

Wolf Habitat Suitability Model for Eastern Ontario

By : Emma Gunn

Introduction

Parks may be too small to maintain populations of large predators such as the Eastern Canadian wolf. The objective of this study is to create a habitat suitability model for the eastern Canadian wolf and use this data to determine how far the most suitable habitat extends from Algonquin Provincial Park (study area)

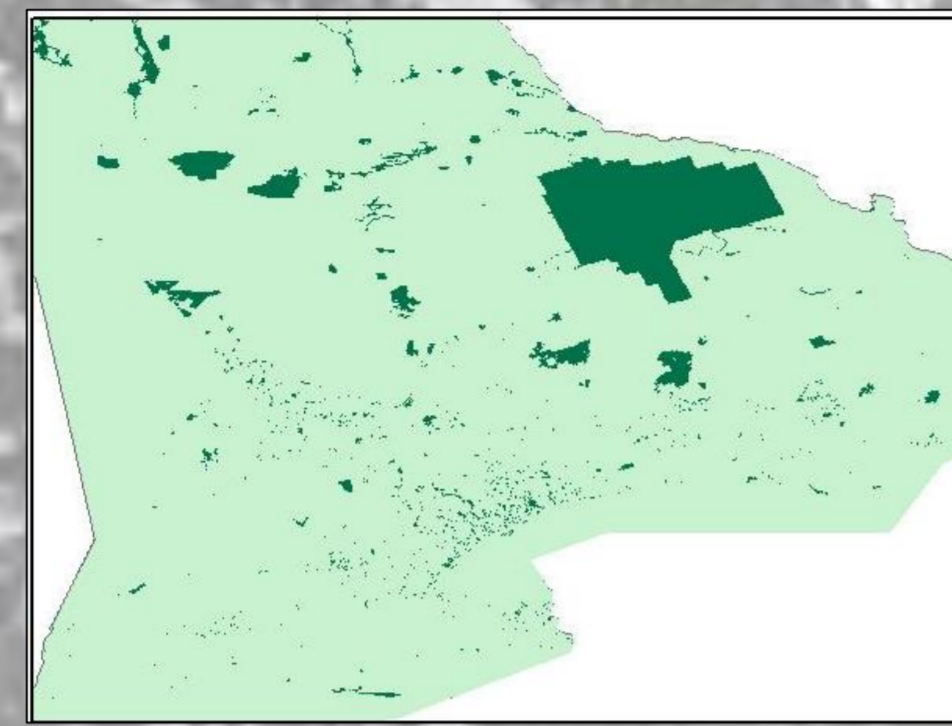
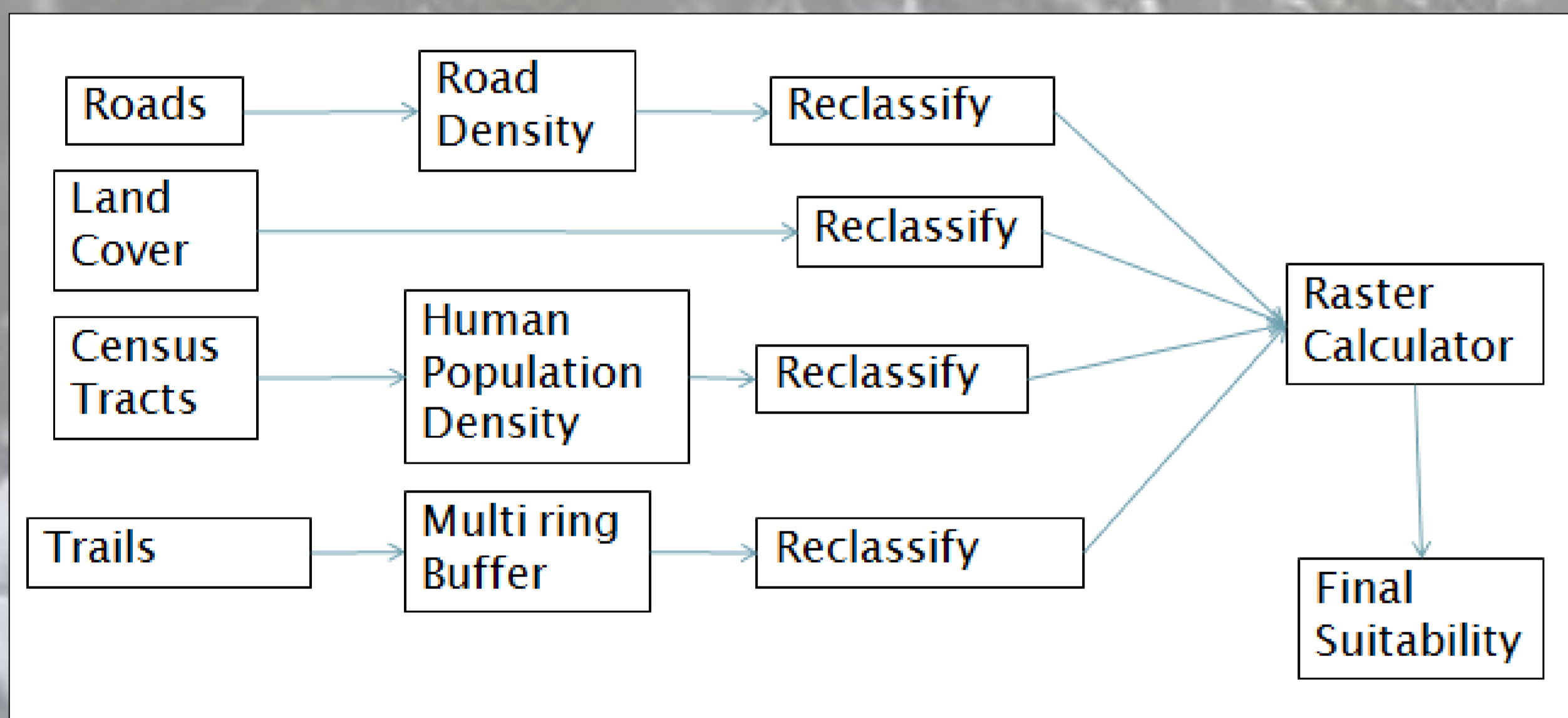


