MOTORIZED RECREATION ON PUBLIC LANDS

Alberta Wilderness Association (AWA) only supports the safe and responsible use of motorized recreational vehicles on designated trails in appropriate areas where there is no impact on other recreational users, vegetation, water or wildlife. The environmental damage that is caused by motorized recreation is well documented. Well-designated trails and strict adherence to regulations limiting the use of motorized vehicles are required to minimize damage.

Off-highway vehicle (OHV) use needs to be considered a privilege, not a right. AWA supports a "closed unless open" approach to motorized recreation management on public lands, as opposed to "open unless closed." In the absence of a designated trail network, public lands should default to being off limits to OHVs. Authorized use may be given only when the best available science shows that watershed, wildlife, and ecosystem integrity is not compromised by such use.

Additionally, OHV use should be considered and regulated as a formal land use in Alberta. Treating OHVs as a land-use requires their trails to be considered in linear density footprints and future land use planning. To comply with *A Policy for Resource Management of the Eastern Slopes* (1984), a moratorium must be imposed on the use of off-highway vehicles (OHV) on existing trails within Prime Protection and Critical Wildlife Zones, as well as a moratorium on further OHV trail development in these Zones.

Permanent closure and decommissioning of all trails and roads must be implemented where critical habitat of threatened or endangered wildlife exists.

OHV use must not be permitted in protected areas.

Points of Emphasis: Motorized Recreation

- Only six percent of outdoor recreationists in Alberta engage in motorized recreation. A 2015 provincial survey of outdoor recreationists show that 86 percent prefer non-motorized recreation in wilderness areas (The Praxis Group 2015). Additionally, a 2012 survey of Southern Alberta residents on wilderness land use preferences showed that they ranked "more opportunities for motorized recreation" last out of 11 provided options (The Praxis Group 2012).
- Because the vast majority of Albertans using public lands seeking a wilderness experience require solitude, vast landscapes and freedom from noise, most areas should prohibit motorized use.
- Motorized recreation is incompatible with the maintenance of ecological integrity and must be prohibited in sensitive wilderness areas (including, but not limited to, areas protected through legislation or policy for the maintenance of environmental values, areas managed for the protection of environmental values, areas identified by the province as Environmentally Significant, and other undisturbed wilderness areas).
- Motorized recreation must be permitted only on roads, trails, and routes expressly designated and/or constructed for their use with off-route travel prohibited.
- Because OHV use has an extremely high impact on riparian zones and wetlands, it is important for well-designed trails to avoid these sensitive areas.

- The rules for use by motorized vehicles in an area where there are designated trails must be clearly signposted. This signage should be designed with the goal of educating users about the potential for environmental damage caused by OHVs.
- Regular patrolling, monitoring and enforcement of regulations must be in place wherever motorized recreation is allowed. Enforcement will motivate responsible use of our public lands and is an effective means of educating the public.
- Seasonal route closures must be implemented to accommodate concerns such as stressful times for wildlife, e.g. mating and calving seasons, and periods of high terrain sensitivity.
- OHVs need to have noise mufflers, spark arrestors, and pollution control devices to minimize fire and safety risks, as well as other impacts. Licensing and inspection for enforcement of all OHVs intended for use in on public lands will be required.
- Regulations and education establishing minimum snow conditions required for winter riding must be put in place.
- Permit systems should be implemented as a means of ensuring land carrying capacity is not exceeded. Violations of regulations should lead to a revocation of that user's permit.

Background: Environmental Impacts of Motorized Recreation

Off-highway vehicles (OHVs) are "any motorized mode of transportation built for cross-country travel on land, water, snow, ice or marsh or swamp land or on other natural terrain and, without limiting the generality of the foregoing, includes, when specifically designed for such travel" (Government of Alberta 2014). These vehicles can be used for travel on land, water, snow, and ice, and include all terrain vehicles such as quads and "side-by-side" vehicles, snowmobiles, motorcycles, trikes, and highway vehicles being driven off-road.

