

ALBERTA WILDERNESS ASSOCIATION BIGHORN WILDLAND RECREATION MONITORING PROJECT

2012 REPORT

Monitoring of Recreation Uses and Impacts in Bighorn Wildland, Alberta
Study Location: Hummingbird Forest Recreation Area

Alberta Wilderness Association
by Sean Nichols and Madeline Wilson



Executive Summary

Since the 1970s, when the Bighorn Backcountry was first identified as a provincially significant wilderness area, management priorities have focused on watershed protection, wildlife habitat conservation, and dispersed non-motorized recreational activities. Alberta Wilderness Association (AWA) has actively supported these priorities and, for more than 30 years, has sought protected area designation for the Bighorn Wildland¹. In 2002, through the Bighorn Backcountry Access Management Plan (AMP), the Alberta Ministry of Sustainable Resource Development (now the Ministry of Environment and Sustainable Resource Development (ESRD)) formally permitted motorized recreation of Off-Highway Vehicles (OHVs) in areas where these activities were formerly not permitted.

Research² has shown that unregulated, unenforced use of an area by OHVs over the long-term negatively affects water quality, vegetation, historical trails, and wildlife. These activities may also dissuade many non-motorized recreationists from using the same trails. Experience has revealed this to be true for the Bighorn Backcountry, as emphasized by extreme trail erosion and widespread environmental degradation throughout the area.

In the document *Is the Access Management Plan Working? Monitoring Recreational Use in the Bighorn Backcountry (2004-2008)*, AWA evaluated management success in the Bighorn Backcountry five years after the implementation of the AMP. To understand what effect new recreational guidelines are having in the Bighorn Backcountry, we monitored OHV and other recreational activities between 2004 and 2008. This study focused on the 76-km network of trails designated for motorized and non-motorized use in the Upper Clearwater-Ram Public Land Use Zone (PLUZ), and evaluated three criteria as indicators of management success:

1. Illegal use of trails,
2. Recreational impacts on and around trails, and
3. Trends in motorized vehicle activity.

Since the time of the 2009 report, AWA has continued to monitor trends in motorized recreation, and document the extensive damage that continues to occur as a result of increased

¹ Within the general category of Provincial Park, wildlands is a special subcategory established by a set of regulations in 1996. Based closely on the Willmore model, this designation was intended to allow for the establishment of large protected areas. It is now the form of protected-area designation under which most land is protected in Alberta.

² An annotated bibliography of all relevant literature appears as Appendix D of AWA's 2009 report, *Is the Access Management Plan Working? Monitoring Recreational Use in the Bighorn Backcountry*.



motorized use throughout the Bighorn Backcountry. This current document represents the data and observations gathered by AWA staff and volunteers throughout the 2012 field season.

Key Findings

1. **Illegal use of trails is occurring.** Although trail regulations governing OHV activity including seasonal closures are in place, OHV traffic that does not comply with current PLUZ regulations continues to occur, i.e. trails are used out of the designated season or within non-designated areas.
2. **Trail damage is increasing.** Between 2004 and 2008, 453 features of concern such as trail braiding or rutting were recorded. In 2012, an additional 146 features of concern were recorded. Of previously recorded sites, damage severity *increased* in 80 percent. Erosion events (EEs) due to recreational use were observed at 98 sites.
3. **The total footprint of non-designated backcountry camping is significant.** In AWAs previous report, it was found that the total combined footprint from random backcountry campsites in the study area was 50,574 m². This area is roughly equivalent to 32 NHL ice surfaces. In 2012, one new backcountry campsite was observed.
4. **Water bodies are not adequately protected.** We documented 8 water crossings throughout the trail network, only 1 of which had formal crossing structures present.
5. **Motorized traffic on trails continues to increase.**
6. **The particular topography, soil type, and vegetative communities found in the Bighorn are unable to support motorized recreation.** The extreme trail erosion observed throughout the 2012 field season confirmed that motorized recreation is incompatible with protection of the pristine wilderness values of the Bighorn Backcountry.
7. **Protection of ecological values in the Bighorn is the top management priority of Albertans.** Albertans consistently rank healthy environment and ecosystems as the number one priority for land use planning (SRD 2007).



Recommendations

Our most recent monitoring data serves to reinforce AWA's previous assertion that current access management in the Bighorn Backcountry is unable to protect the environment from degradation caused by recreational impacts. Reasons include 1) enforcement and voluntary compliance of PLUZ regulations do not appear to be reducing the amount of illegal activity on trails, 2) current levels of recreational activity are causing severe environmental degradation, and 3) extreme trail erosion in 2012, exacerbated by high water levels, suggests these trails cannot sustainably support motorized recreation and that such problems will increase cumulatively.

We recommend the following actions be taken:

1. **Restrict motorized recreation in the Prime Protection Zone³.**

AWA recommends the full removal of motorized access in the Prime Protection Zone. Prudent management intervention is needed to prevent further and possibly irreversible damage from occurring in this area.

