

Potential Site Analysis for Recreation Land Use

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The process of scouting locations for recreation development in a diverse land such as British Columbia faces at least one major challenge, the vast amount of land area, and really quite low population density means that it is impractical or impossible to simply perform an exhaustive search for new sites. It should be possible to reduce the list of potential sites using simple GIS techniques. Taking into account easily available data such as the topology of the land and the major waterways it's relatively easy to produce a set of criteria which can be used to reduce the size of search area for a given type of recreation. This project will attempt to assemble the data into a form which will facilitate the process of reducing the potential site list.

The area of interest is 2650 square kilometres of the Powell River Forrest District. Located some 150 Km north of Vancouver, B.C. on the west coast of the main land with Powell River at it's lower left corner, and extending north and east.

Three classifications were used in this project to help predict potential sites for recreation. The first criteria was access, recreation sites must be accessible. Assuming there is readily available access to large bodies of water and navigatable rivers, which is a safe assumption for this region. A buffer of one kilometre can be placed around the navigatable bodies of water. Any thing within these buffers should be relatively easily accessible. The buffers are the think black lines shown in [Fig 1.](#) and [Fig 2.](#)

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Fig 1. Potential Hiking Sites



Fig 2. Potential Climbing Sites

Next, the slope of the land has a large effect on what types of recreation the region can support. Extremely steep slopes, while good for rock climbing, are poor for hiking. The third classification was of the aspect or direction the land faces. Areas of Southeasterly to Southwesterly aspect get more sun exposure than areas facing other directions and are therefore usually drier more firm ground, which is important for many types of recreation. In [Fig 1.](#) regions shaded in green have a gentle slope and good aspect, the regions in red have a high slope or bad aspect. In [Fig 2.](#) Areas in green have an extreme slope and good aspect, and the areas in red have a bad aspect.

The results of this process are quite promising. Two of the sites predicted by the climbing diagram are actually established climbing sites. The first one is known as Higgi Land and the second is known as High Five shown in Fig. 3 and Fig. 4 respectively.

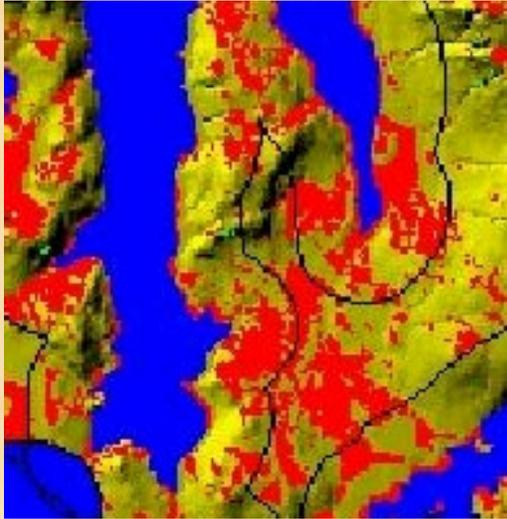


Fig 3. Higgi Land Climbing Site

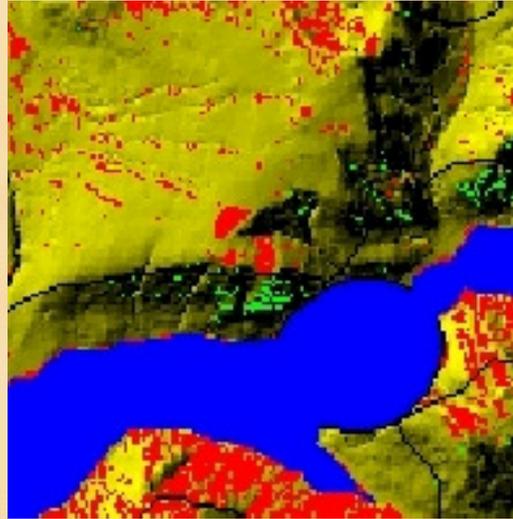


Fig 4. High Five Climbing Site

Further analysis taking into account road access (data was unavailable) and forest cover (time constraints prevented analysis) as well as more fine grained analysis of the lakes, rivers, ocean, slope and aspect should produce even more results. The full report is available here in [Postscript\(GZIP\)](#) or [Adobe PDF](#) formats. The appendices are available here in [Tar.GZ format](#)

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