Impacts on Land

OHV use increases and facilitates access to backcountry wilderness areas. Wilderness values of these areas are compromised by this excess use.

OHV use can directly and indirectly affect soils, streams, and vegetation. OHV use can cause intense soil and disruption through erosion, compaction and sedimentation. Soil compaction diminishes water infiltration and promotes water and wind erosion, which in turn reduces soil moisture available to plants and increasing runoff from precipitation (Ouren et al. 2007).

Because the damage associated with soil compaction is asymptotic, initial trampling of previously undisturbed areas is critical and should be prevented if possible. Soil and water disruption affects the soil's ability to support vegetation after disturbance, encouraging the elimination of natural vegetation and potential invasion by exotic species to an area (Ouren et al. 2007). This speaks to the necessity for users to keep to well-designed, designated trails. The ability of plants to regenerate in many areas of the

Rocky Mountains and their foothills is limited. It can take decades to centuries for certain plant ecosystems to recover their intact state after damage from OHVs.

OHVs widen traditional backcountry trails and cause the breakdown of the trail edge. A backcountry horse or foot trail is often 12-24 inches wide, whereas OHV routes are five to eight feet wide and often more. Wider trails have greater negative ecological effects than narrower trails. The ecological effects of roads and trails are well-documented and include the disruption of natural vegetation patterns, ground and surface water flow, and natural disturbance regimes. They also cause well-documented disturbances to wildlife through factors such as habitat fragmentation and increased mortality.

Impacts on Water and Water Courses

Wider trails and their use by motorized vehicles cause siltation and sedimentation into water courses. During spring run-off and times of heavy rain, trails erode. This needs to be minimized through proper design.

OHVs can deposit oil, transmission fluid and other liquids on trails and in water courses. Through erosion, these pollutants can flow from the trail along with disturbed soils downhill into streams and rivers. Soil compaction from OHV use makes the soils impermeable and exacerbates rut formation and runoff (Ouren et al. 2007).

OHV use has an extremely high impact on riparian zones and wetlands because of soft soils and the fragile nature of stream beds. The disruption of soil integrity causes erosion and siltation in riparian zones. Suspended sediment, if present in sufficient quantity and for a sufficient duration, will kill trout eggs and larvae and will chronically stress adults and juveniles (Mayhood 2013).

Where trails directly cross water courses, OHVs driven through stream beds or other waterways disturb trout redds and other aquatic habitat, destroying the ability for fish to reproduce. This underlines the need for well-designed bridges on designated trails. OHV use imposes significant wear and tear on these bridges, so they need to be maintained properly to prevent the erosion at the foundations and along the sides that will contribute to water contamination.

Impacts on Wildlife

Roads and trails can cause direct and indirect wildlife mortality, and may lead to the fragmentation, reduction and extirpation of local wildlife populations. This leads to the genetic isolation of small groups of individuals. Habitat fragmentation has serious impacts on species that require large block of continuous habitats, impacts predator-prey relationships, and has strong effects on animal movement (Ouren et al. 2007).

Habitat fragmentation may also encourage the elimination of natural vegetation and potential invasion by exotic species to an area. As vegetation species composition is changed, fewer food sources and nesting areas may be available for certain wildlife species. Stress caused by OHV disturbance can lead to a weakened physical condition or death, the abandonment of territories, and lower reproduction rates.

OHV emissions contain pollutants and carcinogens including benzene and carbon monoxide. These pollutants can be harmful to wildlife. There can also be direct wildlife mortality from vehicle impact.

OHV use causes extreme noise. Wildlife is adversely affected by noise (Ouren et al. 2007):

1. Hearing loss - resulting from noise levels of 85 decibels or greater. Noise from OHVs can be as high as 110 decibels, which is near the threshold of human pain;
2. Masking - the inability to hear important environmental cues and animal signals;
3. Non-auditory physiological effects - including anxiety, increased heart rate and respiration, decrease in reproductive output and general stress reaction; and
4. Behavioural effects – these vary greatly between species and noise characteristics and can result in the abandonment of territory and lost reproduction.