Without full legal protection of the Prime Protection Zone, the following recommendations must be implemented immediately.

2. **Increase enforcement presence and action in backcountry areas, including substantial fines for illegal activities.**
3. **Ensure that all non-designated (i.e. illegal) trails are physically blocked and signed at the junction, with language indicating that motorized users proceeding off of the main trail are in violation of PLUZ regulations. .**
4. **Redesign elements of the trail network to facilitate safety and enforcement patrols.**
5. **Ensure that amateur stewardship efforts to repair damaged trail sections are overseen by professional engineering and construction personnel.**
6. **Address water quality and fisheries objectives by improving water crossings along designated trails through the construction of bridges for permanent streams and hardened fords for ephemeral streams.** Approaches to streams should be hardened with gravel to reduce bank erosion and fenced to encourage their use. AWA was pleased

³ Under the 1977 Eastern Slopes Policy, the Prime Protection Zone (PPZ) became the zone with the highest level of protection, with the only allowed activities being "dispersed back-country" non-motorized recreation.



to observe some examples of proper water crossings throughout our study area in 2012. ESRD staff should ensure adequate trail infrastructure is constructed throughout the trail network.

7. **Increase management responsiveness to changing trail conditions by closing areas until repairs are made or the area naturally regenerates.** AWA was pleased that in July 2012 trails in the Hummingbird Recreation Area were closed to motorized traffic. The lack of response to AWA's letter of concern requesting trail closure in September 2011 where we warned of increased trail damage, significant trail widening, frolicking in the meadows of BTS remains a concern. It is disappointing that conditions were allowed to become so severely damaged before the necessary closures were made.
8. **Enforce a three-metre-wide trail designation.** The 10-m or 23-m designated trail width (SRD 2002b) in the Bighorn is far wider than in many jurisdictions in North America where OHV use is common. Having more reasonable and enforceable trail widths will help minimize environmental degradation as well as improve the efficiency of stewardship efforts.

Future Actions by AWA

This report should be considered an updated edition of AWAs previous Bighorn trail monitoring reports and trail monitoring work, ongoing since 2004. It is intended to provide complementary data and analysis for government agencies responsible for access management decisions in the Bighorn Backcountry.

AWA will continue to monitor recreation use and impacts in the Bighorn Backcountry, and advocate for its protection. We will:

- 1) Continue to promote full legal protection of the Prime Protection Zone;
- 2) Continue monitoring efforts using traffic counters;
- 3) Spot-check severely disturbed areas for management intervention and update the photo-database of areas;
- 4) Continue monitoring of trail network for comparison against baseline data to determine trends of impacts on landscape;
- 5) Continue to bring management/enforcement issues to the attention of authorities; and
- 6) Continue to be a resource for those who have questions about recreational impacts in the Bighorn and want to find a way to help.



Acknowledgements

A project of this scale requires a good deal of cooperation, collaboration and volunteerism. We are grateful to all those involved and mention **Paul Sutherland** in particular for his untiring support of our monitoring project.

AWA is grateful for the support we received from ASPRWF for our 2012 on-the-ground monitoring work in the Bighorn.



AWA also appreciates the support received from Google for the mapping software used in the production of this report.



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Introduction

Recreational trail use is growing in Alberta as more people become engaged in backcountry activities and as new infrastructure development increases new unregulated access to wilderness areas. Under the provincial Land-use Framework (LUF), the Albert government commits to "ensure responsible stewardship of Alberta's lands and resources, so that future generations of Albertans benefit from the province's natural beauty and prosperity, just as we do today" (GoA, 2011). Alberta's backcountry users include naturalists, photographers, hunters and anglers, hikers, cross country skiers, mountain bikers, trappers, ranchers, rock climbers, rafters, commercial outfitters, equestrian, off-highway vehicle (OHV) and snowmobile riders. These backcountry users come from a variety of communities with equally varying values and opinions about wilderness protection and management which has lead to severe challenges in consensus-based land-use management.

The Alberta Ministry of Environment and Sustainable Resource Development (ESRD) is responsible for meeting the often competing demands for new recreational opportunities from these user groups, whilst also addressing human impacts on water quality, forest maintenance and regeneration and wildlife habitat. The government agencies responsible for regulating recreation access across the province are under-resourced to plan, manage, and enforce regulations in backcountry areas.

This report is intended to provide complementary data and analysis for government agencies responsible for access management decisions in the Bighorn Backcountry⁴ area, which lies approximately 90 km southwest of Rocky Mountain House and directly east of Banff and Jasper National Parks. An important piece of Alberta's Eastern Slopes, the Bighorn Backcountry is a large and intact wilderness area that has largely retained its ecological integrity due to the absence of roads and industrialized access. Since the 1970s, the Bighorn Backcountry has been identified as a provincially significant wilderness area. The Eastern Slopes Policy (Government of Alberta, revised 1984) gives management precedence to protection of intact watersheds, native vegetation, and wildlife habitat over all other uses of this sensitive area.