Figure 1: Algonquin Provincial Park (outlined in dark green).

Methods



Results/ Discussion

It was determined that the most suitable wolf habitat extended approximately 98km from the park boundaries. Since some of these areas overlap with areas of low road density and have trails which extend from inside the park, a 20km buffer zone is proposed for the park. This buffer zone would encompass most suitable habitat areas and help to prevent wolf mortality.



Figure 2: A wolf in a park

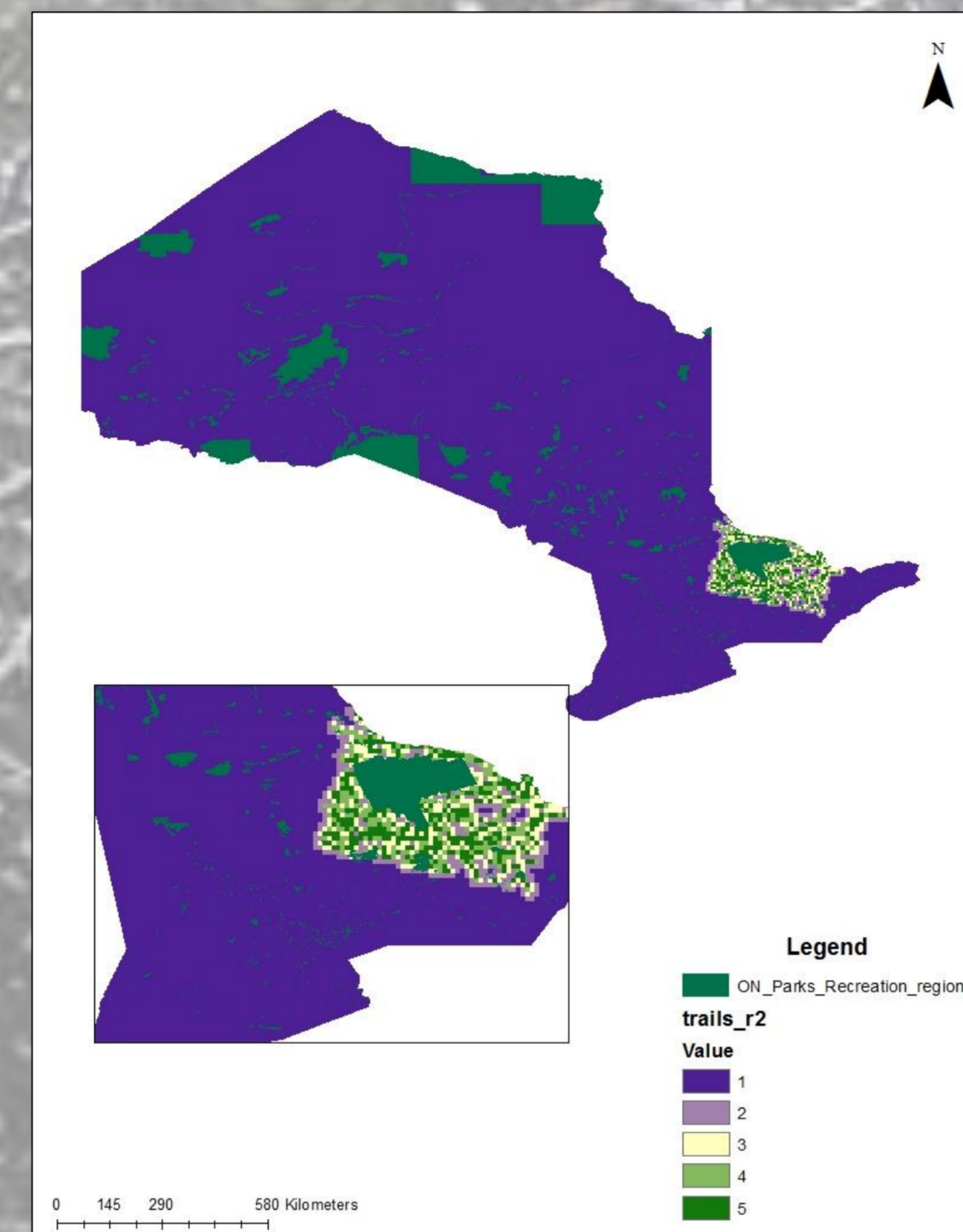


Figure 3: reclassified trail map. Most suitable habitat areas are in dark green.

