

were apparent. Both showed a similar amount of compaction after the runs, but the mountain biking showed a much greater tendency for rutting with roughness ratios of ~1.07, while hiking actually tended to have an overall flattening effect, a roughness ratio of ~1.02. These results indicate that a large number of factors can influence trail degradation. While these findings are specific to this trail, the methods used for determining both the natural effects and the user-influenced trail degradation can be applied to any trail location.

Trail degradation on the Nine Mile Trail system: a study on the effects of users on trail compaction and rutting

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Trail deterioration is a major issue to consider for trail builders and managers. Trail deterioration can be caused by: overuse, use of the trail for an unintended purpose, mismanagement, improper construction techniques, and failure to ensure proper upkeep. In order for trail management to adequately maintain a trail system, an understanding of the physical properties of soils and the underlying geomorphology, as well as the impacts that various types of uses will have on the trail is essential. The impacts can vary depending on the geological properties at the trail site. This study will attempt to provide trail managers with essential data regarding the influence that both the underlying geology and users can have on a trail track.

On a section of the new Nine Mile Trail system, just north of Elmsdale Nova Scotia, soil data and the slope of the trail section and its position in the overall topography of the area was noted. A total of 50 mountain biking and 50 hiking test runs, were completed to record the impact of these activities on trail compaction and roughness. The findings of this study show an average compaction of a trail cross-section of 2.2 mm, with a greater impact on areas of the trail that had higher than average soil moisture, as well as on areas with a steeper slope. The differing effects of hiking and mountain biking in this study