake
Type of Use	stock
Closest Water Source	lake
Distance to Water	0

### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	>150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	45
Site Condition Class	Extreme

## Campsite #7



### Location

Easting (m)	308,474
Northing (m)	5,096,317
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	15

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	6-25%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #8



### Location

Easting (m)	309,950
Northing (m)	5,098,530
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	25

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #9



### Location

Easting (m)	309,986
Northing (m)	5,098,583
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	40

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	13
Site Condition Class	Light

## Campsite #10



### Location

Easting (m)  
 Northing (m)  
 Landform  
 Type of Use  
 Closest Water Source  
 Distance to Water

318,412  
 5,101,137  
 stream  
 stock  
 creek  
 100

### Conditions

Damaged Trees  
 Root Exposure  
 Development  
 Cleanliness  
 Social Trails  
 Barren Area Estimate  
 Mineral Soil Exposed Area  
 Off-site vegetation  
 Off-site mineral soil exposure

10 - 25 damaged trees  
 1 - 4 trees with exposed roots  
 Multiple facilities present  
 > 1 fire ring/scar, some trash, or manure present  
 2 - 3 discernable  
 <300 sq ft.  
 1-36 sq ft.  
 76-100%  
 0-5%

### Impact Evaluation

Impact Index  
 Site Condition Class

24  
 Moderate

## Campsite #11



### Location

Easting (m)	305,753
Northing (m)	5,090,544
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	15

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	37-150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	6-25%

### Impact Evaluation

Impact Index	24
Site Condition Class	Moderate

## Campsite #12



### Location

Easting (m)	305,902
Northing (m)	5,090,552
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	19
Site Condition Class	Light

## Campsite #13

### Location

Easting (m)	306,994
Northing (m)	5,091,821
Landform	lake
Type of Use	stock
Closest Water Source	lake
Distance to Water	250

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash,
Cleanliness	waste, or manure
Social Trails	1 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	29
Site Condition Class	Moderate

## Campsite #14



### Location

Easting (m)	295,438
Northing (m)	5,086,780
Landform	stream
Type of Use	stock
Closest Water Source	river
Distance to Water	100

### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	21
Site Condition Class	Moderate

## Campsite #15



### Location

Easting (m)

294,741

Northing (m)

5,084,221

Landform

cirque basin

Type of Use

stock

Closest Water Source

Distance to Water

100

### Conditions

Damaged Trees

10 - 25 damaged trees

Root Exposure

1 - 4 trees with exposed roots

Development

primitive seat(s) and/or facilities

1 fire ring/scar, not obvious microtrash, waste, or manure

Cleanliness

Social Trails

1 discernable

Barren Area Estimate

300-1499 sq ft.

Mineral Soil Exposed Area

1-36 sq ft.

Off-site vegetation

76-100%

Off-site mineral soil exposure

0-5%

### Impact Evaluation

Impact Index

23

Site Condition Class

Moderate

## Campsite #16



### Location

Easting (m)	304,557
Northing (m)	5,091,245
Landform	lake
Type of Use	stock
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	8
Site Condition Class	Not a site (naturalized)

## Campsite #17



### Location

Easting (m)	304,438
Northing (m)	5,091,299
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	75

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	11
Site Condition Class	Light

## Campsite #18



### Location

Easting (m)	290,196
Northing (m)	5,079,218
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	10

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	13
Site Condition Class	Light

## Campsite #19



### Location

Easting (m)	290,322
Northing (m)	5,079,482
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	None
Development	primitive seat(s) and/or facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	12
Site Condition Class	Light

## Campsite #22



### Location

Easting (m)	310,023
Northing (m)	5,098,587
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	1

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	24
Site Condition Class	Moderate

## Campsite #23



### Location

Easting (m)	309,980
Northing (m)	5,098,584
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	19
Site Condition Class	Light

## Campsite #24



### Location

Easting (m)	309,950
Northing (m)	5,098,527
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	25

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #25



### Location

Easting (m)	310,838
Northing (m)	5,096,610
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	25

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	all facilities dismantled 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	10
Site Condition Class	Not a site (naturalized)

## Campsite #26



### Location

Easting (m)

312,740

Northing (m)

5,098,389

Landform

stream

Type of Use

foot

Closest Water Source

creek

Distance to Water

50

### Conditions

Damaged Trees

no more than broken branches

Root Exposure

1 - 4 trees with exposed roots

Development

no facilities

Cleanliness

1 fire ring/scar, not obvious microtrash, waste, or manure

Social Trails

1 discernable

Barren Area Estimate

<300 sq ft.

