



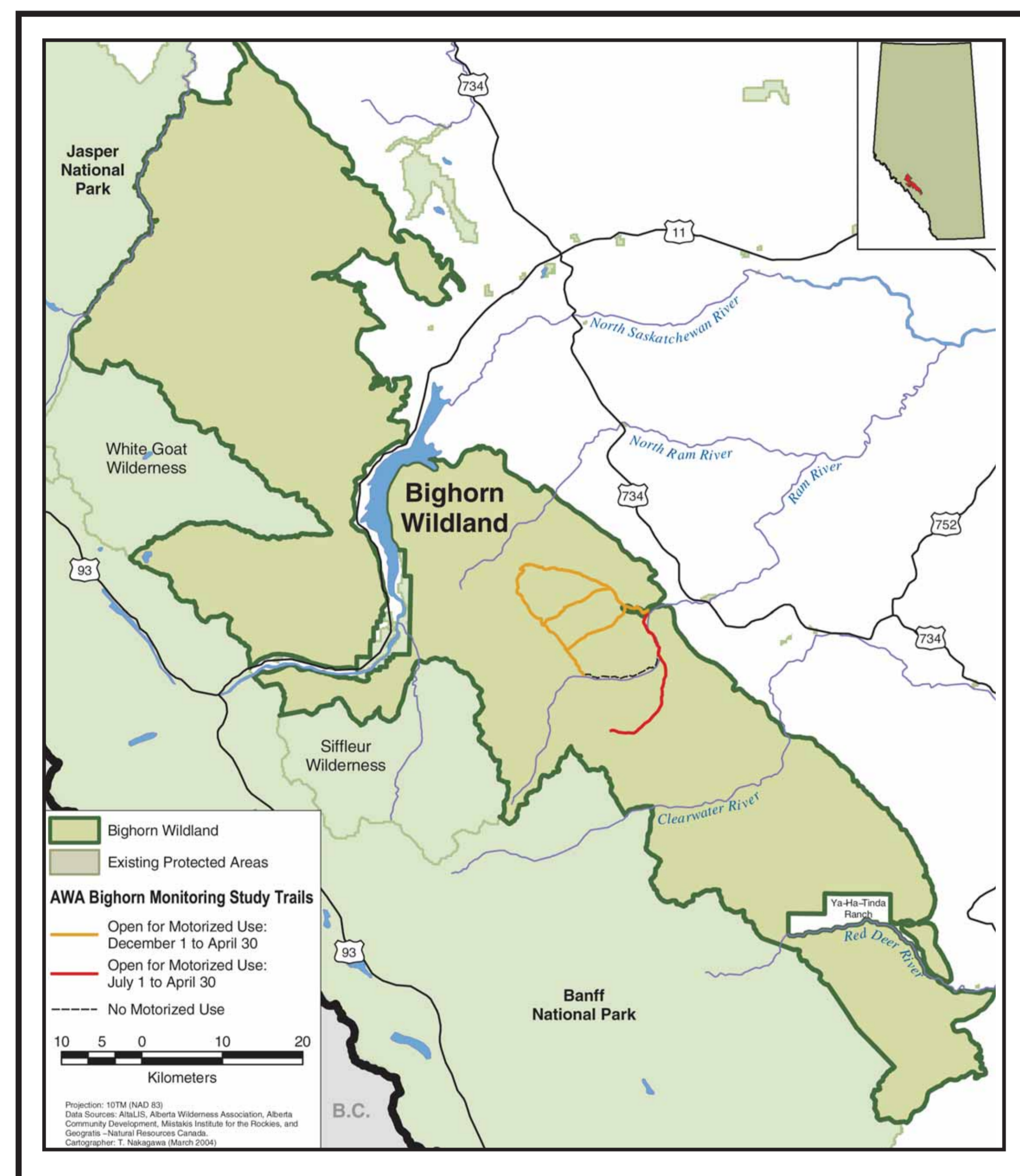
# MONITORING THE IMPACT OF RECREATIONAL ACTIVITIES FOR LONG-TERM MANAGEMENT IN BIGHORN WILDLAND, ALBERTA

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## INTRODUCTION

Wilderness degradation from recreation use and misuse, particularly from off highway vehicles (OHVs) and equestrians, is a growing concern in Bighorn Wildland, Alberta. Trail monitoring is crucial for effective long-term management of the impacts of recreational activities in remote backcountry areas with high ecological value.



## PURPOSE & OBJECTIVE

The purpose of the monitoring study is to assess the pattern, intensity, and extent of recreational use in the Bighorn Wildland. This poster presents data collected from the 2003 baseline year and the 2004 season in progress.

The study has four main objectives:

- identify recreational activity in the Bighorn;
- identify and document the physical and environmental impacts of recreational activities on the landscape;
- record illegal off trail or out-of-season use by motorized recreationists; and
- provide the results to government and the public to facilitate effective long-term management of the area. This is an ongoing project.

