# Determining Areas in Need of Trees in Los Angeles County

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are also in need of trees geographically and socially.

We acknowledge that there were limitations in these

maps due to availability and accessibility of

need in the context of LA County.

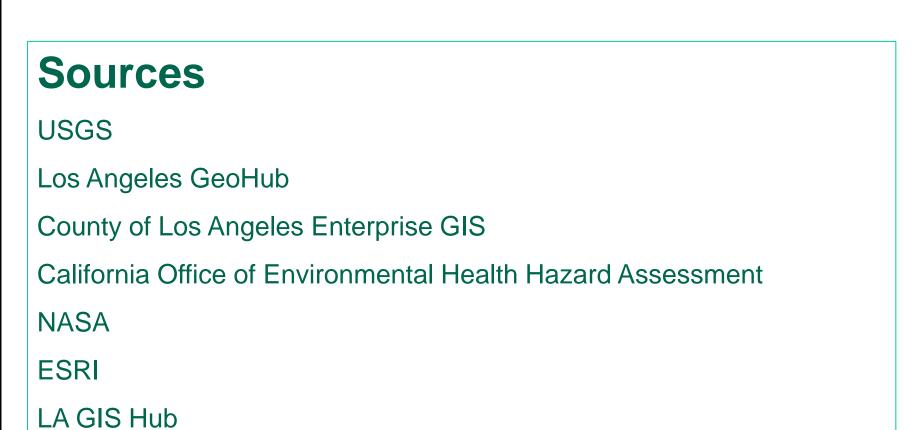
information, but we believe that this poster best

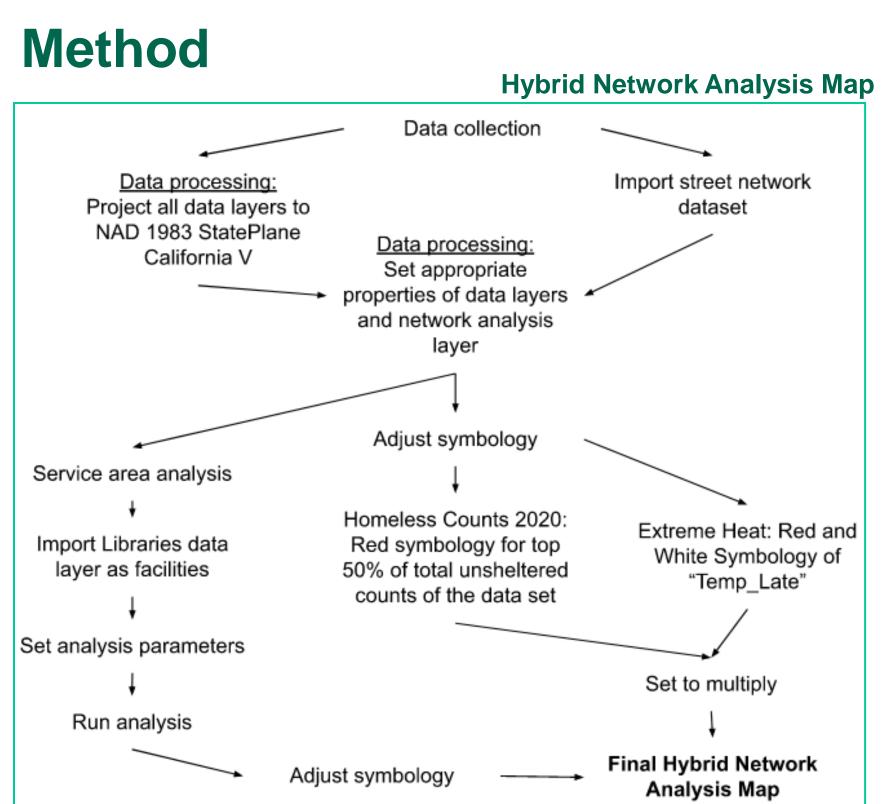
captures our research goals. Though not entirely