Mineral Soil Exposed Area

1-36 sq ft.

Off-site vegetation

76-100%

Off-site mineral soil exposure

0-5%

### Impact Evaluation

Impact Index

12

Site Condition Class

Light

## Campsite #27



### Location

Easting (m)	312,655
Northing (m)	5,098,409
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	200

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	12
Site Condition Class	Light

## Campsite #28



### Location

Easting (m)	315,981
Northing (m)	5,097,163
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	10

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	all facilities dismantled
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	12
Site Condition Class	Light

## Campsite #29



### Location

Easting (m)	312,983
Northing (m)	5,094,244
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	75

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	26
Site Condition Class	Moderate

## Campsite #30



### Location

Easting (m)	324,647
Northing (m)	5,100,652
Landform	lake
Type of Use	multiple
Closest Water Source	lake
Distance to Water	60

### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	39
Site Condition Class	Heavy

## Campsite #31



### Location

Easting (m)	324,627
Northing (m)	5,100,715
Landform	lake
Type of Use	multiple
Closest Water Source	lake
Distance to Water	35

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	all facilities dismantled 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	20
Site Condition Class	Light

## Campsite #32



### Location

Easting (m)	324,683
Northing (m)	5,100,597
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	17
Site Condition Class	Light

## Campsite #33



### Location

Easting (m)	321,707
Northing (m)	5,101,325
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	50

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	all facilities dismantled
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	20
Site Condition Class	Light

## Campsite #34



### Location

Easting (m)	320,345
Northing (m)	5,099,576
Landform	meadow
Type of Use	foot
Closest Water Source	creek
Distance to Water	300

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	20
Site Condition Class	Light

## Campsite #35



### Location

Easting (m)	321,983
Northing (m)	5,101,713
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	100

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	12
Site Condition Class	Light

## Campsite #36



### Location

Easting (m)	305,941
Northing (m)	5,090,601
Landform	lake
Type of Use	foot
Closest Water Source	creek
Distance to Water	25

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	all facilities dismantled
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	28
Site Condition Class	Moderate

## Campsite #37



### Location

Easting (m)	306,957
Northing (m)	5,091,819
Landform	lake
Type of Use	stock
Closest Water Source	creek
Distance to Water	50

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	>150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	35
Site Condition Class	Heavy

## Campsite #38



### Location

Easting (m)	306,779
Northing (m)	5,088,931
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	25

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	21
Site Condition Class	Moderate

## Campsite #39



### Location

Easting (m)	304,514
Northing (m)	5,091,206
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	15

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #40



### Location

Easting (m)	304,543
Northing (m)	5,091,175
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	10

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #41



### Location

Easting (m)	304,454
Northing (m)	5,091,271
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	0

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	21
Site Condition Class	Moderate

## Campsite #42



### Location

Easting (m)	304,021
Northing (m)	5,090,115
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	10

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	all facilities dismantled 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	18
Site Condition Class	Light

## Campsite #43



### Location

Easting (m)	304,276
Northing (m)	5,089,925
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	35

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #44



### Location

Easting (m)	304,150
Northing (m)	5,090,124
Landform	meadow
Type of Use	foot
Closest Water Source	lake
Distance to Water	250

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #45



### Location

Easting (m)	304,043
Northing (m)	5,090,162
Landform	meadow
Type of Use	foot
Closest Water Source	lake
Distance to Water	110

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #46



### Location

Easting (m)	302,133
Northing (m)	5,090,447
Landform	meadow
Type of Use	foot
Closest Water Source	creek
Distance to Water	300

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	none
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	10
Site Condition Class	Not a site (naturalized)

## Campsite #47



### Location

Easting (m)	301,823
Northing (m)	5,089,586
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	20

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	none
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	27
Site Condition Class	Moderate

## Campsite #48



### Location

Easting (m)	301,810
Northing (m)	5,089,613
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	20

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	21
Site Condition Class	Moderate

