

Geography 413

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Abstract

The objective of this project is to find the Greatest camping spots in the Central and North Okanagan that are off the main roads and allow motorized vehicles.

Summary

Camping in the Okanagan Valley is very common, as many tourists flock each year to the Okanagan to enjoy the sun, water and beauty. The Okanagan Valley provides many beautiful camping sites at paid parks, paid forest sites, and 'regular' campgrounds. However, for local residents going back to the same camping sites every year is not fun. So this project will look at areas off main highways, places tourists may not be into exploring adventurously. Great camping sites is where slope <10, no roads within 1000 meters and where there is recreation trails within 1000 meters as well but not within 100 meters of the trail so campers are not disturbed. Also Great camping is within 100 meters of a swimming lake or river. The Good camping follows the same parameters as Great camping but slope is 10-13 degrees. The Ok camping in the same as Great camping though does not have the swimming parameter. This information will then lead to any 'off the beaten tracks' camping sites. The camping will be secluded but close enough to recreation trails that off-highway vehicles (ATV's and Dirt Bikes) can be enjoyed.

Study Area

The study area is the Central and North Okanagan, which lies on the Interior Plateau of British Columbia. The Okanagan Valley is home to some of the most amazing scenery with its orchard and vineyard filled hills. However, not all of the Central Okanagan is represented in the study area as 3 different map sheets would have had to been used. Figure 2 shows, in a circle, the area of Central Okanagan that is not included in the study area.

Figure 1: Shows where the Okanagan Valley is located in the Province of BC, Canada. Image from: <http://riversidetrailsbb.ca/location.asp>





Figure 2: Shows the Okanagan Valley. Circled area was not included in the study area. Image from:

http://www.kelownabc.com/community_facts/

Data Source

Data was obtained using the UNBC GIS data download page. The 1:20000 map sheets for 082E & 082L in UTM 11 were obtained. The following data was analysed; BC DEM 25m in ASCII (UTM). Using the Land and Resource Data Warehouse (LRDW) and drawing tools to select the study area the following data was analyzed; Digital Road Atlas (DRA) Master Partially- Attributed Roads, Freshwater Atlas Linear Boundaries, and Freshwater Atlas Manmade Boundaries. In the Freshwater Atlas Linear Boundaries a boundary of the study area had to be made before the data could be downloaded, this is because the file was too big. This was done by selecting area of interest to be custom AOI. BC then came up in iMaps, then zoomed to the Okanagan Valley, added layer of District Boundaries and using the draw tool, I drew a polygon shape just outside the Central and North Okanagan Boundaries, leaving out the part of Central Okanagan that lands in the 092h zone.

Methodology

1. Download of all data needed; DEM, Water Bodies, Roads, and Recreation Trails
2. Start ArcMap and using outline of boundary from Freshwater Atlas Linear Boundaries make a Boundary of the study area
3. Load DEM into a new ArcMap and the following was done to obtain vector data:
 - a. Using reclassify in the toolbar, 5 slope classes were made; <10, 13, 20, 50, & 85<
 - b. A merge was then performed using Mosaic
 - c. Raster calculator then clipped the raster data using the Environment of 'myboundary'
 - d. Raster to polygon was then performed to obtain the vector slope data
4. Slope <10 was then selected and a new layer made showcasing the great camping terrain
5. Then same was then done to get the 10-13 degree terrain for ok camping
6. All main roads and recreation trails were added to same ArcMap session
7. A 1000 and a 100 meter buffer was made around the recreation trails.
 - a. The 100 meter buffer was then erased from the 1000 meter buffer
 - b. This now 100-1000 meter trails buffer is the area to camp in
8. A buffer of 100 meters was made around water
 - a. Buffer around rivers
 - b. Buffer around lakes
 - c. Join lakes and rivers buffer zones
9. An intersect was done on the joined water buffer zone and trails buffer making 'trailwater'
10. A 1000 meters buffer to roads was produced
 - a. This was then erased from the 'trailwater', thus a new camping area
11. An intersection of Slope<10, with the new camping area was performed to find Great Camping sites
12. An intersection of slope 10-13 with new camping area was performed to find Good Camping sites
13. To find Ok Camping which has slope <10, 1000-100 m from recreation trails and 1000 m from roads but may have no swimming
 - a. Erase roads buffer from trails buffer
 - b. Take output from above and intersect with slope<10
 - c. Now erase all Great and Good Camping from slope output
14. Now add all legends, scales and north arrows for a well-produced map.

Results

With a Boundary for the Central and North Okanagan of 13359226707.3 m², 13,359.2 km², there is not much 'off the beaten tracks' camping. Great Camping has an area of approximately 28302549.3 m², which is 28.3 km². Good Camping has an area of approximately 2292938.3 m², which is 2.3 km². These areas are shown in figure 4 and 5 because they are not seen very well from figure 3. Ok camping has an area of approximately 519683124.9 m², which is 519.7 km².