The "Bighorn Wildland Recreation Area" was designated by the Government of Alberta in 1986, but the corresponding legislation to protect it never materialized. In 2002 the Bighorn Backcountry was placed under new access management regulations through the designation of

⁴AWA prefers the use of the term Bighorn Wildland.



six Forest Land Use Zones (since changed to Public Land Use Zones⁵ (PLUZ)) under the Forest Recreation Regulations. The PLUZ regulations enabled the government to legally designate recreational trails for specific uses and seasons. The government also publicized access to the Bighorn area with a map, brochure, and website (SRD 2006a) and officially permitted motorized (mixed-use) trails in some areas through the Bighorn Backcountry Access Management Plan (AMP) (SRD 2002a). Overall, these actions have led to adverse recreational impacts in the area and have significantly diminished wildlife and watershed values, as well as non-motorized recreational opportunities.

Alberta Wilderness Association (AWA) is committed to ensuring the tremendous ecological attributes of this area are conserved, and is seeking Wildland Park protection for the Bighorn.

The protection of the Bighorn Backcountry is the responsibility of ESRD, and in the past, the Ministry has recognized that mixed recreational use in the area will bring challenges to the task of protecting sensitive resources (SRD 2002b). Concerned about these challenges, in 2003 AWA planned a 5-year program to monitor OHV and other recreational activities and assess how well regulations in place would protect the sensitive ecosystems of the Bighorn. Shortly thereafter, ESRD created a Trail Impact Monitoring Program (SRD 2003) based on the recommendations of the Bighorn Advisory Group (SRD 2002b), a multi-stakeholder group designed to provide access management advice to ESRD. Through this monitoring program, ESRD aims to manage the Bighorn Backcountry “to ensure the protection of the environment, while allowing responsible and sustainable recreational use” (SRD 2006b). A report based on 5 years of monitoring was expected in early 2009, but was not made public until the summer of 2012 (although the report is dated January 13, 2012). The report provided to AWA is based on a review of current and past members of the steering and standing committee and states that members of the committee "garnered input from the larger groups they represent as users of the Bighorn area". Regrettably AWA and its 40 years of efforts at maintaining trails as well as our trail and access management monitoring work for the past eight years, including our reports to the ESRD department, did not qualify to comment as part of the review.

⁵ Due to changes made to the provincial Public Lands Act (PLA) in 2010, and the consolidation of the Forest Recreation Regulation (FRR) into the Public Lands Administration Regulations (PLAR) in 2011, the six FLUZ are now referred to as Public Land Use Zones (PLUZ). The PLUZ are still governed by the legislative requirements established in the FRR.



AWA supports the goals of the Trail Impact Monitoring Program and believes that decisions made by managers of the Bighorn should be evidence-based. AWA also believes that access management regulations can be improved through monitoring studies that address changes to environmental conditions. All trail monitoring reports compiled by AWA are intended to provide complementary data and analysis for government agencies responsible for access management decisions in the Bighorn Backcountry area.

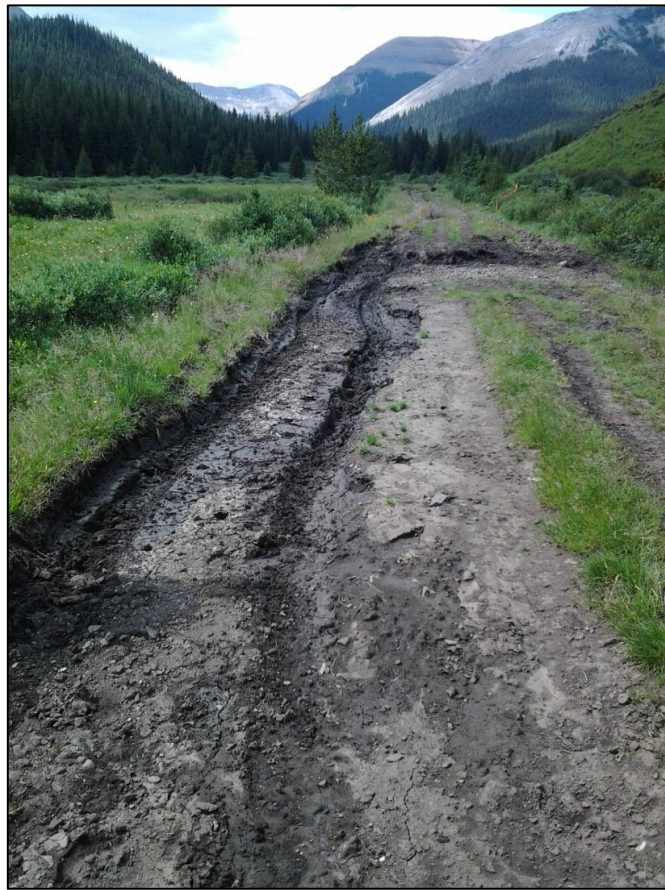


Figure 1. The forested foothills of the Bighorn Backcountry area.



