Sasquatch Habitat Analysis

{ Locating the best Sasquatch viewing habitat in Oregon, Washington, and Idaho

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Ecological Niche Modeling

"The basic premise of the ENM approach is to predict the occurrence of species on a landscape from georeferenced site locality data and sets of spatially explicit environmental data layers that are assumed to correlate with the species' range." J.D. Lozier, et al.

Datasets

Forests

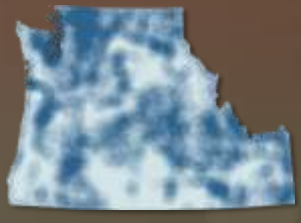
Highways

Lakes

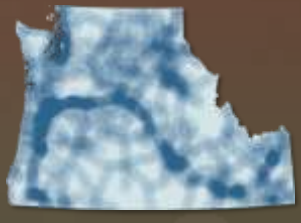
Population Density

Rivers

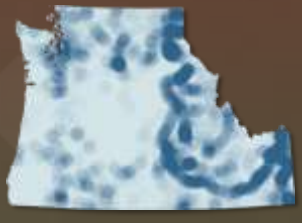
Point & Line Density



Forests

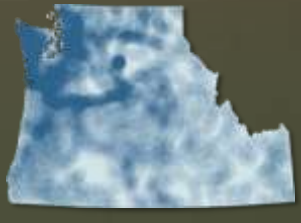


Highways



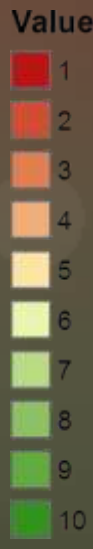
Lakes

Population Density



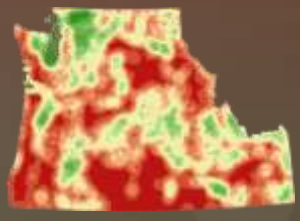
Rivers

Reclassification



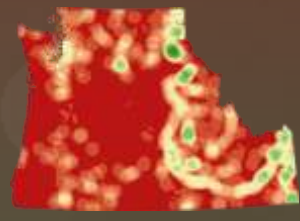
- Density data was reclassified into 10 classes
- Suitability for Sasquatch ranges from a low of 1 to a high of 10
- No "expert" testimony or input available for how to classify
- Employed the BG Model ™ -- aka, best "guesstimation"

Reclassification



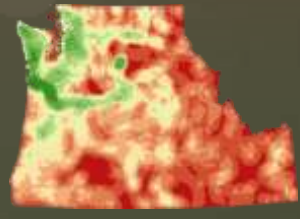
Forests

Highways



Lakes

Population Density



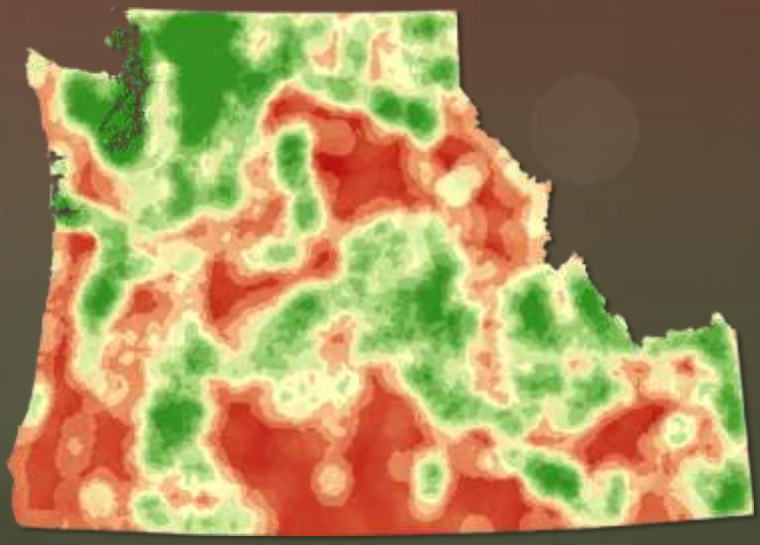
Rivers

Analysis

Variable Weight:
Forests 40%
Highways 10%
Lakes 10%
Pop Density 30%
Rivers 10%

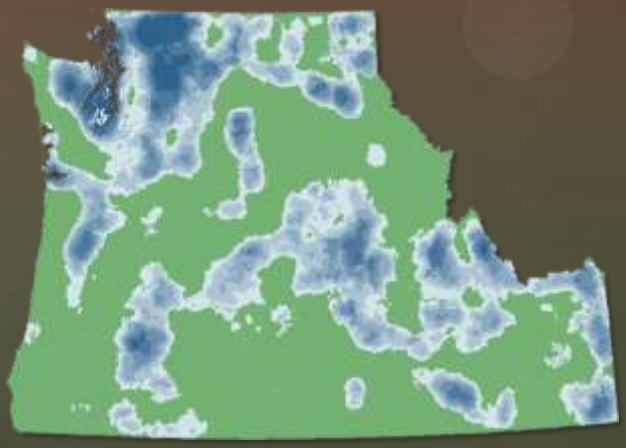
"forest" * .40 + "highways" * .10 + "lakes" * .10 + "pop_den" * .30 + "rivers" *.10