## Campsite #49



### Location

Easting (m)	301,869
Northing (m)	5,089,607
Landform	lake
Type of Use	foot
Closest Water Source	creek
Distance to Water	5

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	15
Site Condition Class	Light

## Campsite #52



### Location

Easting (m)	301,813
Northing (m)	5,090,680
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	30

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	no facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	9
Site Condition Class	Not a site (naturalized)

## Campsite #53



### Location

Easting (m)	301,649
Northing (m)	5,090,490
Landform	lake
Type of Use	stock
Closest Water Source	lake
Distance to Water	70

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	29
Site Condition Class	Moderate

## Campsite #54



### Location

Easting (m)	301,872
Northing (m)	5,090,529
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	200

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	17
Site Condition Class	Light

## Campsite #57



OBJECTID  
Camp\_ID

57  
new site 1

### Location

Easting (m)  
Northing (m)  
Landform  
Type of Use  
Closest Water Source  
Distance to Water

296,702  
5,075,080  
lake  
foot  
lake  
100

### Conditions

Damaged Trees  
Root Exposure  
Development  
  
Cleanliness  
Social Trails  
Barren Area Estimate  
Mineral Soil Exposed Area  
Off-site vegetation  
Off-site mineral soil exposure

no more than broken branches  
None  
all facilities dismantled  
1 fire ring/scar, not obvious microtrash, waste, or manure  
1 discernable  
<300 sq ft.  
1-36 sq ft.  
51-75%  
0-5%

### Impact Evaluation

Impact Index  
Site Condition Class

10  
Not a site (naturalized)

## Campsite #58



### Location

Easting (m)	298,007
Northing (m)	5,081,419
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	25

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	None
Development	all facilities dismantled 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	13
Site Condition Class	Light

## Campsite #60



### Location

Easting (m)	299,282
Northing (m)	5,079,107
Landform	ridgetop
Type of Use	stock
Closest Water Source	
Distance to Water	1000

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	15
Site Condition Class	Light

## Campsite #61



### Location

Easting (m)	310,100
Northing (m)	5,098,571
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	30

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	26
Site Condition Class	Moderate

## Campsite #62



### Location

Easting (m)	310,125
Northing (m)	5,098,500
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	10

### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	36
Site Condition Class	Heavy

## Campsite #63



### Location

Easting (m)	310,245
Northing (m)	5,098,323
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	300

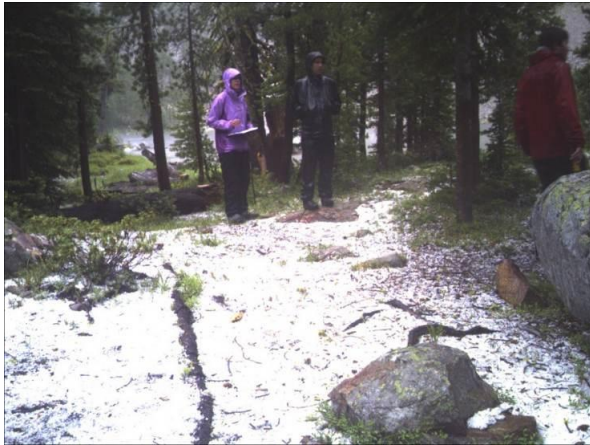
### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	36
Site Condition Class	Heavy

## Campsite #64



### Location

Easting (m)	309,850
Northing (m)	5,096,703
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	50

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	no facilities
Cleanliness	no waste, manure, trash, or fire scar
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	22
Site Condition Class	Moderate

## Campsite #65



### Location

Easting (m)	310,878
Northing (m)	5,096,703
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	50

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	22
Site Condition Class	Moderate

## Campsite #66



### Location

Easting (m)	313,809
Northing (m)	5,099,935
Landform	sideslope
Type of Use	foot
Closest Water Source	creek
Distance to Water	75

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #67



### Location

Easting (m)	312,912
Northing (m)	5,094,181
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	30

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	28
Site Condition Class	Moderate

## Campsite #68



### Location

Easting (m)	318,414
Northing (m)	5,101,086
Landform	stream
Type of Use	multiple
Closest Water Source	creek
Distance to Water	100