Study Area

This study took place in the Upper Clearwater/Ram PLUZ within the Bighorn Backcountry, which is located approximately 90 km southwest of Rocky Mountain House (Figure 1). The Bighorn Backcountry is adjacent to Banff and Jasper National Parks and consists of approximately 5,000 km² of public lands. Within the Bighorn Backcountry, the Upper Clearwater/Ram PLUZ is the largest of the six PLUZs, with an area of approximately 2,000 km². The Upper Clearwater/Ram PLUZ consists of Alpine and Subalpine subregions of the Rocky Mountain Natural Region. Most of the trails we focused on occur within the Subalpine, an area characterized by forests of lodgepole pine (*Pinus contorta*), Engelmann spruce (*Picea engelmannii*), and subalpine fir (*Abies lasiocarpa*); high elevation meadows comprising hairy wild rye (*Elymus villosus*), June grass (*Koeleria cristata*), and bearberry (*Arctostaphylos uva-ursi*); wetlands; and shrub areas. Large carnivores (e.g., bears, wolves, cougars), ungulates (e.g., deer, elk, and bighorn sheep), songbirds, and cutthroat and bull trout are also prevalent here. Since the 1970s, there has been no industrial activity in the Upper Clearwater/Ram PLUZ, in contrast to adjacent lands on the Bighorn's eastern boundary.

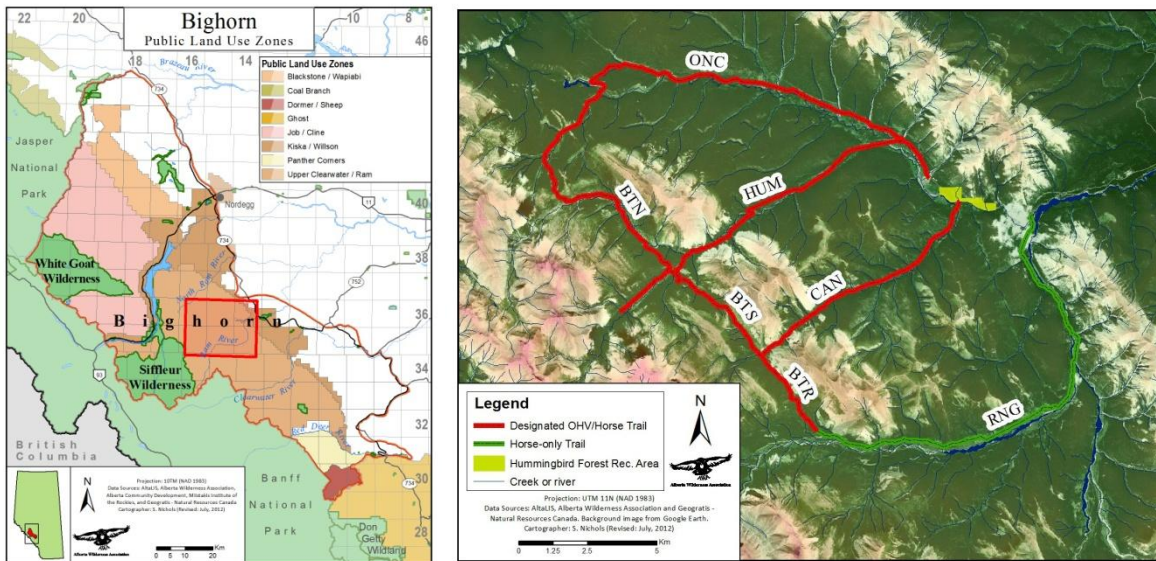


Figure 2. General location of study area (left). The specific study area (right) is indicated by the red square near the centre of the general figure. Legal Land Description township and range coordinates are shown along the right and top margins of the map, respectively.



Methodology

AWA designed a monitoring program that looked at three indicators of management success:

- 1) Illegal activity on trails,
- 2) Recreational impacts in and around trails, and
- 3) Trends in motorized vehicle activity.

Study area

We chose to focus our efforts on trails based out of the Hummingbird Forest Recreation Area. These trails are the largest OHV-designated trail system in the Bighorn and are located within the Prime Protection Zone. We divided the trail network into seven sections based on names identified on the PLUZ map published by SRD (2006b; revised from 2003). Where designated trails were not named, we added complementary names to specific stretches (Figure 2).

Four of these seven trails are former resource exploration roads dating to before 1970; these include the Onion Lake Trail (ONC), Hummingbird Creek Trail (HUM), Canary Creek Trail (CAN), and Ranger Creek/South Ram River Trail (RNG). The three trails we assigned names to are Back Trail North (BTN), Back Trail South (BTS) and Back Trail Ranger (BTR). For classification purposes, we combined the lower portion of the Ranger Creek Trail with the South Ram River Trail to its junction with BTR (Figure 2). This classification allowed us to efficiently survey the trail network as well as incorporate a variety of trail regulations, such as temporal restrictions and equestrian versus OHV, into the study.