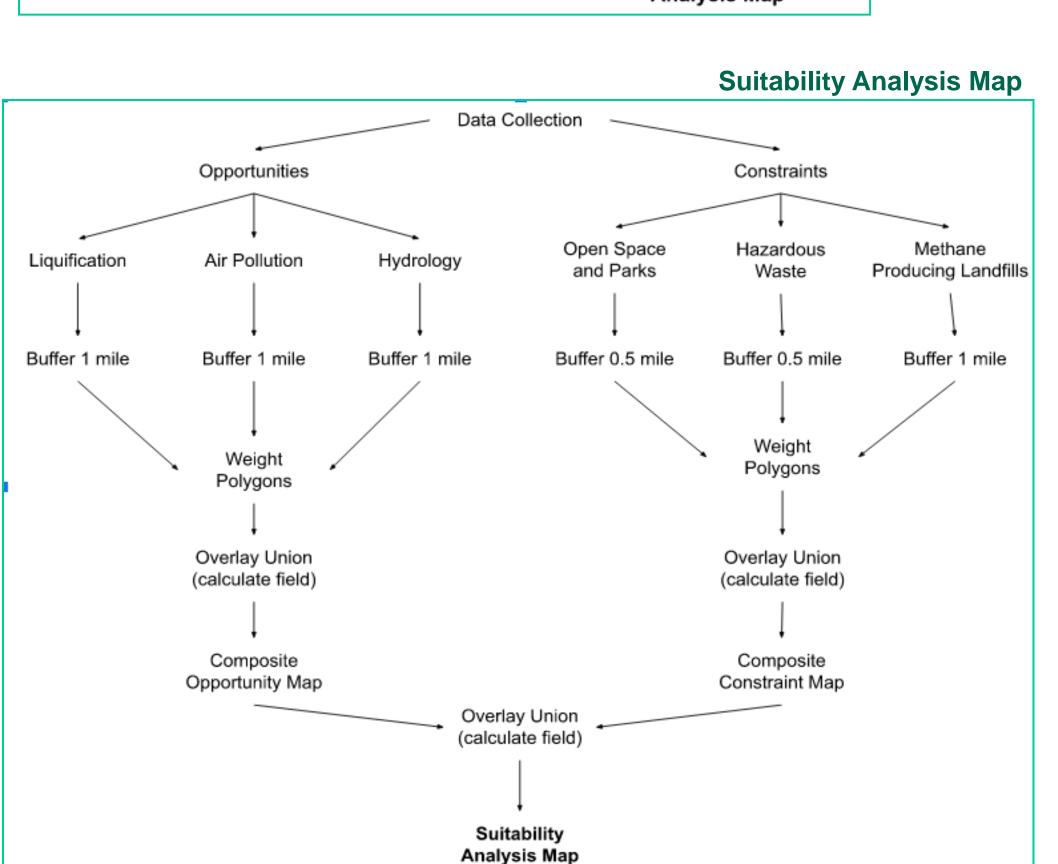
comprehensive, we were able to identify areas of