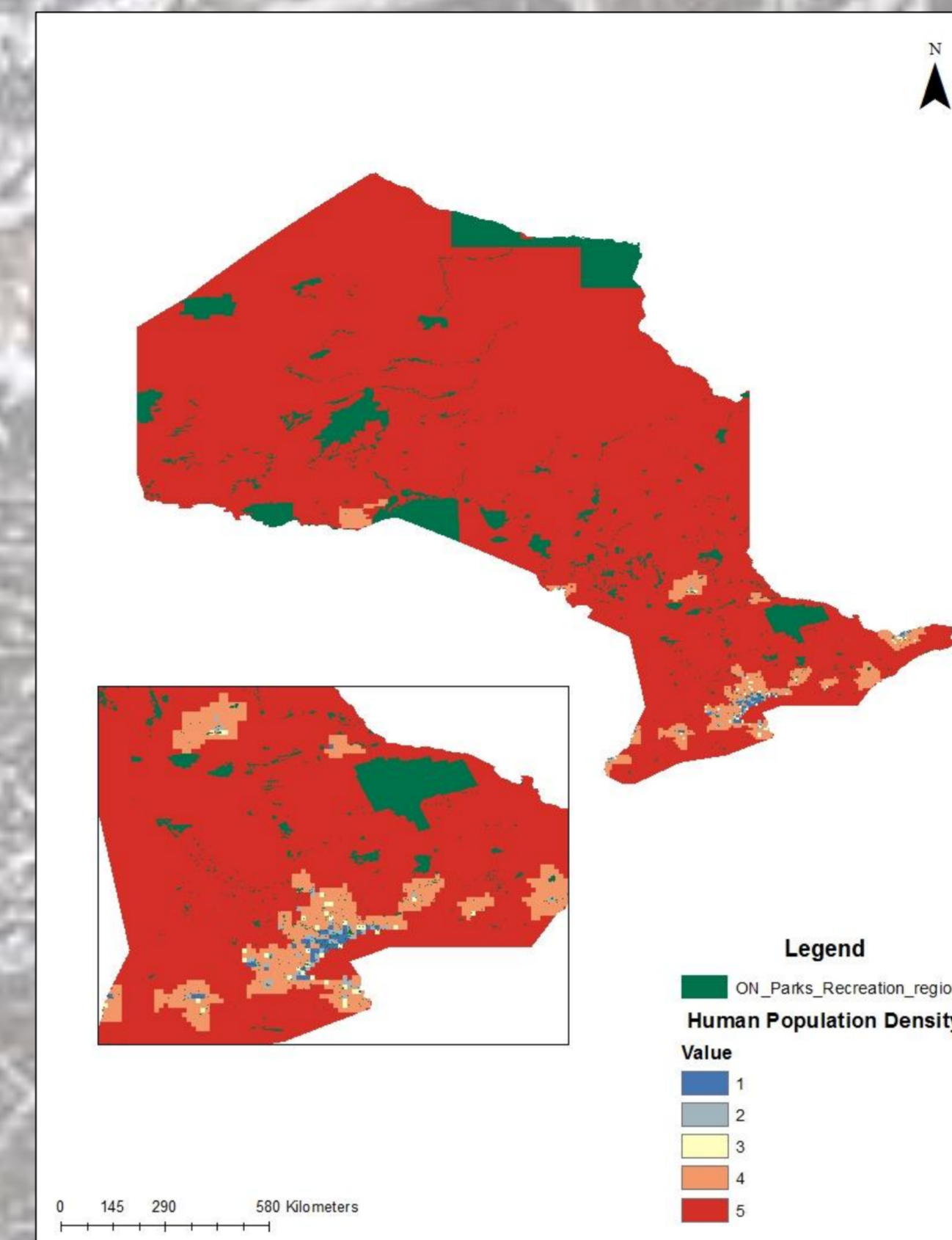


Figure 4: reclassified human population density map. The most suitable habitat areas are red.