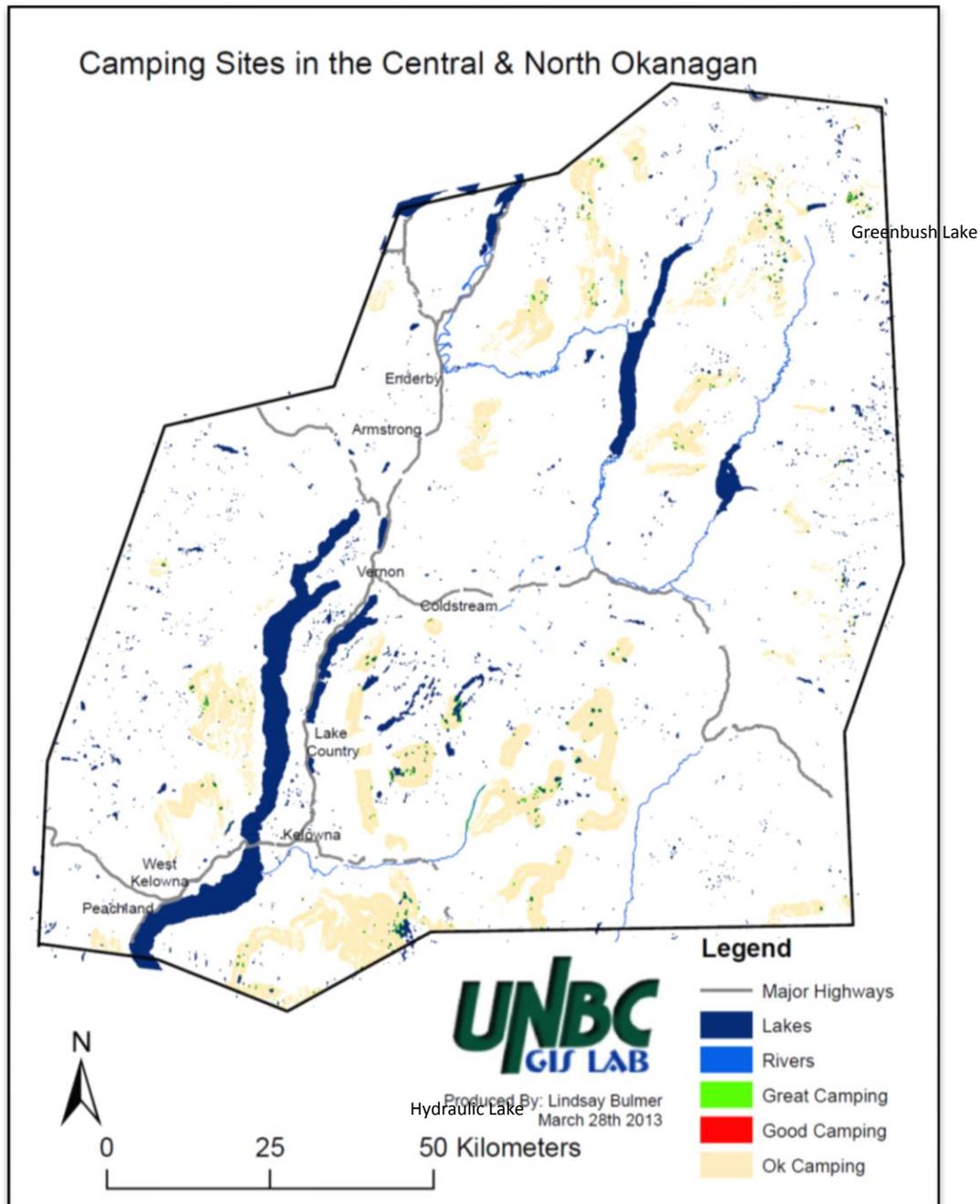


Figure 3: This map names two lakes. In the southern Central Okanagan, Hydraulic Lake and in the northeast corner of the North Okanagan, Greenbush Lake.