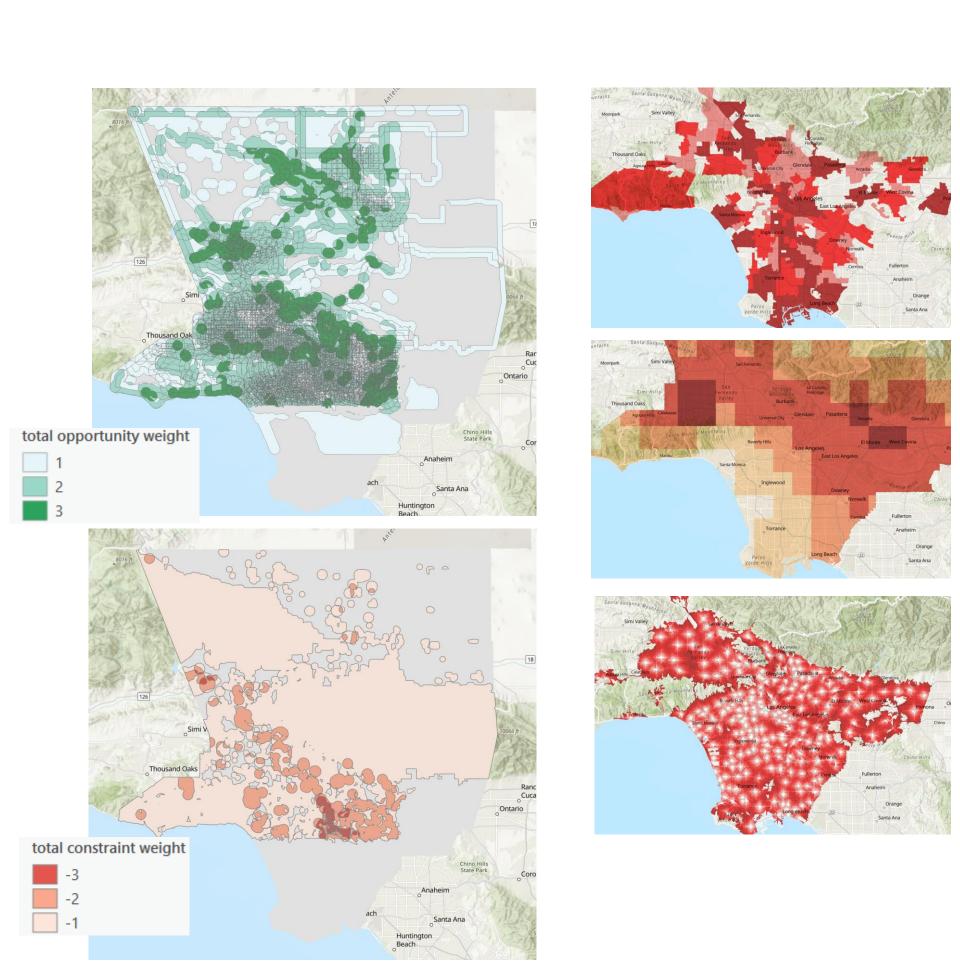
#### Introduction

In our research, we plan to locate areas in need of tree planting due to low or non-existent tree canopy coverage. Tree planting has a lot of benefits on the environment and people's health, including providing shade (which helps to lower the outdoor temperatures), ridding of air pollutants, and absorbing runoff. We are presenting this to our client, the Los Angeles City Planning Commission, as we chose to analyze Los Angeles County due to the high anthropogenic activity and its environmental impact as a bustling city. In the following poster, we have included three types of maps: vector suitability, 3D NDVI surface analysis, and network analysis.