## METHODS

- Primary trails designated for OHV use were inventoried for both secondary (non-designated) trails and sites of damage within Bighorn Wildland's Upper Clearwater/Ram Forest Land Use Zone (FLUZ).
- On selected secondary trails, a 20-meter section was measured to assess trail condition. Measurements included, width, depth, vegetation damage and habitat classification. All secondary trails were inventoried through digital mapping (GPS) and photography.
- Damaged sites included rutting, braiding, erosion or evidence of frolic areas on or adjacent to primary trails. Measurements included, width, depth, number of braids, area of damage, and vegetation damage. All damaged sites along primary trails were inventoried through digital mapping and photography.
- Campsites located adjacent to primary trails were inventoried, the area of these sites were measured and damage assessed.
- TRAFx counters were buried adjacent to selected primary and secondary trails and count OHV traffic and record the date and time of legal and illegal motorized use.



Large frolic area in marshy meadow



Braiding through meadow

## TRAIL USE RESULTS

- 20 km of designated trails were surveyed and inventoried.
- The total area of damage from damaged sites and campsites was approximately 36,523m<sup>2</sup> or 58% of trail.

## Total Damaged Area

	SITES	MEASURED SITES	DAMAGED AREA (m <sup>2</sup> )*
Damaged Sites	64	36	21392 m <sup>2</sup>
Campsites	25	17	15140 m <sup>2</sup>
TOTAL			36523 m <sup>2</sup>

\* Total damaged area calculation includes primary trail width.



Measuring depth of severe rut along primary trail



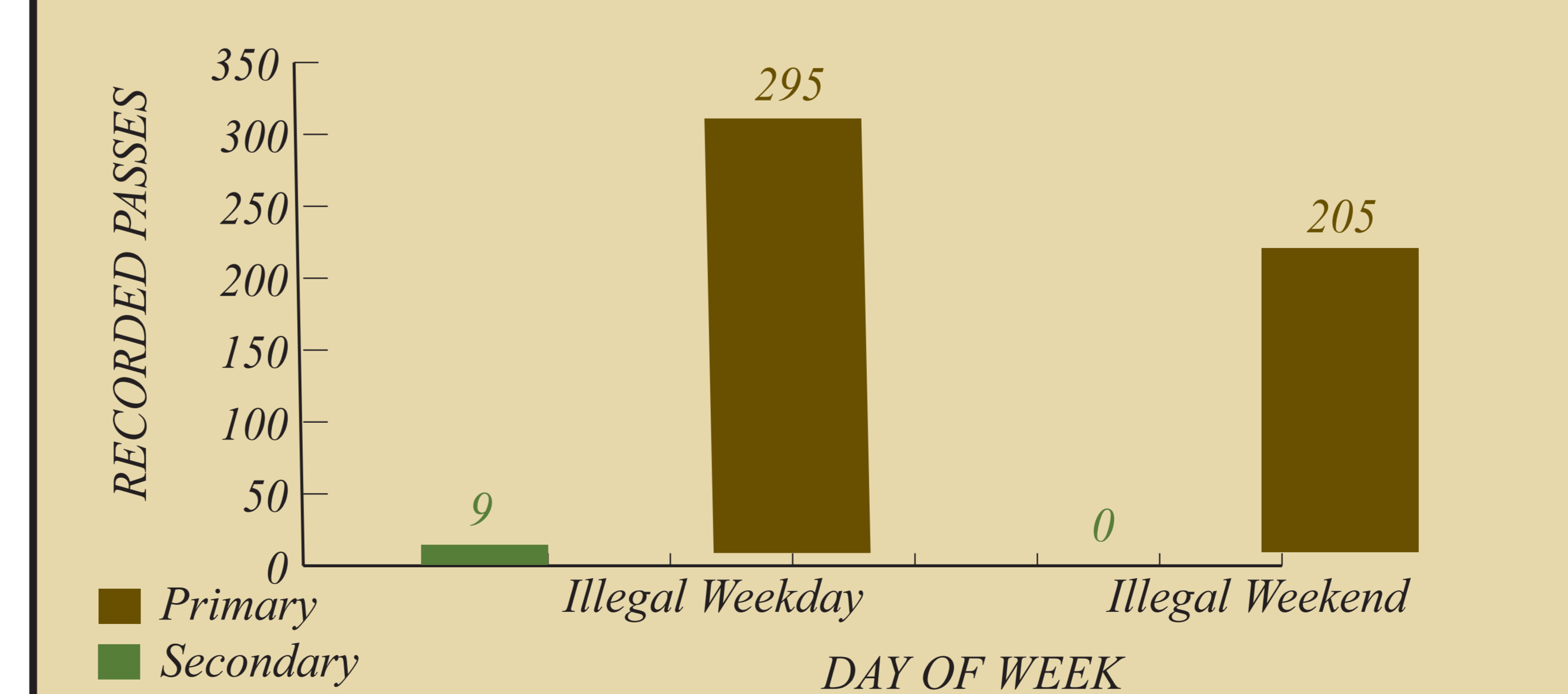
Primary trail damage results in horse and OHV trail braiding

