

Bighorn Access Management Plan

Recreational Trail Monitoring

Purpose

The Bighorn Advisory Group recommended that a monitoring program be developed and implemented for adopted recreational trails. The Advisory Group indicated:

Where major changes are implemented, pilot programs should be established to monitor actual changes and results. A monitoring program that measures specified conditions and outcomes should be established prior to implementation of changes so that baseline data can be collected for comparative purposes. Monitoring must continue throughout the pilot program and the project should be re-visited if there is evidence that undesired outcomes are occurring as a result of the project.

Alberta Sustainable Resource Development, Land and Forest Division (LFD) will coordinate the monitoring program with other organizations and departments. The trails will be monitored at least every 5 years, however interim surveys may be completed at any time. Trails may be closed if their condition deteriorates within, or at the end of, each 5-year period.

Monitoring Criteria

Selected recreational trails will be monitored to identify:

1. Frequency of erosion/rutting events
2. Intensity of erosion/rutting
3. Travelling off trails
4. Suitability and effectiveness of stream crossings
5. Presence of noxious or restricted weeds.

The LFD may also initiate and coordinate monitoring of sedimentation on watercourses if there is sufficient visual evidence as determined by Water Resource Personnel, Biologist, or Forest Officer. In addition to this monitoring program, certain provincial and/or federal legislation may be involved if there are any impacts or effects to a watercourse, waterbody, fish habitat or aquatic environment. This legislation includes the Provincial Water Act and the Federal Fisheries Act.

Procedures

The LFD will survey selected trails to assess current conditions. The LFD will notify adopters in writing of the areas that need immediate maintenance. Adopters will have three months of open trail season to rectify the immediate concerns. Trails may be closed if problem areas are not fixed within the three-month period. Once the initial trail maintenance is completed, the condition will be the baseline to which all subsequent measurements will be evaluated. The trails to be monitored will be determined by LFD based on public concern

and site sensitivity. The LFD will establish and maintain a photo inventory of problem areas.

1. Frequency of Erosion/Rutting events

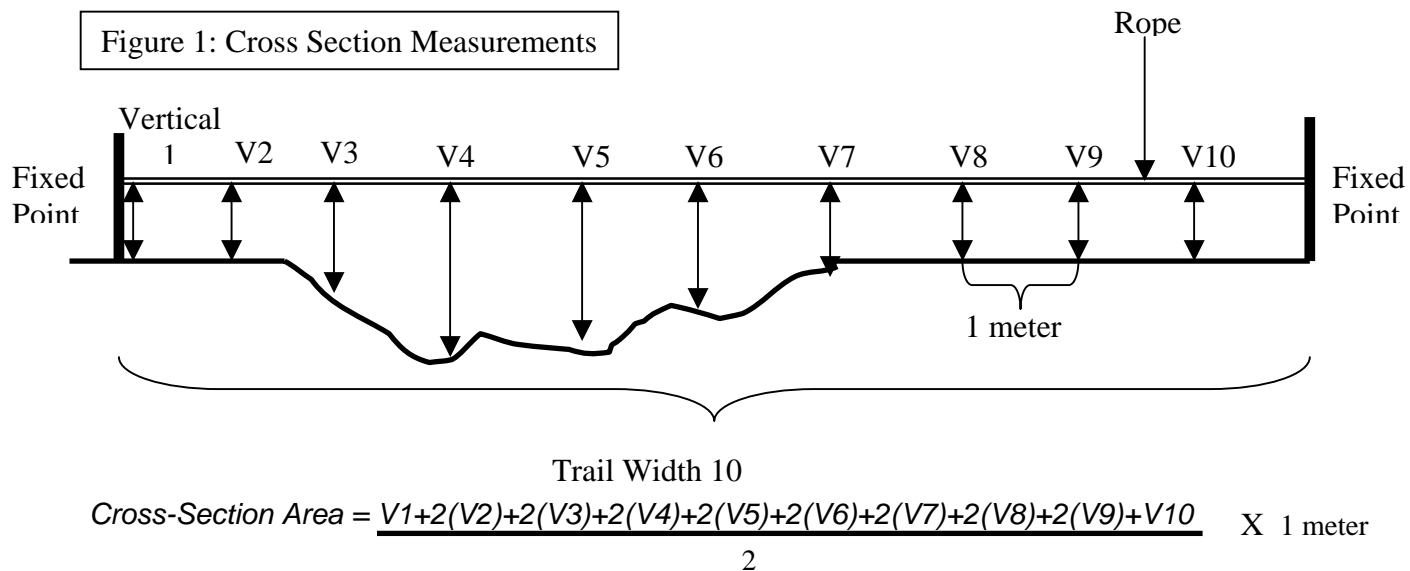
An erosion event (EE) will be defined as ruts measuring at least 10 feet long and 10 inches deep. Erosion events may run parallel, as in the case as OHV tires (counts as 2 EE), or may result from a single water channel. A tally of the number of EE will be collected for each selected trail. The same section of trail will be evaluated each 5 years, however more areas may be added if necessary. **Evaluation:** The number of EE will be divided by the number of kilometres surveyed to determine the EE/km. The current number of EE/km will be compared to the number in each 5-year interval. Failure is defined as any increase in the number of EE/km.