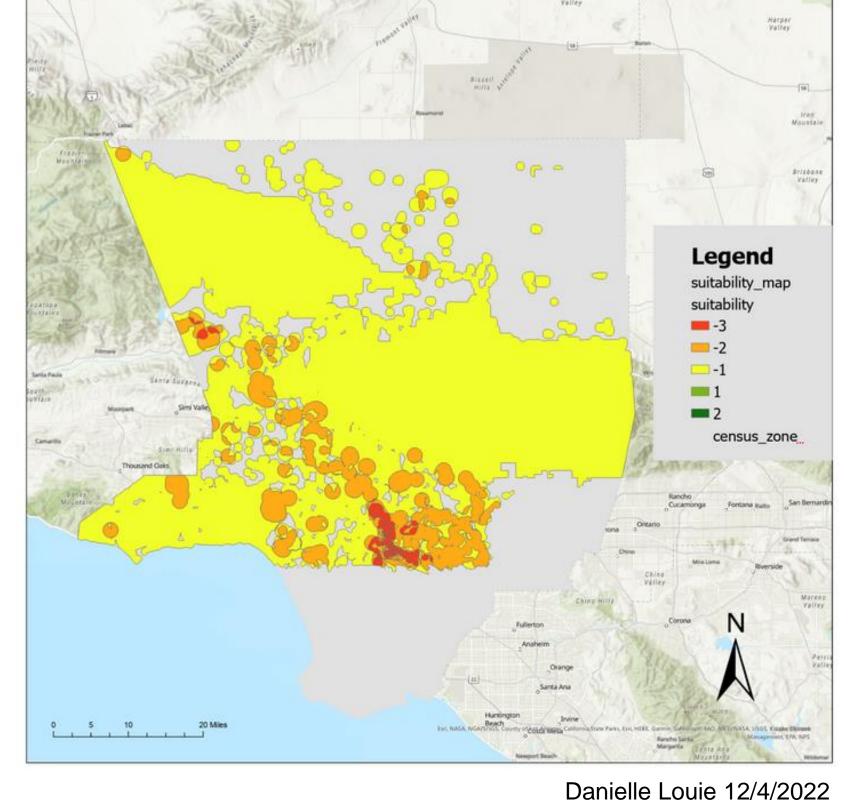


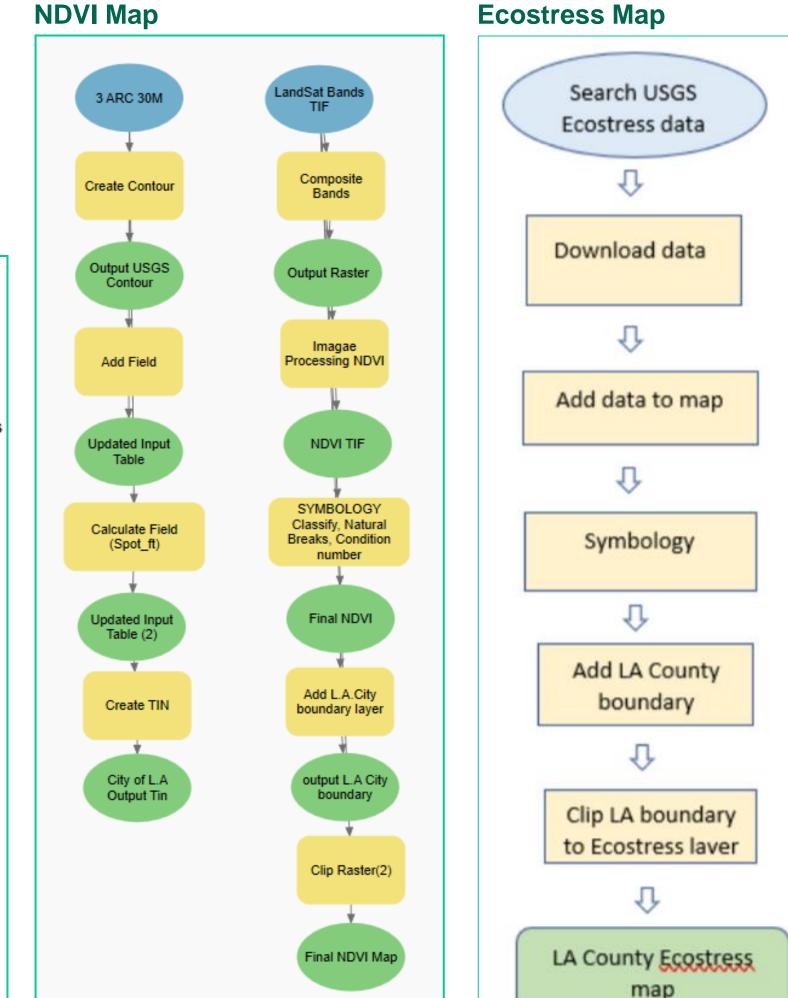




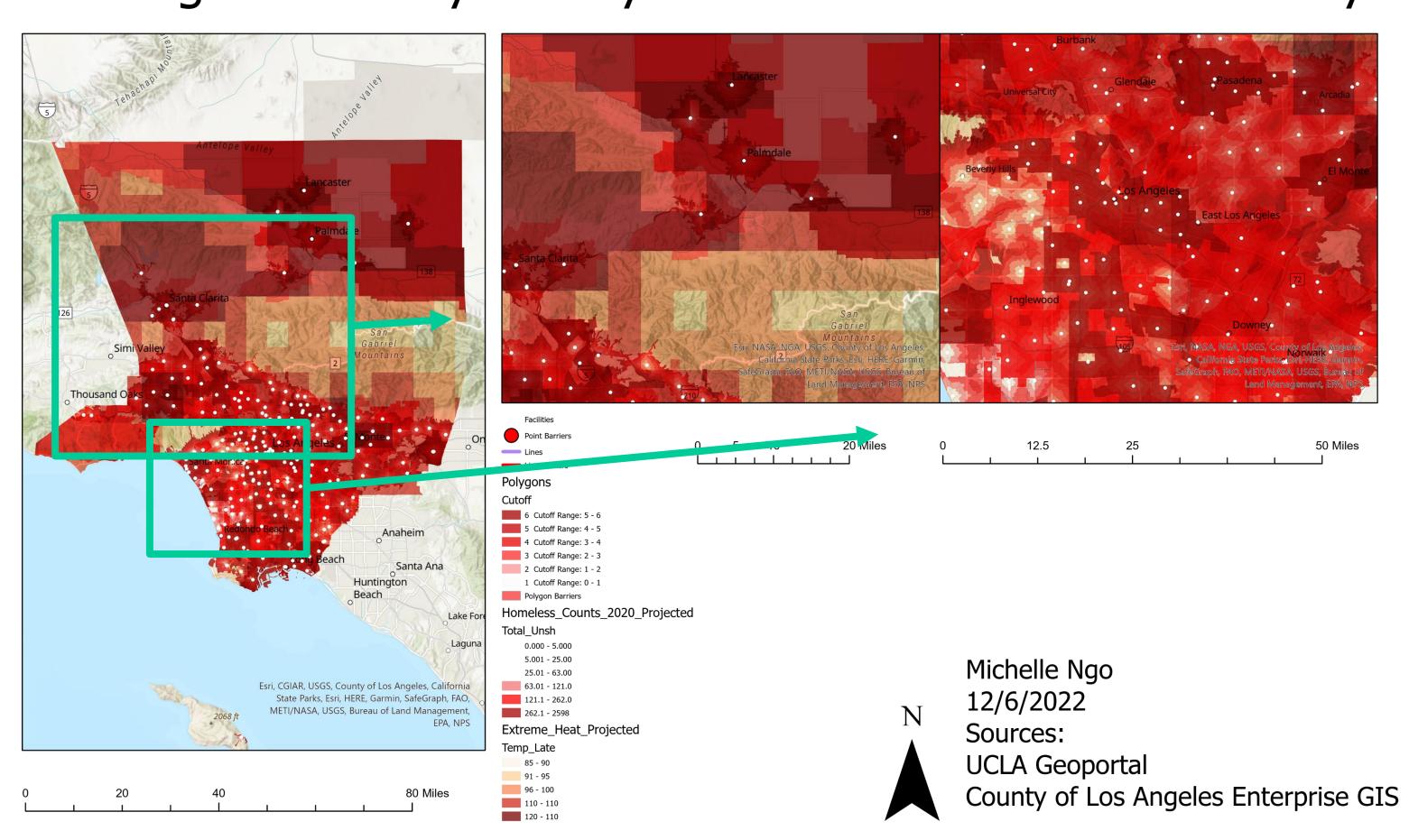




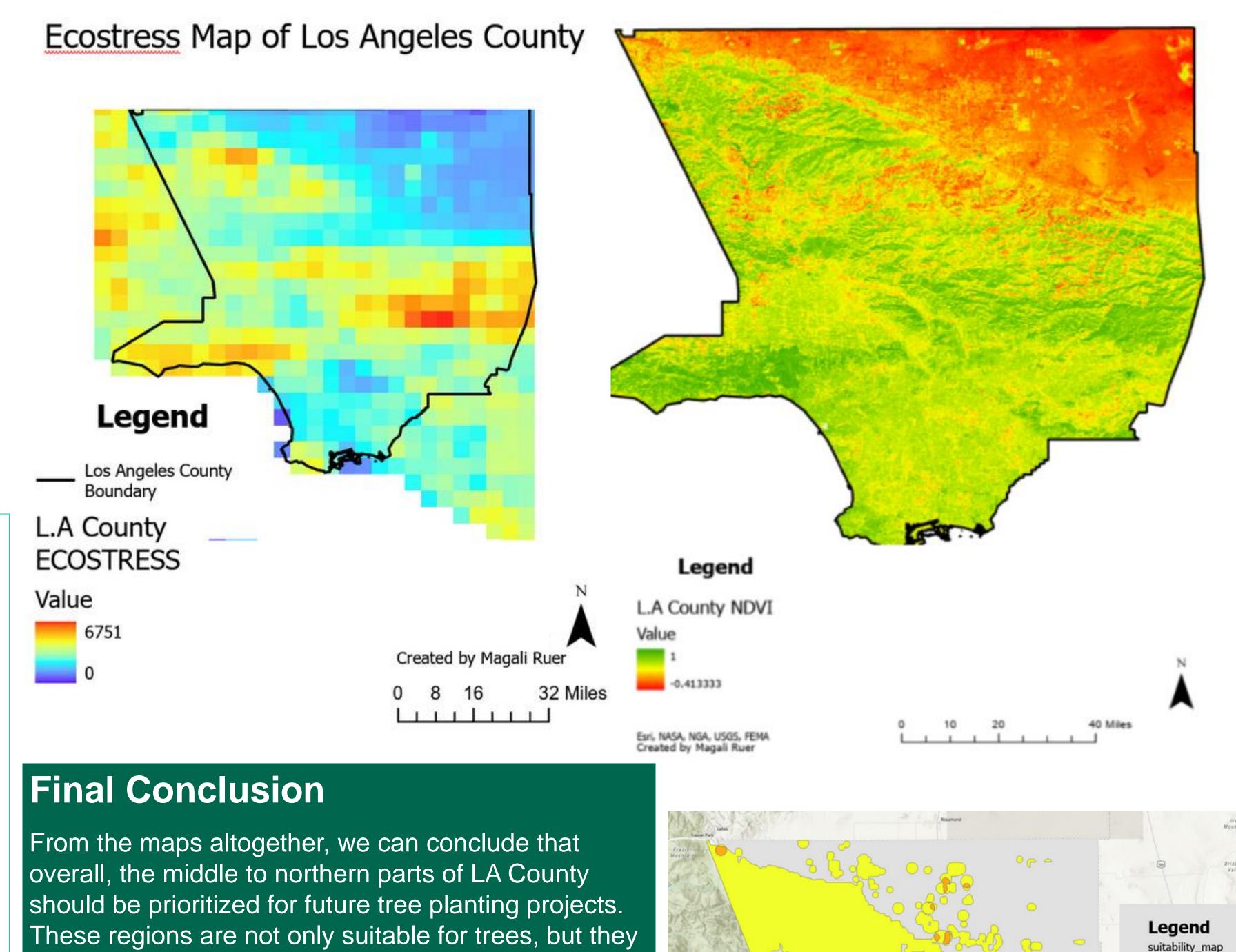




### Los Angeles County Library Service Areas and Vulnerability



Normalized Difference Vegetation Index of Los Angeles County



#### Conclusion

From the suitability map, we can conclude that overall, most of Los Angeles County is suitable for planting trees, with several locations around the middle to the east that should be avoided. These areas contain hazardous waste sites, as well as low hydrology, which makes it difficult to sustain tree life, and in general plant life; some of these locations are also already open parks and spaces, which already contain a lot of trees. On the other hand, the suitable locations, or rather places that are in need of trees, contain high