For the 2012 monitoring update trip, two Samsung 7" tablet computers running the Google Android platform were purchased. These tablets were equipped with 3-megapixel cameras and an integrated GPS. Survey software from Open Data Kit (ODK) was installed on the tablets that allowed for efficient data collection. The ODK surveys were set up such that for any given damage site, measurements of the physical dimensions (length, width, depth) and severity of the damage could be entered, along with various other characteristics (presence of braids, erosion events, and so forth) and any annotations. Each observation was automatically timestamped, geolocated with a GPS reading and associated with one or more photographs of the site. A portable solar charger from Voltaic Systems was also purchased and brought along on the



trip to recharge the tablets after each day's use. The solar charger was attached to a backpack, allowing it to accumulate a charge over the course of a day.

Damage observations were made over the entire length of the trails selected for the monitoring (CAN, BTS and BTR). The trail selection was made based on a combination of ease of access; diversity and representation of terrain types; and potential for further degradation (as noted on earlier trips). Methodologies for determining the size and severity of the damage remained as described in the original 2004-2008 Bighorn Monitoring Report (see pp.7-8). As the objective was to document the changes that had occurred since the initiation of the study, a hard-copy catalogue of all the damage sites initially recorded was brought along, which included GPS locations and photos from the original monitoring trips. At each damage site observed, the catalogue was checked to determine if it had been previously recorded. If not, it was recorded as a new damage site. Otherwise, the site was compared to the record in the catalogue to determine whether the site appeared worse, much worse, better, much better, or about the same as the existing record indicated. In the last case (no significant observable change), the site was not re-recorded. In all other cases, it was re-recorded, with an annotation indicating the degree of observed change.

Results

Monitoring trends in illegal activity on trails

As detailed in earlier reports, AWA has had TRAFx vehicle counters⁶ in place on several designated and undesignated trails since 2003. These counters record and timestamp OHV passes, data which is then downloaded to a computer for analysis. Since 2009, AWA has had five such counters active: two on ONI, and one each on HUM, CAN and RNG, the latter of which is closed to OHVs other than snowmobiles.

Due to the annual freeze/thaw cycle of the ground and difficulty of winter access, there have been several data outage windows where no data was collected from the counters, making a precise day-by-day comparison of the numbers difficult. However two trends are clear from the data collected:

⁶ <http://www.trafx.net/products>



1. OHV use in the Bighorn is increasing every year
2. OHV use in the Bighorn does occur during trail closure periods

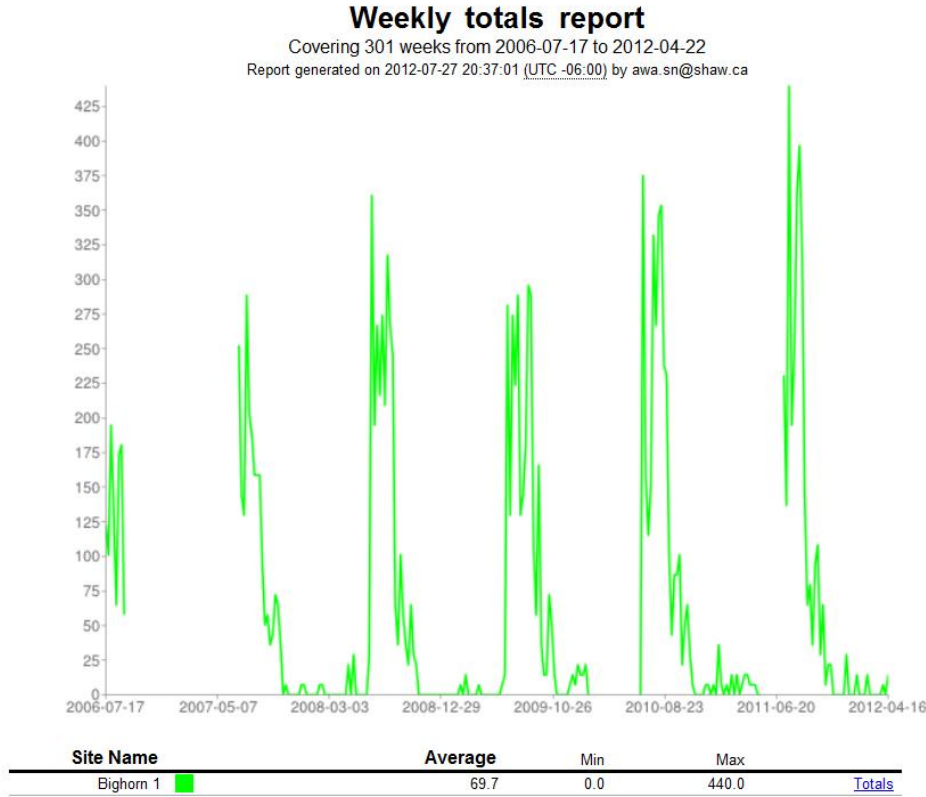


Figure 3. A graph from the TRAFx website showing recorded OHV passes at the ONI/HUM trailhead. A clear trend of increasing use from 2006 to present is visible, despite data gaps. This data also evidences vehicle passes during the trail closure period from February 1 (previously March 15) to June 30 every year, which has been corroborated with visual observations. Similar patterns of use are observable in the data collected from the other vehicle counters.