## OHV ACTIVITY RESULTS

- Of the total counts recorded, 64% of passes were legal and 36% were illegal\*.
- Approximately 52% of legal OHV activity occurred on weekends and 48% on weekdays.
- Approximately 59% of illegal OHV activity occurred on weekdays, and 41% occurred on weekends.

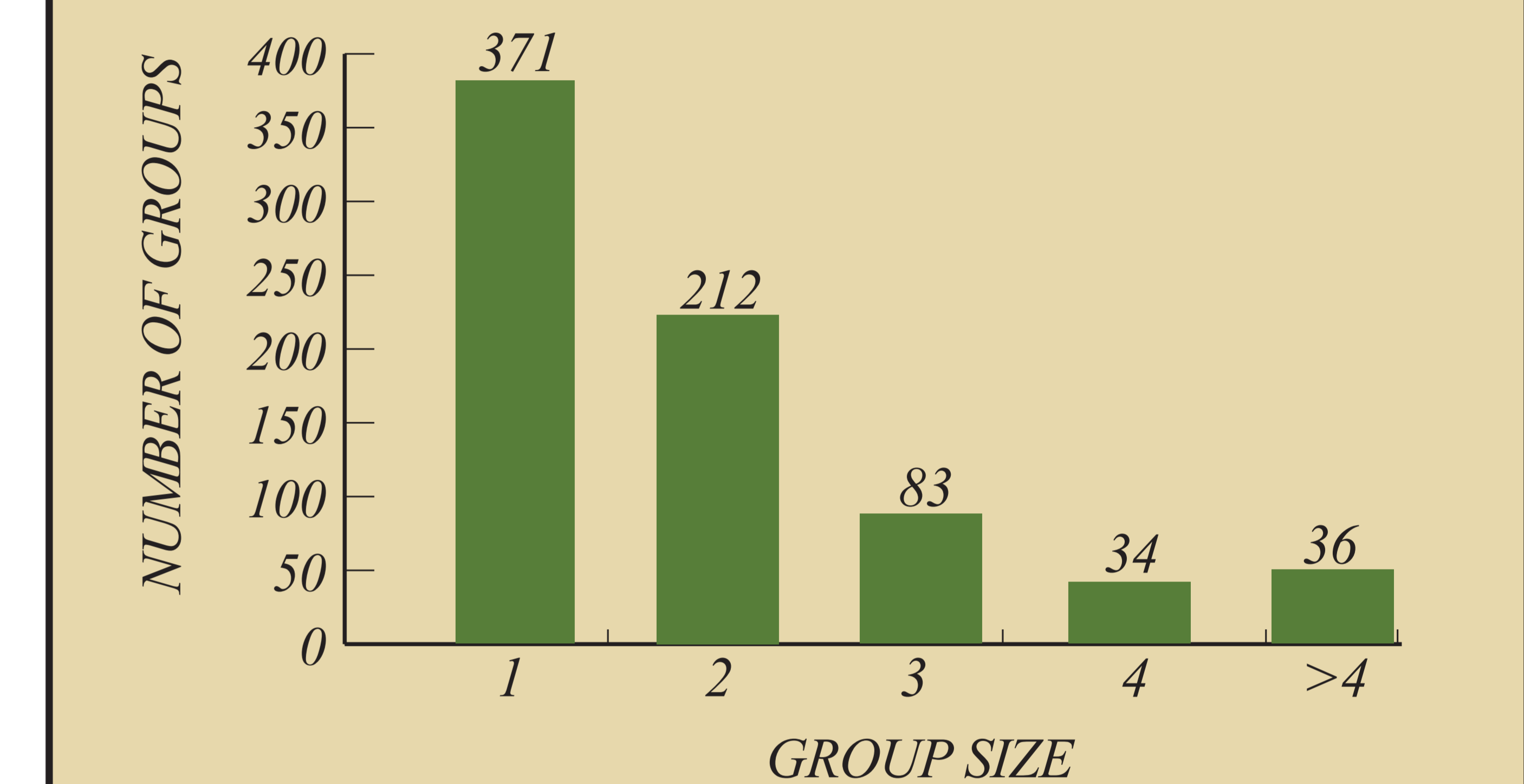
\*Illegal use is off trail and out of season use. Some passes may have been made by wagons, bikes or horses in recreational area.