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	(no data)
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	23 (missing 1 value)
Site Condition Class	Moderate

## Campsite #69



### Location

Easting (m)	319,093
Northing (m)	5,099,742
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	20

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #70



### Location

Easting (m)	318,746
Northing (m)	5,099,462
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	200

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities > 2 fire rings/scars, trash, waste, or manure prevelenat.
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #71



### Location

Easting (m)	329,157
Northing (m)	5,096,095
Landform	meadow
Type of Use	multiple
Closest Water Source	creek
Distance to Water	75

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	None
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	17
Site Condition Class	Light

## Campsite #72



### Location

Easting (m)	302,632
Northing (m)	5,092,093
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	30

### Conditions

Damaged Trees	> 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	33
Site Condition Class	Heavy

## Campsite #73



### Location

Easting (m)	293,779
Northing (m)	5,082,726
Landform	sideslope
Type of Use	foot
Closest Water Source	
Distance to Water	100

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	none
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	0 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	4
Site Condition Class	Not a site (naturalized)

## Campsite #74



### Location

Easting (m)	301,917
Northing (m)	5,082,464
Landform	lake
Type of Use	stock
Closest Water Source	creek
Distance to Water	15

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	32
Site Condition Class	Heavy

## Campsite #75



### Location

Easting (m)	301,894
Northing (m)	5,082,354
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	20

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	no facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	30
Site Condition Class	Moderate

## Campsite #76



### Location

Easting (m)	306,869
Northing (m)	5,092,767
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	50

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	37-150 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	26
Site Condition Class	Moderate

## Campsite #77



### Location

Easting (m)	306,988
Northing (m)	5,092,324
Landform	lake
Type of Use	foot
Closest Water Source	creek
Distance to Water	20

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	no facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	23
Site Condition Class	Moderate

## Campsite #78



### Location

Easting (m)	306,980
Northing (m)	5,092,313
Landform	lake
Type of Use	foot
Closest Water Source	creek
Distance to Water	15

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	33
Site Condition Class	Heavy

## Campsite #79



### Location

Easting (m)	307,063
Northing (m)	5,092,291
Landform	lake
Type of Use	foot
Closest Water Source	creek
Distance to Water	15

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	> 3 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	36
Site Condition Class	Heavy

## Campsite #80



### Location

Easting (m)	307,186
Northing (m)	5,092,312
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	500

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	37-150 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	28
Site Condition Class	Moderate

## Campsite #81



### Location

Easting (m)	298,289
Northing (m)	5,081,002
Landform	meadow
Type of Use	stock
Closest Water Source	creek
Distance to Water	50

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	no facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	none
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	16
Site Condition Class	Light

## Campsite #82



### Location

Easting (m)	307,555
Northing (m)	5,094,929
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	75

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	30
Site Condition Class	Moderate

## Campsite #83



### Location

Easting (m)	307,678
Northing (m)	5,094,973
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	60

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	Multiple facilities present
Cleanliness	1 fire ring/scar, not obvious microtrash, waste, or manure
Social Trails	> 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	34
Site Condition Class	Heavy

## Campsite #84



### Location

Easting (m)	308,335
Northing (m)	5,096,359
Landform	lake
Type of Use	stock
Closest Water Source	lake
Distance to Water	60

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	1 discernable
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	37-150 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	21
Site Condition Class	Moderate

## Campsite #85



### Location

Easting (m)	308,295
Northing (m)	5,096,399
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	25

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #86



### Location

Easting (m)	308,342
Northing (m)	5,096,303
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	0

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	37-150 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	6-25%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #87



### Location

Easting (m)	310,003
Northing (m)	5,098,599
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	60

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	1 - 4 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	none
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	18
Site Condition Class	Light

## Campsite #88



### Location

Easting (m)	322,039
Northing (m)	5,101,610
Landform	lake
Type of Use	foot
Closest Water Source	lake
Distance to Water	35

### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	1 discernable
Barren Area Estimate	300-1499 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	23
Site Condition Class	Moderate

## Campsite #89



### Location

Easting (m)	321,764
Northing (m)	5,101,182
Landform	stream
Type of Use	multiple
Closest Water Source	creek
Distance to Water	50