Monitoring the impacts of recreational activities on and near trails

We surveyed the trail network for four types of recreational activity impact: 1) damaged sites, 2) water crossings, 3) campsites, and 4) non-designated trails (secondary trails). In total, approximately 20 km of designated trails were surveyed and 146 features of concern were found.

Where damaged sections of a trail exceeded a width of 3 m (defined by AWA as the reasonable maximum trail width that should be enforced throughout the Bighorn), site width was measured. The average overall width of recorded features of concern was found to be 5.74 m, the widest site being approximately 30 m. Where damaged sites involved trail rutting that visibly



exceeded “normal” rutting depth due to either excessive use or erosion, site depth was measured (i.e. ruts were observed throughout the entire trail network, but were only measured when the depth was of concern). Of these damaged sites, the average depth was 0.62 m and the maximum observed depth was 1.75 m.



Figure 4. A section along CAN trail showing a damaged site of approximately 1.75 m in depth.

We observed 14 non-designated trails, some of which had official signs directing motorists against using the particular trail. We also observed various methods of trail obstruction such as logs, assumedly put in place by trail stewardship groups to deter users from straying off the designated trail.

The density of campsites was similar to that observed in previous studies. Overall, 6 campsites were observed. The majority of random campsites were found in good condition, although vegetative damage due to acts of vandalism and horses being tied to trees was noted. In particular, one campsite (assumedly on a trap line) had several traps left out unsecured.

We documented 8 water crossings throughout the network with the highest water crossing densities along CAN. Of these water crossings, only 1 had a formal crossing structure present.





Figure 5. A water crossing located along CAN trail. As no permanent structures are present, users must travel directly through the stream.

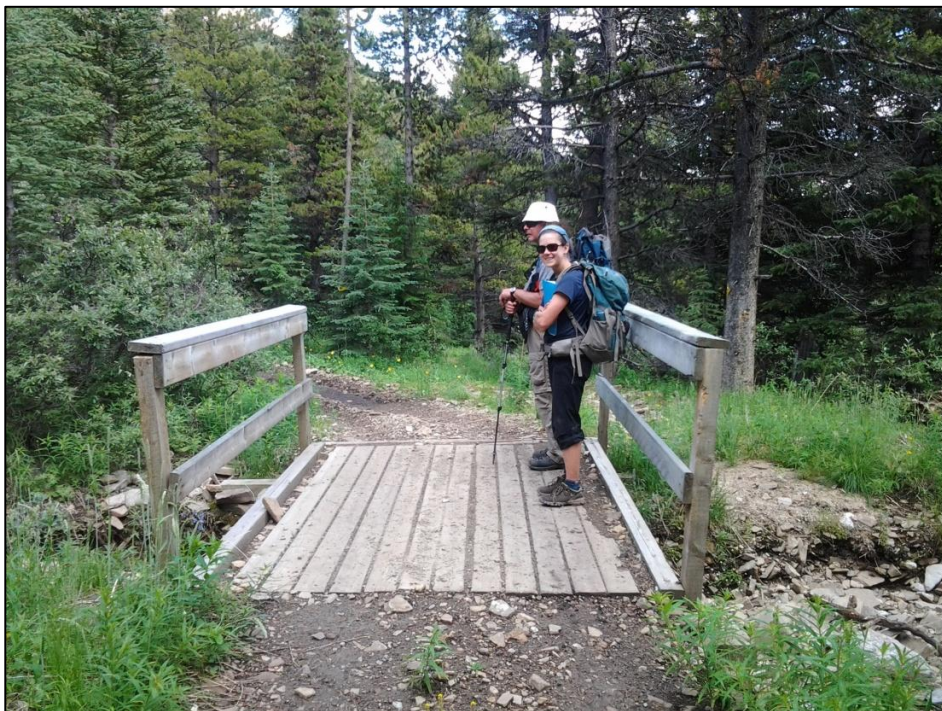


Figure 6. Permanent water crossing constructed on BTR.

Erosion events were observed at a total of 98 sites (Figure 7). Trail erosion was most severe on CAN, where large sections were essentially impassable.