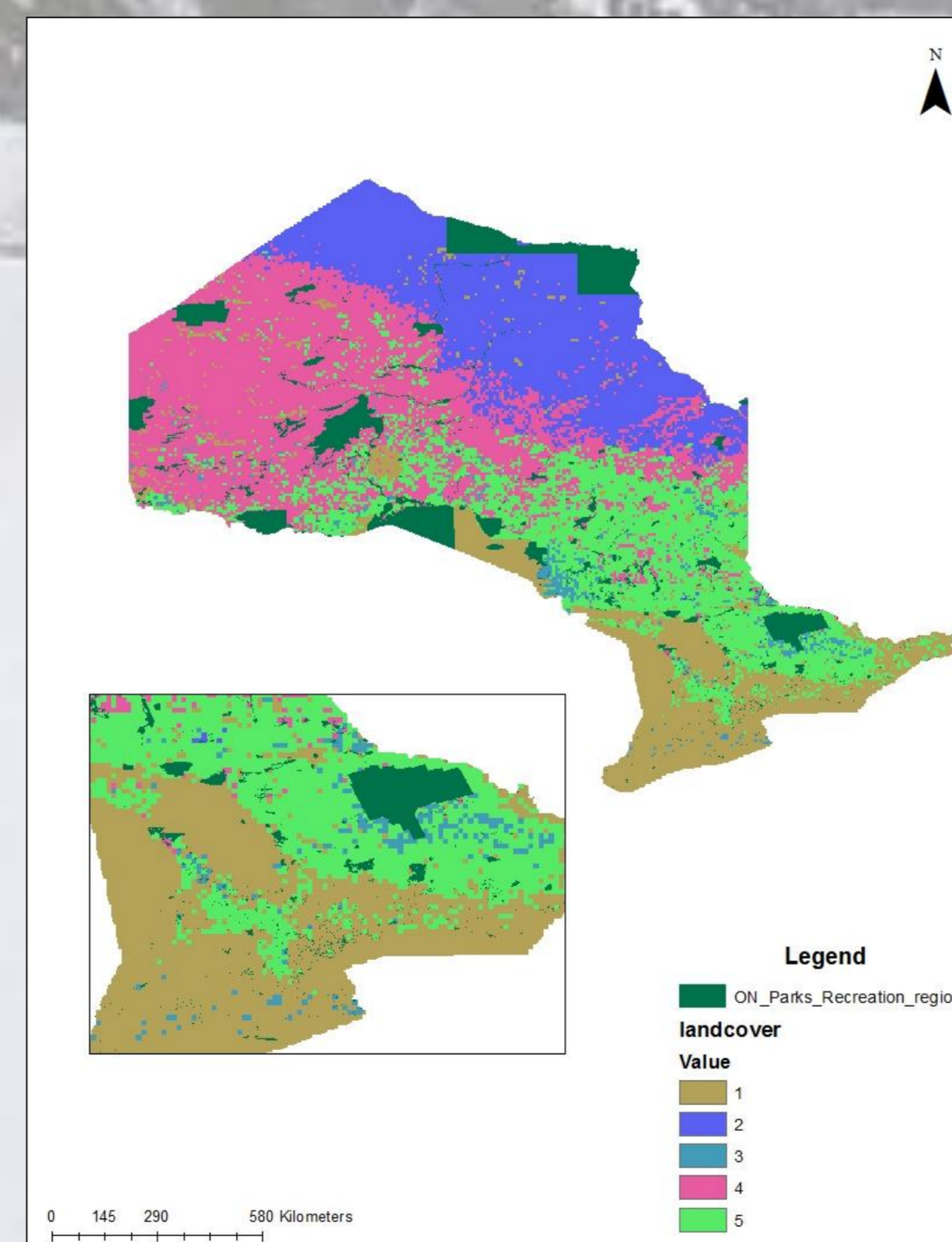


Figure 5: Reclassified land cover map. The most suitable habitat areas are bright green