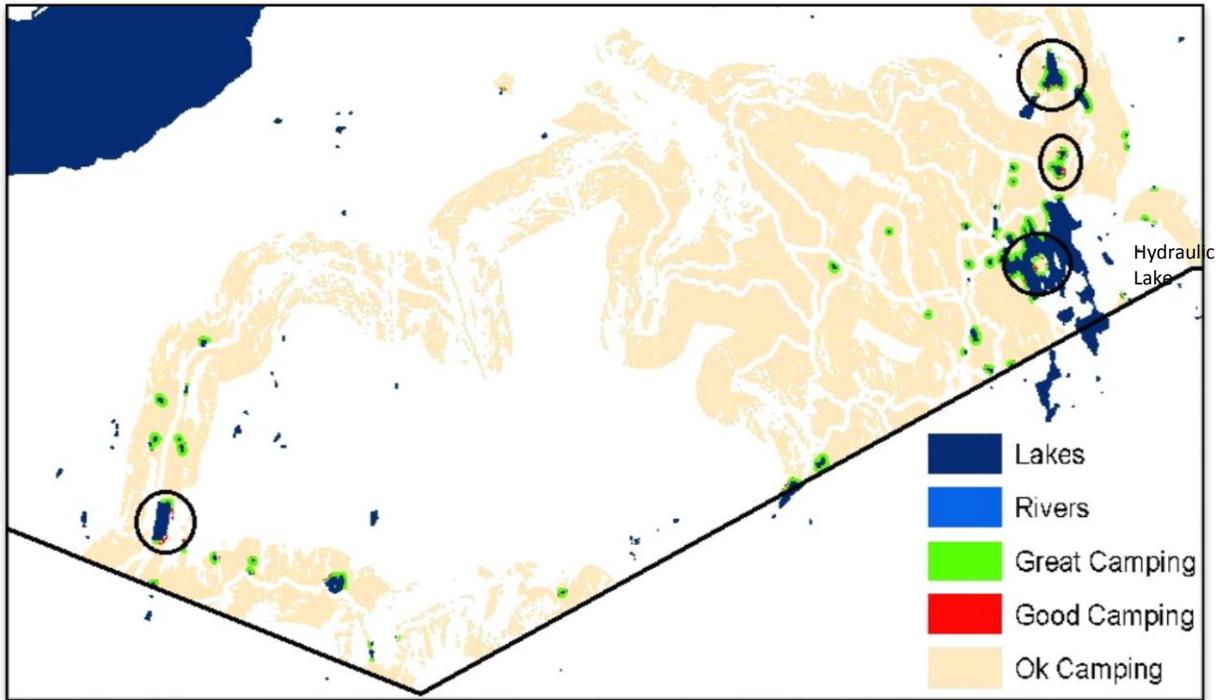


Figure 4: Shows a small amount of Good Camping in the southern part of Central Okanagan. This area is approximately 25 km southeast of Kelowna.