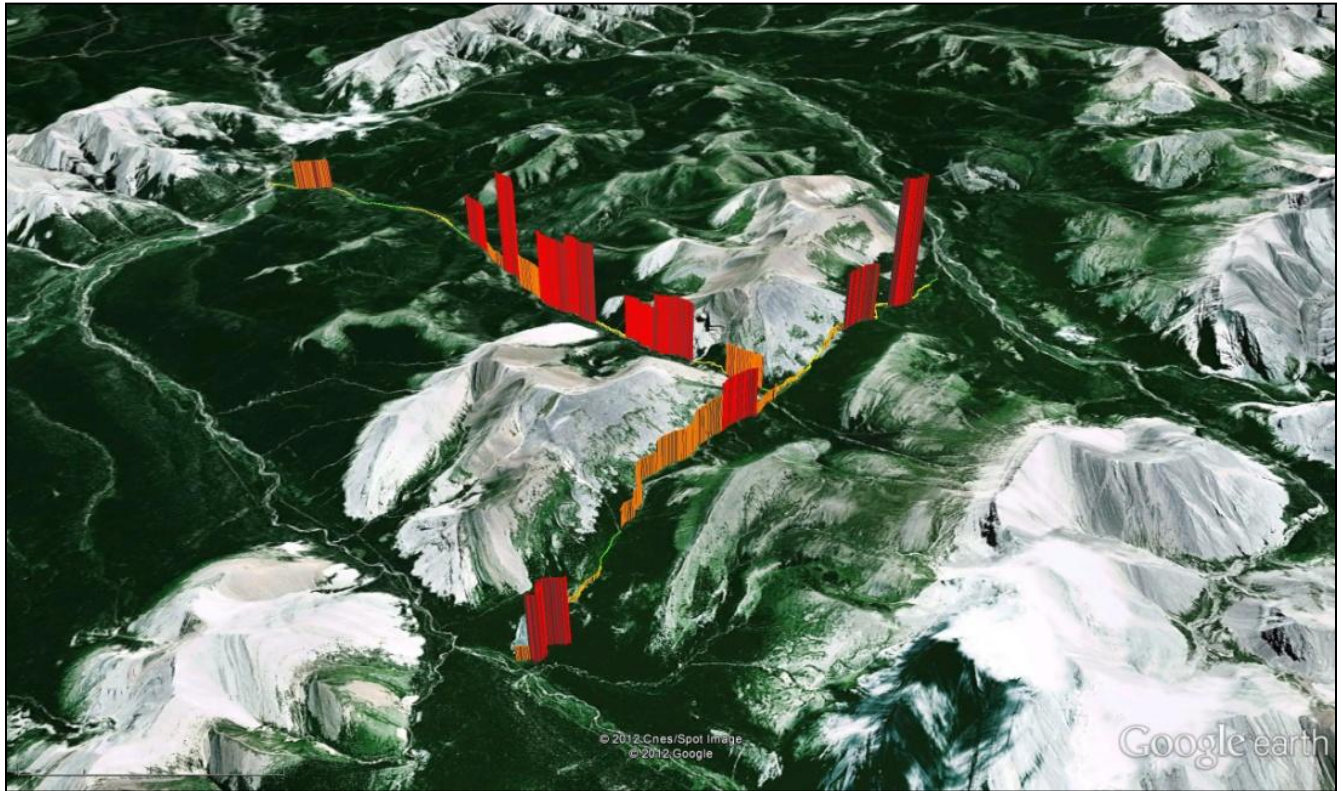


Figure 7. Erosion Event distribution on CAN, BTS and BTR; view looking southeast from above the North Ram River headwaters. Height and colour of 500m trail sections is related to the total length of eroded trail within each section: no eroded trail = green, 1m-10m eroded = yellow, 11m-25m eroded = orange, 26m-100m eroded = dark orange, greater than 100m eroded = red. Scale is variable on this projection, but the length of individual trail sections is 500m. (Background map courtesy Google Earth.)





Figure 8. A section on CAN trail made impassable due to extreme erosion.

Discussion and Conclusion

The pristine wilderness found within the Bighorn Backcountry area has been, and continues to be, negatively impacted by unmanaged recreational activities. Since the 2004-2008 AWA report was released, trail degradation in this area has increased in both frequency and severity. Based on eight years of quantitative trail monitoring data and qualitative observations, it is clear the trails throughout this sensitive wilderness area cannot sustain motorized recreational activity.

Trend in activity on trails

The first of these trends, that OHV use of the trails is steadily increasing, compounds the existing problem of cumulative damage to the trails and underlying ground structure caused by even law-abiding users. With the ecosystem unable to support the usage that exists now, it will be less able to support the increased usage that we can expect over the next five years, and into the future.



The second trend is concerning in two different ways. First, this illegal traffic is highly disruptive to mating and calving wildlife during this important time of the year. Also, when OHV users (even if only a small subset of all users) show a willingness to disregard the basic rules concerning allowed access and trail closure, it is unlikely to expect them to follow other rules regarding keeping to the trail. When obstacles such as the erosion discussed elsewhere in this report block the trail, this type of user is more likely to create secondary trails and braids in an attempt to bypass the obstructions and push onward, increasing the damage already present and encouraging other users to do the same. As with the general traffic counts, the illegal pass counts show an increasing trend from year to year.