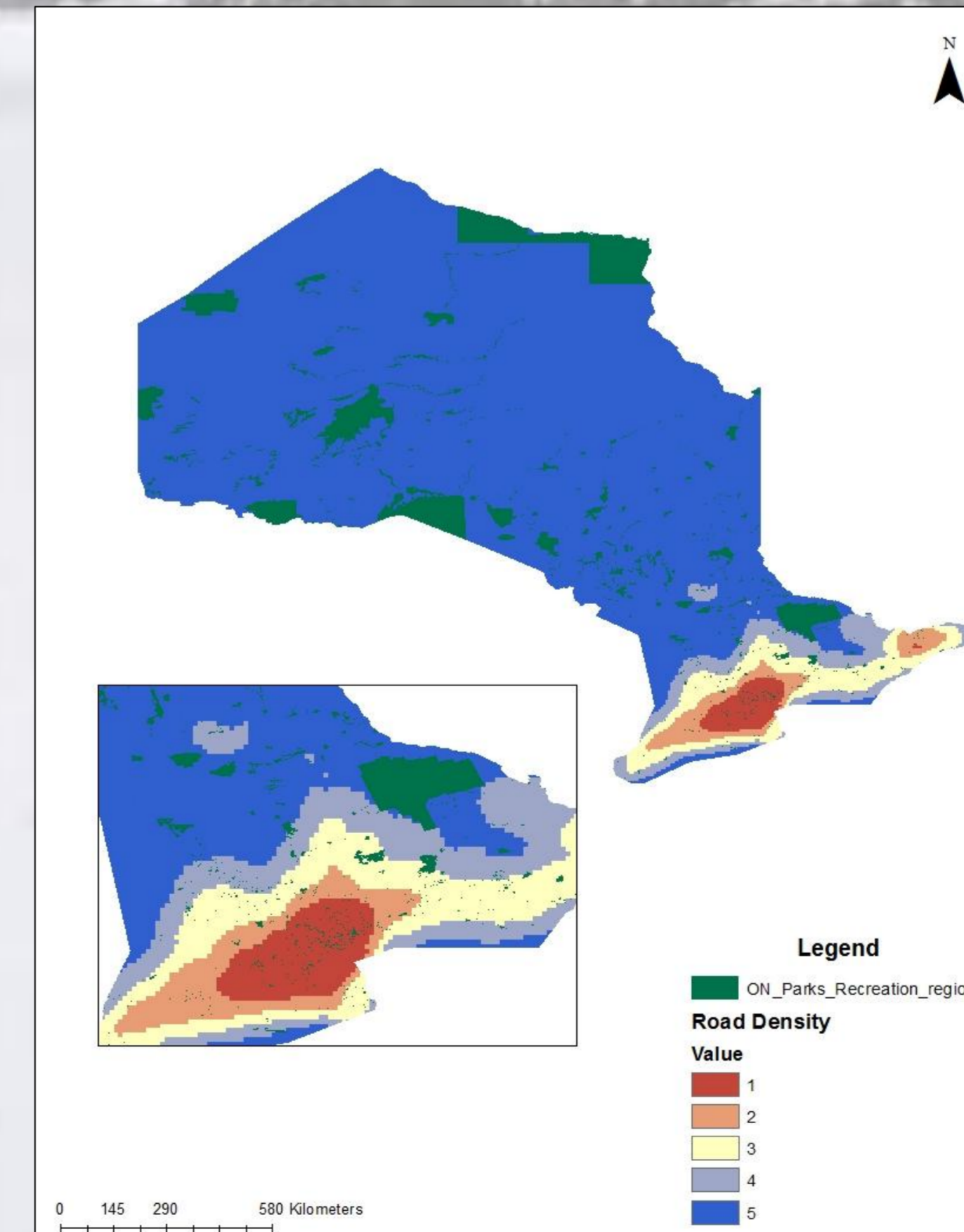


Figure 6: reclassified road density map. The most suitable areas are dark blue.