2. Intensity of Erosion/Rutting

The LFD will establish at least one permanent monitoring plot (in an undisclosed location) for every 10 km of selected trail. The permanent plot will be located in a sensitive area as determined by a Forest Officer, Biologist, or Range Forester.

The intensity of erosion will be measured by comparing the current cross-sectional area of the trail with a cross-sectional measurement taken every 5 years. The cross-sectional area is measured by placing a rope or rigid bar across the trail (all 10 meters) attached to permanently fixed points on either side of the trail (figure 1). The vertical distance from the rope/bar to the tread surface is measured at 1-meter intervals along the rope/bar (figure 1). The cross-sectional area is calculated using the formula provided with figure 1. **Evaluation:** A 10% or more increase in the cross sectional area of any permanent monitoring station will result in failure.

Figure 1: Cross Section Measurements



3. Travelling off Trails

Once the final locations of the trails are mapped and measured using Global Positioning, and approved by LFD, any tracks or obvious evidence of use beyond the 10 m wide established trail will be considered a trespass. **Evaluation:** Any trespass will result in failure.

4. Suitability and effectiveness of stream crossings

All stream crossings must meet Alberta Environment standards as outlined in the Code of Practice for Watercourse Crossings and the associated Guide (available at the web site <http://www3.gov.ab.ca/env/water/legislation/index.html>). Initially, LFD will coordinate with Alberta Environment to survey selected trails, outline basic stream crossing requirements, and establish baseline information for future monitoring and evaluation. During the initial survey, the Association or individual(s) adopting the trail will be notified of any problems.

Throughout the 5-year monitoring period, various stream crossing will be evaluated. Any deviations from the Code of Practice for Watercourse Crossings will be outlined and documented and the number of unsuitable crossings tallied. **Evaluation:** Any unsuitable crossing will result in failure

5. Presence of noxious or restricted weeds

All restricted and noxious weeds will be identified and mapped/GPSed along the trail. The weed species and approximate size of infestation will be recorded. **Evaluation:** Any weed infestation will result in failure.

Performance Limits/Tolerance

Each monitoring criteria will be evaluated separately. If any one of the five categories fails, the Association or individual(s) that adopted the trail will be notified in writing by LFD. The written notice will identify the problem areas and provide maps.

Corrective Action

All adopted trails must be in equivalent or better condition after five years. If the trail is in poorer condition after inspection, the adopters have three-months during open trail times to correct the problem. Once the trail is repaired, LFD will re-inspect the trail and approve the changes.

If the trail damage is not corrected in 3 months (of open trail time), the trail will be closed until the work is completed to the satisfaction of the LFD.