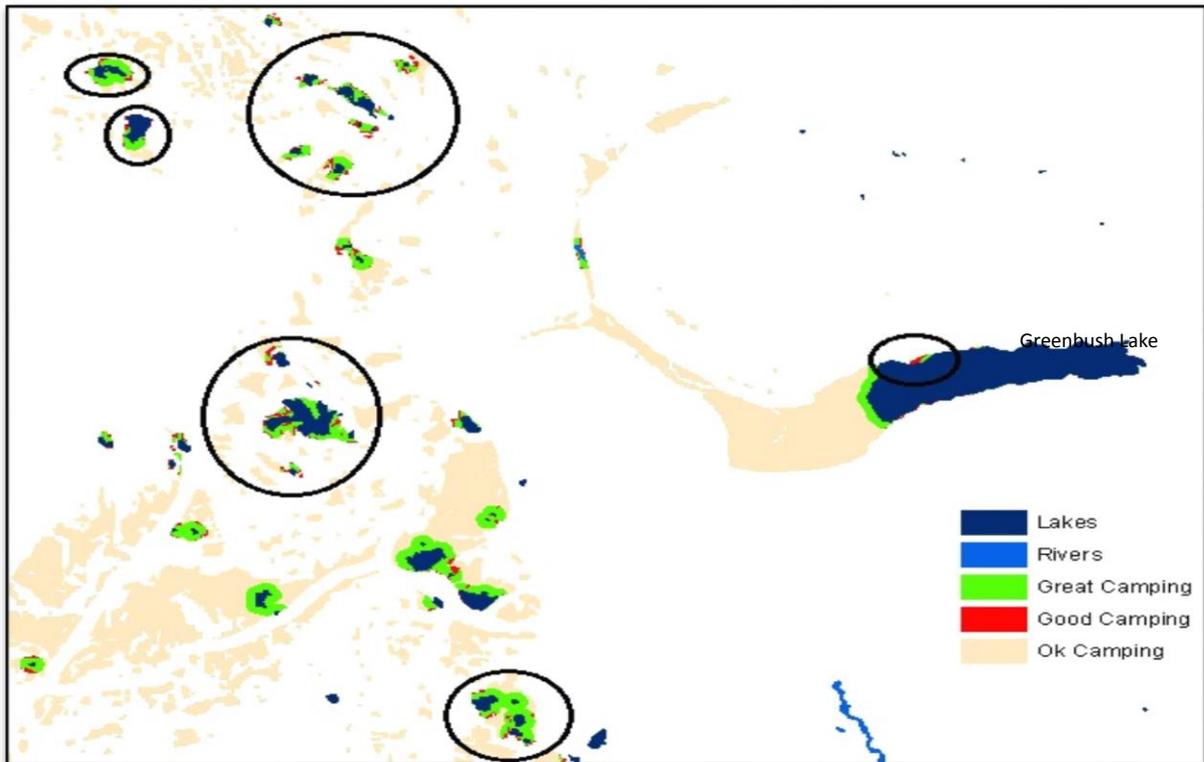
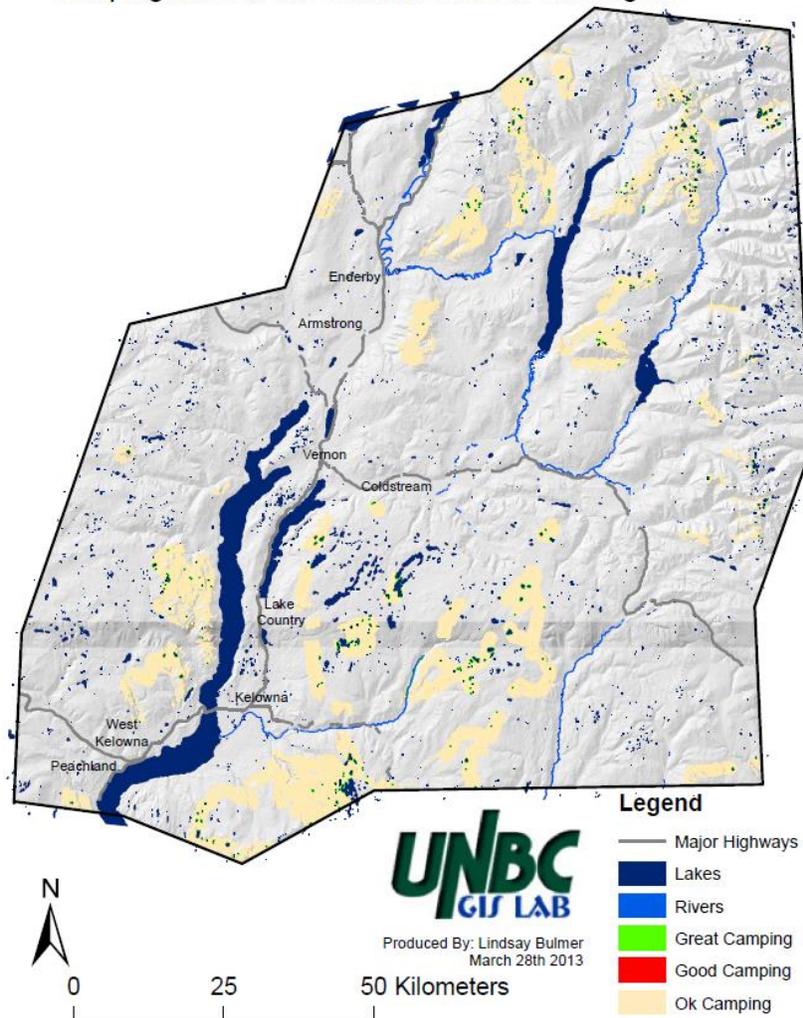


Figure 5: Shows some Good Camping in the Northeast corner of the North Okanagan

Conclusion

The objective of this analysis was to find the Great Camping sites 'off the beat track' in the Central and North Okanagan. This objective was met though not as well as it was thought to be. With only 28.3 km² of Great camping found that is only 0.2% of the total study area. This however is mostly likely due to the proximity to trails, as there are very specific rules for motorized off highway vehicles in the Okanagan Valley. This project was successful in finding some Great camping but mostly Ok camping was found, with 3.9% of the study area falling in the Ok camping parameters. The small southwest corner of the Central Okanagan that was not used would not have had a big effect on the results, thus taking it out is not an issue in this project. Though the Great camping may not seem like a big area to go camping it is actually a reasonable area. This is because with all the parameters needed for Great camping in this mountainous, vineyard/orchard filled landscape, are very specific. If someone really wants to camp and have an adventure the methods of how to get there do not matter, and sometimes a place to swim or fish does not matter. Thus, in all three camping areas there is 550.3 km² of adventure.

Camping Sites in the Central & North Okanagan



References

- Okanagan Trail Riders Association. Web. www.okanagantrailriders.com
- Shannon, Steve. 2012. "Exploring five of the Okanagan's best off-road riding areas". *Riders West Magazine*. Web: http://www.riderswestmag.com/xriderzone/article/exploring_five_of_the_okanagans_best_off_road_riding_areas