Recreational impact on and around trails

During our July 2012 field study, severe trail damage and intensive erosion were observed throughout the Hummingbird Recreation Area trail network. Overall, 146 sites were recorded, in addition to the 453 features of concern documented between 2004- 2008. There were particularly high levels of damage on CAN. In most cases, this damage was associated with OHV use, although impacts inflicted by equestrian use were also documented. Due to extreme trail erosion and deep rutting, several sections of the CAN trail were practically impassable to foot traffic, let alone to equestrian or OHV users.

Visual evidence indicated that a large percentage of the trail damage observed was due to inadequate storm and stream water drainage. It should be noted that high winter snow pack and heavy spring rains created higher-than-average water levels in 2012, which likely contributed to the extreme trail erosion observed. These wet conditions emphasized the natural topographical, soil and vegetative profile that make the Bighorn Backcountry unable to sustain motorized activity. The low river valleys are easily saturated, and the unstable stream banks quickly lose their structural integrity when subjected to long-term motorized activity. It is our fear that if current levels of use are either maintained or increased, temporary trail closures and stewardship efforts will be unable to repair the severe environmental damage. The extreme trail erosion observed throughout the 2012 field season confirmed AWAs position that motorized recreation is incompatible with the protection of the pristine wilderness values of the Bighorn Backcountry.

It is also evident that illegal use of trails continues to occur, including out-of-season activity and use of non-designated trails. AWA appreciates the difficult nature of enforcing PLUZ regulations given the large area, remoteness of the Bighorn backcountry, and lack of



departmental resources. However, given the increasing lack of compliance with PLUZ regulations, the extensive damage to the trails and surrounding area, and the trend in increased motorized activity, we can only conclude that current management efforts in the Bighorn Backcountry are failing to protect “areas containing sensitive resources such as fish and wildlife and their habitats, vegetation, soils and watershed” (SRD 2002a:10). The extent and intensity of impacts observed and reported are inconsistent with these stated objectives, as well as the overall vision of the Prime Protection Zone designation under the Eastern Slopes Policy.

Our most recent trail monitoring work has provided additional evidence of the extensive environmental degradation caused by recreational use of the Bighorn Backcountry, and have affirmed AWAs historical position that motorized recreation is entirely inappropriate in pristine wilderness areas. This attitude is consistent with the views of many Albertans. Public opinion polls consistently reveal Albertans are concerned with the protection of wilderness areas throughout the province. In the 2008 public consultation process for the Land-Use Framework (LUF), Albertans ranked healthy environment and ecosystems as the number one desired outcome for the LUF almost four times as often as the goals of well-planned places to live and play, or sustainable prosperity supported by our land (SRD 2007). A public opinion study completed for Alberta Tourism Parks and Recreation (2008) provides further evidence to support this assertion:

“Albertans’ feel the top priority for Alberta Tourism, Parks and Recreation should be to set aside more land and leaving it in an undisturbed state (page 5). The area of lowest priority is infrastructure and land to support off-highway vehicle use (page 6).”

Other areas of the province are by no means immune to the difficulties of access management; similar issues are being encountered all along the Eastern Slopes of Alberta. Alberta’s growing network of roads, cut lines, seismic lines and other linear disturbances has created abundant new access points for backcountry users, punctuating the need for integrated land use planning across the province that addresses cumulative effects upon the landscape. The extensive environmental impacts of recreational activities observed in the Bighorn Backcountry, combined with the difficulty ESRD has encountered managing its use emphasize the urgent need for the province to tackle the growing issue of access management. Clear, enforceable regulations must be established that ensure the protection of the invaluable wildlife, watersheds, and wilderness resources across the province. It is our hope that our observations, and those of others, will be used to ensure areas such as the Bighorn are protected and enjoyed for generations



to come. Although there now lies visible scars of human impacts, the Bighorn has maintained its magnificence; a provincial treasure deserving more from all of us.



Future Actions by AWA

This report is intended to provide complementary data and analysis for government agencies responsible for access management decisions in the Bighorn Backcountry. AWA will continue to monitor recreation use in the Bighorn Backcountry, and advocate for its protection.

We will:

- 1) Continue to promote full legal protection of the Prime Protection Zone;
- 2) Continue monitoring efforts using traffic counters;



- 3) Spot-check severely disturbed areas for management intervention and update the photo-database of areas;
- 4) Continue monitoring of trail network for comparison against baseline data to determine trends of impacts on landscape;
- 5) Continue to bring management/enforcement issues to the attention of authorities; and
- 6) Continue to be a resource for those who have questions about recreational impacts in the Bighorn and want to find a way to help.

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