## Number of Illegal OHV Passes on Weekdays & Weekends



- Group sizes ranged from single OHVs to groups of more than 4 OHVs. Fifty percent of users were on single OHVs, 29% of users were in parties of two OHVs, 11% in groups of 3, and less than 10% in groups of 4 OHVs or greater.

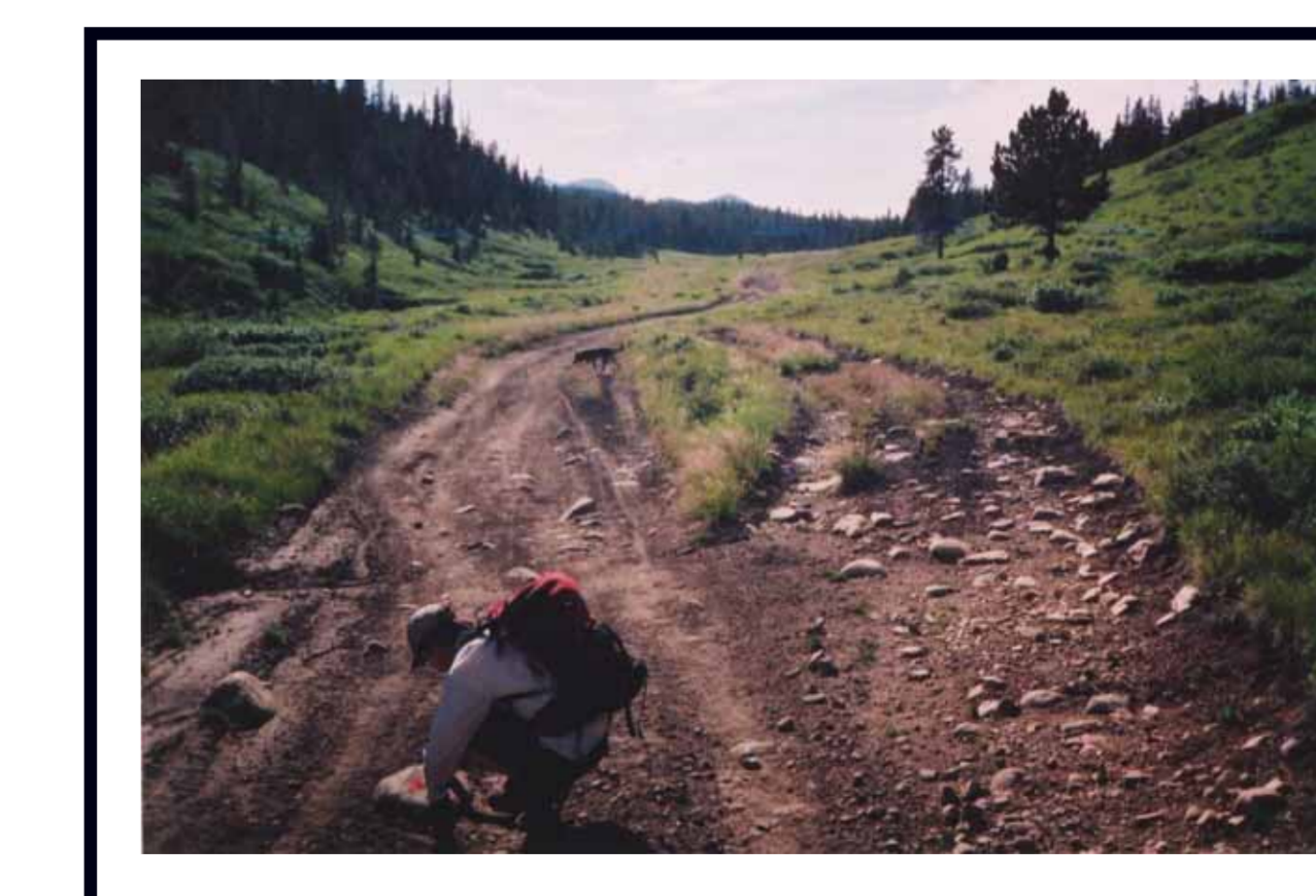
## Number of Groups of Motorized Users Versus Group Size



## CONCLUSIONS

The preliminary results of this monitoring project indicate that Bighorn Wildland is being subjected to intensive recreational use predominately in the form of OHV and equestrian use. These recreation types have resulted in environmental degradation including off trail use, braiding and rutting of trails and illegal off trail/out of season use.

Our observations of recreational impacts, indicate that monitoring must continue in Bighorn Wildland. Immediate action is required to enforce regulations, to restrict access, and to restore damaged areas. An increase in officer presence, timing of patrols in the area, and clear and concise signs outlining regulations and penalties for non-compliance must be implemented for effective long-term management of Bighorn Wildland.



Severe trail braiding and widening



Stream damage as result of OHV trail braiding