hydrology levels, higher air pollution levels, and are liquefaction zones that require more tree life to sustain the environment.

The NDVI map provides both a macro and micro perspective of the state of the vegetation in Los Angeles and a visual tool in determining potential locations for planting trees. Using the "classify" method in symbology, which assigns a color for each group value. The results lay out an overall visual representation of the greenness of L.A and the data necessary to analyze more specific parcels.

The proportion of values under zero is either dead vegetation or an urbanized area without any vegetation. This map provides a visual of not only the health of the vegetation but also how green Los Angeles County is. To complement the NDVI data, Ecostress data was mapped out to reflect the temperature of vegetation and their evapotranspiration rate, Ecostress maps are an indicator of drought and can be useful when linked with NDVI data to find the best and the worst locations for tree plantings.

The network analysis map, of which the method service area analysis was used, reveals that a large portion of Los Angeles City and the larger county are quite vulnerable with many areas that would be in need of more shade equity. Areas in the darkest shade of red on the map are indicative of areas with high extreme temperatures, high unsheltered populations, and distant from libraries. These three factors illustrate vulnerability as they are all highly interconnected with one another. In particular, there is a dark red area that runs from the middle of the city towards Huntington Beach that could likely be an area for more trees and green space as well as northern Los Angeles.

census zone