Impacts on Other Recreational Users

According to a comprehensive 2015 survey commissioned by the Canadian Parks and Wilderness Society, approximately 6 percent of outdoor recreationists in Alberta engage in motorized recreational activities (The Praxis Group 2015). The majority of outdoor users in Alberta, on the other hand, participate in non-motorized activities such as hiking, cycling, walking, fishing, swimming, snow-shoeing, and skiing. This echoes the results of a 1999 Government report which found that only 6.5 percent of Albertans participate in motorized recreational activities including OHV and snowmobile use.

Most crown land in Alberta is open to all kinds of outdoor recreation, including motorized access. Only about 9 percent of provincial crown land is closed to motorized recreation (see below table). These areas have been designated as protected areas, Forest Land Use Zones, or Prime Protection Zone to preserve wilderness, aesthetic and non-motorized recreation values. The use of OHVs in these wilderness regions is incompatible with environmental protection and non-motorized recreational enjoyment.

OHV use must not be permitted in Provincial Parks or other protected areas. Motorized recreation is a conflicting use in protected areas, based on public values, science, and inherent wilderness values. A public opinion study completed for Alberta Tourism Parks and Recreation 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)” (The Praxis Group 2008).

Conflicts frequently arise when motorized and non-motorized recreational users access the same areas. Because OHVs are faster and more mobile, they have the ability to use a larger area than non-motorized users. As a result, non-motorized recreational users are often pushed out of these areas. OHVs are noisy and therefore incompatible with non-motorized activities and recreationists who cherish the peace and tranquility of public lands.

Land Ownership in Alberta:

Alberta total land mass:	661,190 km²
Provincial Crown Land:	56.4% (372,911 km²)
Federal Land:	10.6%
Private Land:	28.4%
Other provincial:	4.6%

Provincial Crown Land where motorized recreation is prohibited:

PLUZ:	4,078 km²
Wilderness Areas:	1,010 km²
Willmore Wilderness Park:	4,597 km²
Provincial Parks:	3,600 km²
Ecological Reserves:	269 km²
Wildland Parks:	17,280 km² *
E. Slopes Prime Protection Zone:	4,304 km² **
Total:	35,138 km²
	or 9.4% of Provincial Crown Land

Conclusion: Less than 9% of provincial Crown Land is off-limits to motorized recreation or 91% of provincial Crown Land is open to motorized recreation.

* *Maximum figure - includes area of all Wildland Parks even though some Wildland Parks allow motorized recreation.*
** *Area of Prime Protection Zone not accounted for in other protected areas.*

Literature Referenced

Government of Alberta. 2014. Traffic Safety Act. Alberta Queen's Printer. Accessed on April 8 2016: http://www.qp.alberta.ca/documents/Acts/t06.pdf

Mayhood, D.W. 2013. Suspended Sediment in Silvester Creek and its Potential Effects on the Westslope Cutthroat Trout Population. FWR Freshwater Research Limited.

Ouren, D.S., Haas, C., Melcher, C.P., Stewart, S.C., Ponds, P.D., Sexton, N.R., Burris, L., Fancher, T., and Z.H. Bowen. 2007. Environmental effects of off-highway vehicles on Bureau of Land Management lands: A literature synthesis, annotated bibliographies, extensive bibliographies, and internet resources: U.S. Geological Survey, Open-File Report 2007-1353, 225 p.

The Praxis Group. 2008. Survey of Albertan's Priorities for Provincial Parks. Final Report submitted to Alberta Tourism, Parks and Recreation.

The Praxis Group. 2012. Community Values Assessment for the M.D. of Pincher Creek No. 9. For the Southwest Alberta Sustainable Community Initiative and The Municipal District of Pincher Creek No. 9.

The Praxis Group. 2015. Albertans' Values and Attitudes toward Recreation and Wilderness: Final Report. Commissioned by the Canadian Parks and Wilderness Society (CPAWS) Northern and Southern Alberta Chapters.