Raster Calculator Output



Reclassification of Habitat

Raster Calculator produced an output with classes of 1.5 – 9, we reclassified the output and excluded (through use of NoData) 1.5 through 4.9 while keeping 5 through 9

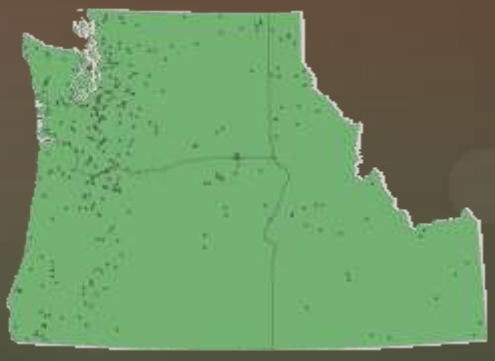


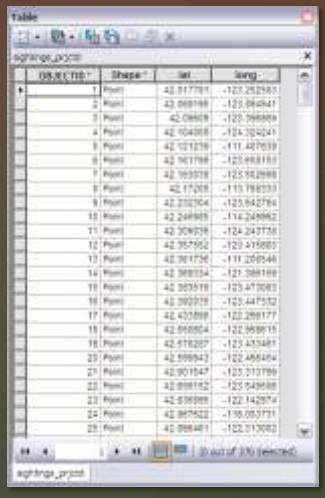
Cities as Anomalies

"If a Sasquatch walks in a forest and no one is around to see it, does it exist?"

Of 370 sightings we worked with, 196 were in densely populated areas. Therefore, we decided to exclude sightings in urban areas from our final analysis.

Model Verification

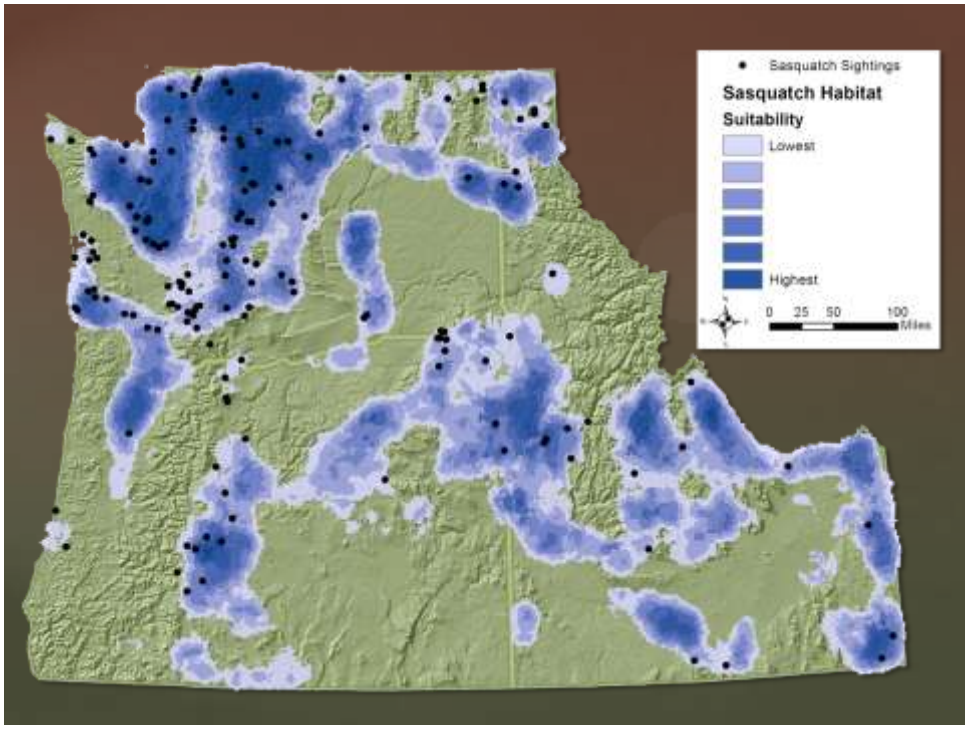




Sasquatch Sighting Density

176 sightings outside of densely populated areas.

How accurate was the model?



Conclusions

- Ecological niche modeling can "prove" anything
- Sasquatch sightings tend to be located around heavily populated areas
- According to our model Sasquatch appears to prefer the habitat of NW Washington state
- Multiple models may be required for large study areas
- This model helps explain Sasquatch sightings, but may not detail its entire range
- Further research is required for more accurate habitat suitability modeling

Questions?

References

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*http://*www.gis.smumn.edu/GradProjects/BelongieC.pdf

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PSU I Drive

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