



Bighorn Recreation Monitoring

ABSTRACT

Alberta Wilderness Association (AWA) has been working for many years to secure protection for the Bighorn Wildland. Recent government decisions have decreased protection levels in the area, and have legalized the use of motorized recreational vehicles within the Prime Protection Zone.

The Alberta Government has made a commitment to adaptive management and to maintain the ecological integrity of the region. AWA believes that monitoring is required to document the patterns of human use and the environmental effects of recreation on these trails. If illegal use and/or environmental damage are observed, appropriate enforcement action and/or trail closures will be required.

Alberta Wilderness Association (AWA) will undertake a human-use monitoring project in the Bighorn Wildland. The study will assess the current status of recreational activity in the Bighorn Wildland, document the effects of these activities, and provide data that is required to protect the area from inappropriate and damaging uses.

The scientific results of the study will provide a better understanding of the local effects of human use on wilderness landscapes and will provide insight into how these processes affect habitat quality and landscape connectivity at a regional scale.

The results of this study will be made available to the Alberta Government to assist their efforts to manage the Bighorn and enforce current regulations.

This project will provide a variety of opportunities for volunteers to become involved in wilderness stewardship activities and to develop a better understanding of the impacts of wilderness recreation.

This monitoring program will integrate a baseline survey, subsequent systematic monitoring of identified trail segments and stream crossings and random monitoring by hikers and volunteers. Results will be mapped and analyzed using GIS and statistical analyses. A winter monitoring program and a quantitative stream condition monitoring (i.e. turbidity measurements) will be integrated into the research design in future years.

An understanding of the numbers and types of users is critical to a valuable assessment of effects of use, and to the formulation of appropriate management plans. A complete assessment of all users is beyond the scope of this study; however, the number and distribution of motorized users will be monitored using electronic counting devices (designed by TRAFx Research Ltd.).

TRAFx counters will be used on trails subject to systematic monitoring, and will provide critical data for correlating trail conditions with use levels. This data will be useful in determining how various levels and types of use affect the landscape and will also help to identify areas subject to illegal/inappropriate activity.





RESEARCH OBJECTIVES

The objective of this study is to assess the current status of recreational activity in the Bighorn Wildland, monitor the effects of these activities, and protect the area from further inappropriate use. Specifically, this study will

- monitor the level and intensity of recreational use of the Bighorn Wildland
- increase understanding of the effects of recreation on the landscape
- document the extent of environmental damage and illegal use
- create a research/stewardship presence to discourage illegal and inappropriate use
- enhance the environmental citizenship and responsibility of Albertans by involving volunteers in stewardship and monitoring efforts
- build grassroots capacity through cooperative efforts with local recreationists, First Nations, equestrians, outfitters, hunters, university students and other users.

DELIVERABLES

- Detailed baseline survey information of trails including trail, terrain, vegetation and stream conditions.
- Systematically collected data of a series of sites throughout this trail system which document change in conditions over the course of the summer recreation season.
- Randomly collected data describing human-use and environmental effects throughout the Bighorn Wildland.
- Photographic documentation of the above information.
- Documentation of human use patterns and intensity on the trail system (automated trail use counters).
- Correlation of use-intensity and environmental effects.
- Quantitative and spatial results (i.e. damaged sites/km trail; intensity of damage; degree of illegal use)
- Graphical representation of results on GIS-generated maps.
- Database that will form the basis of a data reporting system for future years.
- Reports to the Alberta Government regarding human use of the Bighorn and environmental effects.
- Increased grassroots capacity of AWA through local and volunteer involvement.