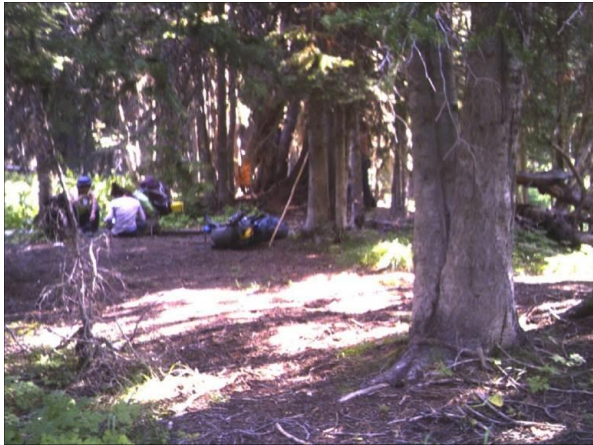
### Conditions

Damaged Trees	1- 9 damaged trees
Root Exposure	5 - 10 trees with exposed roots
Development	primitive seat(s) and/or facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	2 - 3 discernable
Barren Area Estimate	>1500 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	28
Site Condition Class	Moderate

## Campsite #90



### Location

Easting (m)	303,332
Northing (m)	5,091,771
Landform	stream
Type of Use	multiple
Closest Water Source	creek
Distance to Water	15

### Conditions

Damaged Trees	10 - 25 damaged trees
Root Exposure	> 10 trees with exposed roots
Development	primitive seat(s) and/or facilities
Cleanliness	> 1 fire ring/scar, some trash, or manure present
Social Trails	none
Barren Area Estimate	<300 sq ft.
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	76-100%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	25
Site Condition Class	Moderate

## Campsite #91

### Location

Easting (m)	307,602
Northing (m)	5,091,093
Landform	stream
Type of Use	foot
Closest Water Source	creek
Distance to Water	1

### Conditions

Damaged Trees	no more than broken branches
Root Exposure	None
Development	no facilities 1 fire ring/scar, not obvious microtrash, waste, or manure
Cleanliness	
Social Trails	none
Barren Area Estimate	none
Mineral Soil Exposed Area	1-36 sq ft.
Off-site vegetation	51-75%
Off-site mineral soil exposure	0-5%

### Impact Evaluation

Impact Index	4
Site Condition Class	Not a site (naturalized)

## Campsite #92



### Location

Easting (m)

Northing (m)

Landform saddle

Type of Use foot

Closest Water Source

Distance to Water 100

### Conditions

Damaged Trees no more than broken

Root Exposure 1 - 4 trees

Development no facilities

Cleanliness 1 fire ring/scar, mi

Social Trails none

Barren Area Estimate <300 sq ft.

Mineral Soil Exposed Area 76-100%

Off-site vegetation 1-36 sq ft.

Off-site mineral soil exposure 0-5%

### Impact Evaluation

Impact Index 10

Site Condition Class Not a site (naturalized)

## Campsite #93



### Location

Easting (m)

Northing (m)

Landform meadow

Type of Use foot

Closest Water Source creek

Distance to Water 50

### Conditions

Damaged Trees no more than broken

Root Exposure 1 - 4 trees

Development primitive seat(s) an

Cleanliness 1 fire ring/scar, mi

Social Trails none

Barren Area Estimate <300 sq ft.

Mineral Soil Exposed Area 76-100%

Off-site vegetation 1-36 sq ft.

Off-site mineral soil exposure 0-5%

### Impact Evaluation

Impact Index 12

Site Condition Class Light

# APPENDIX 4. ANACONDA PINTLER WILDERNESS SITE IMPACT WORKSHEET

Site # \_\_\_\_\_ **Anaconda-Pintler Wilderness Site Impact Worksheet - 2013 Edition**

Date Inventoried: \_\_\_\_\_ Inventoried by (Name): \_\_\_\_\_  
 Elevation: \_\_\_\_\_ Township / Range/ Section \_\_\_\_\_  
 (decimal minutes) LAT: \_\_\_\_\_ LONG: \_\_\_\_\_