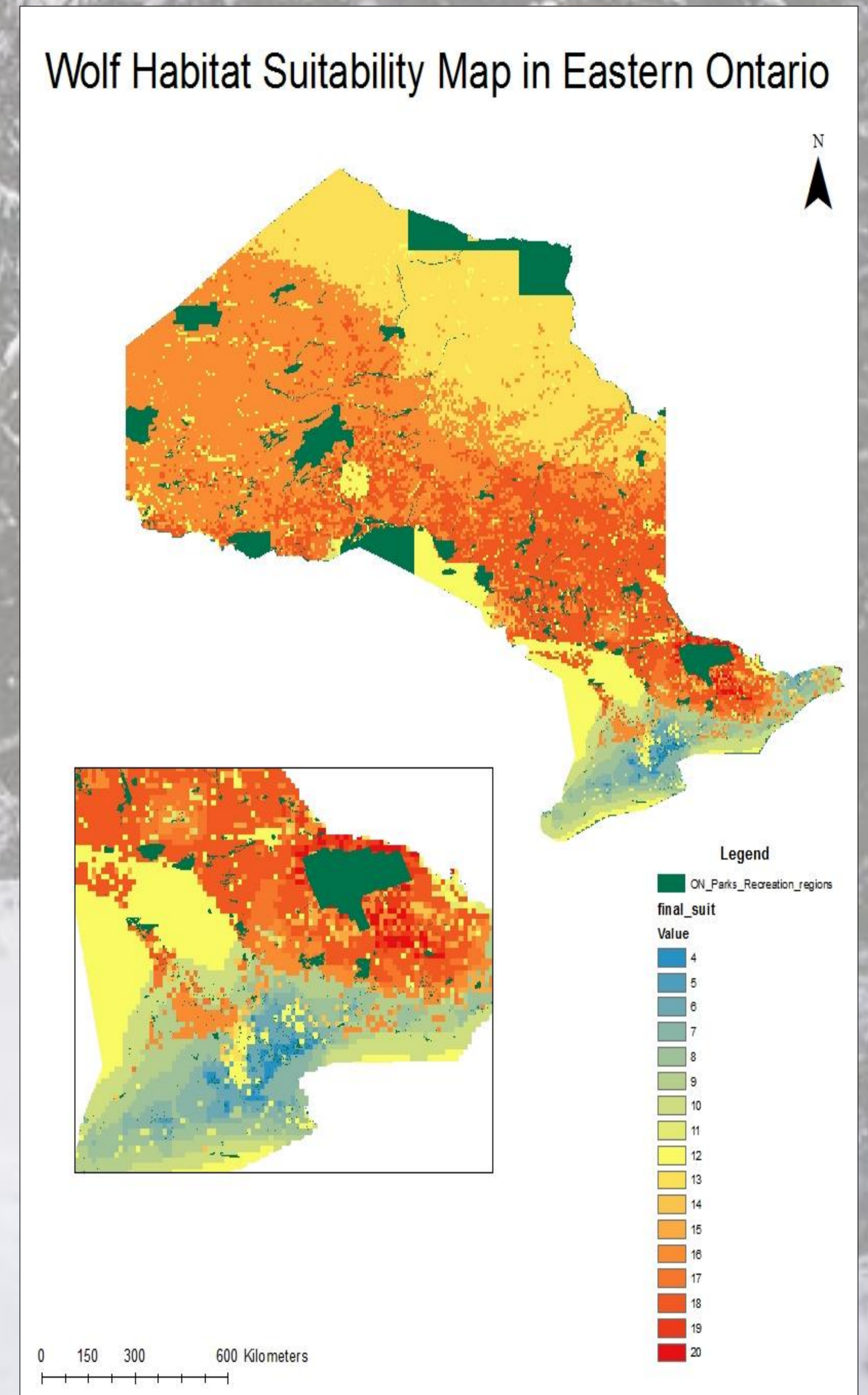


Figure 7: The final suitability map was created by combining the reclassified land cover map, the human population density map, the road density map and the trail map. Most suitable areas are red.