Site Description, Location, and Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Rating: circle one category>	0	1	2	3	Rate x weight
Damaged Trees: # associated with site _____	No more than broken branches	1-9 damaged trees associated with site	10-25 damaged trees associated with site	> 25 damaged trees associated with site.	___ x 3 =
Root Exposure: # associated with site _____	None	1-4 trees with exposed roots	5-10 trees with exposed roots	> 10 trees with exposed roots	___ x 3 =
Development: (Before naturalizing, exclude fire rings)	No facilities	All facilities dismantled but remnants may be visible	Primitive seat(s) present, and/or facilities such as hitch rail, tent poles stored	More facilities present than #2.	___ x 1 =
Cleanliness: (Before naturalizing) # fire scars _____ human waste Y/N _____ manure Y/N _____ trash Y/N _____	No waste, manure or trash or fire scar	1 fire ring/scar, or microtrash present, or human waste not obvious, or manure not obvious.	>1 fire ring/scar, or microtrash and some trash present, or human waste not obvious, or manure present.	> 2 fire rings/scar, or trash prevalent, or microtrash persistent, or human waste obvious, or manure is prevalent.	___ x 1 =
Social Trails: # of social trails _____	None	1 discernable (Count any trail passing through the site as 1 trail)	2-3 discernable (Count additional trails crossing the other trail as 1 trail not 2)	>3 discernable (Count a trail that forks off another trail as 1 trail)	___ x 2 =
Barren Area Estimate: (Main and associated camp areas) _____ Sq. ft.	None	< 300 sq ft.	300 – 1499 sq ft.	> 1500 sq ft.	___ x 3 =
Mineral Soil Exposed Estimate: for main camp and associated areas: _____ Sq. ft.	0 sq ft.	1-36 sq ft	37 – 150 sq ft.	> 150 sq ft.	___ x 3 =
<b>0-10 Not a site 11-20 Light 21-30 Moderate 31-39 Heavy 40 - 48 Extreme</b>					<b>IMPACT INDEX SUM =</b>

Off-site ground cover vegetation \_\_\_\_\_ %. Off-site mineral soil exposure \_\_\_\_\_ %. Site condition class \_\_\_\_\_

Take a digital photo at each site, print it and attach to this sheet. Take a previous SIW with you when remonitoring this site. Convert 1993 edition SIW data to 2006 edition while in the field paying special attention to sq. ft of mineral soil. Document the results.

### SITE SKETCH AND PHOTO DATA 2013 Edition

Site # \_\_\_\_\_ Date: \_\_\_\_\_ Inventoried by: \_\_\_\_\_

Draw a schematic of the site layout, include and label the main camp area, associated stock holding areas, (note their dimensions) distinguishable natural features (large boulders, lake shores, streams, distinctive trees, etc.), system trails and social trails. Indicate locations of photos taken by using an arrow showing the direction of sight. Indicate north with an arrow.

**DISTANCE TO WATER:** Creek \_\_\_\_\_ River \_\_\_\_\_ Lake \_\_\_\_\_ Other? \_\_\_\_\_

**DEVELOPMENT:** (# on arrival / # when you left)

Fire ring \_\_\_\_\_ / \_\_\_\_\_

Primitive seat \_\_\_\_\_ / \_\_\_\_\_

Constructed seat \_\_\_\_\_ / \_\_\_\_\_

Table/shelf \_\_\_\_\_ / \_\_\_\_\_

Ditched tent pad \_\_\_\_\_ / \_\_\_\_\_

Excavated tent pad \_\_\_\_\_ / \_\_\_\_\_

Hitchrail \_\_\_\_\_ / \_\_\_\_\_

Corral \_\_\_\_\_ / \_\_\_\_\_

Toilet \_\_\_\_\_ / \_\_\_\_\_

Meat rack \_\_\_\_\_ / \_\_\_\_\_

Poles \_\_\_\_\_ / \_\_\_\_\_

Other \_\_\_\_\_

**TYPE OF USE:** (Circle as many as apply)

1 - Foot 2 - River 3 - Stock

4 - Outfitter 5 - Other \_\_\_\_\_

**Key to symbols:**

Photo point

Tree

Stream

Social/non-system trail

System trail

**In office -**

Code-a-Site done? (Year) \_\_\_\_\_ Code-a-Site impact level \_\_\_\_\_

Site impact worksheet done previously? (Year) \_\_\_\_\_ Site impact score \_\_\_\_\_ Impact level \_\_\_\_\_