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Depression in Pierce County

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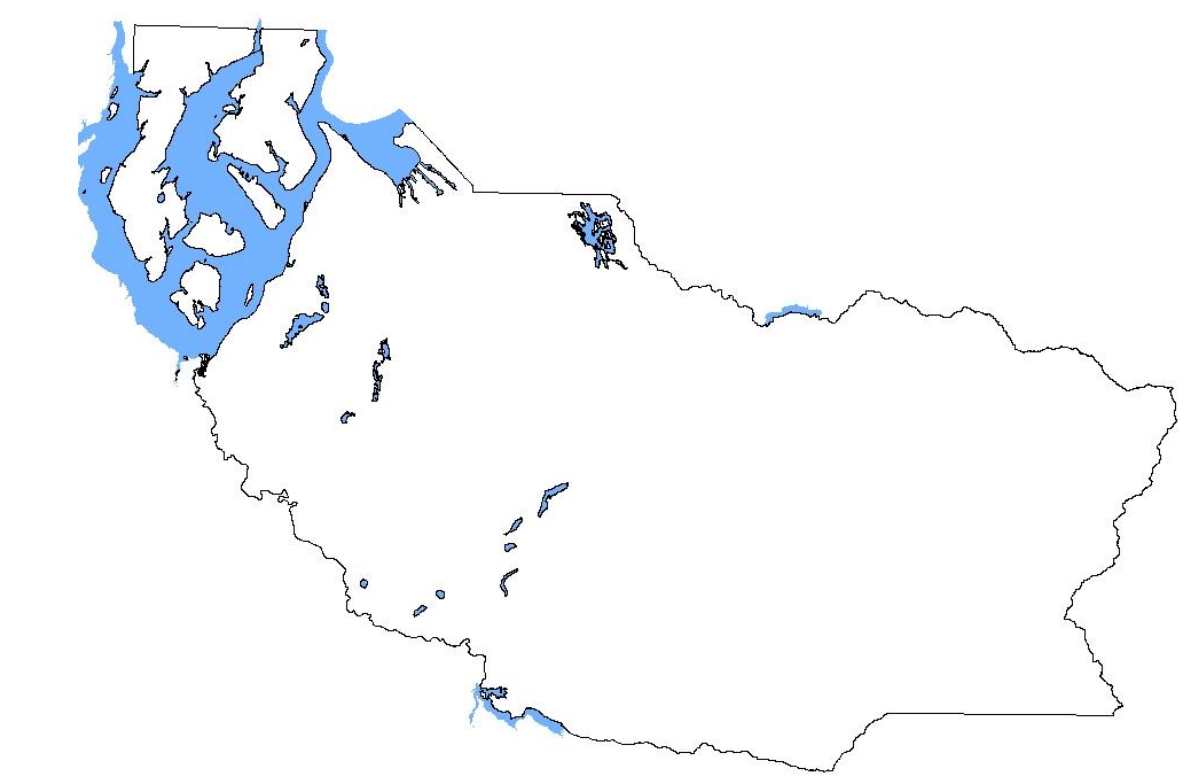
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Depression in Pierce County

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GIS Certificate Program 2011

UNIVERSITY of WASHINGTON
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Introduction and Purpose of the Project

This project was thought up through my interest in Psychology. Since I cannot actually map physical locations of where depression comes from, I was interested in possible demographics that could cause (not always does) depression. I was able to compile a list of contributing demographics through a literature review. Through my literature review, demographics that were highlighted were that of socioeconomic status or social standing (class). Those with a lower SES were more likely than those who had a higher SES for depression. The purpose of this research was to be able to identify areas within Pierce County that were at risk for depression, and to compare it to the availability of mental health facilities, where they could receive professional help.

Methodology and Data

To complete my analysis I had to use several different techniques. The data I used did not come ready to use. I had to manipulate most of my data to be able to use in a useful way for my specific project.

Demographics used (gathered from the census):
Income, education level, single mothers, age 65+, unemployment, poverty. From that I had standardize the data to be able to accurately account for each demographic. This allowed me to run an interpolation on the data to create low to high areas of possible depression in Pierce County, displayed in Figure 1.

I gathered mental health facilities in a few different ways. I was able to gather a lot of data from the Pierce County website, however I wanted all possible mental health facilities. I had to do a bit of extra research through yellow pages to gather additional mental health facilities. This allowed me to geocode the addresses of the additional mental health facilities with an address locator. After joining all mental health facilities, I had all possible Pierce County mental health facilities displayed in Figure 2.
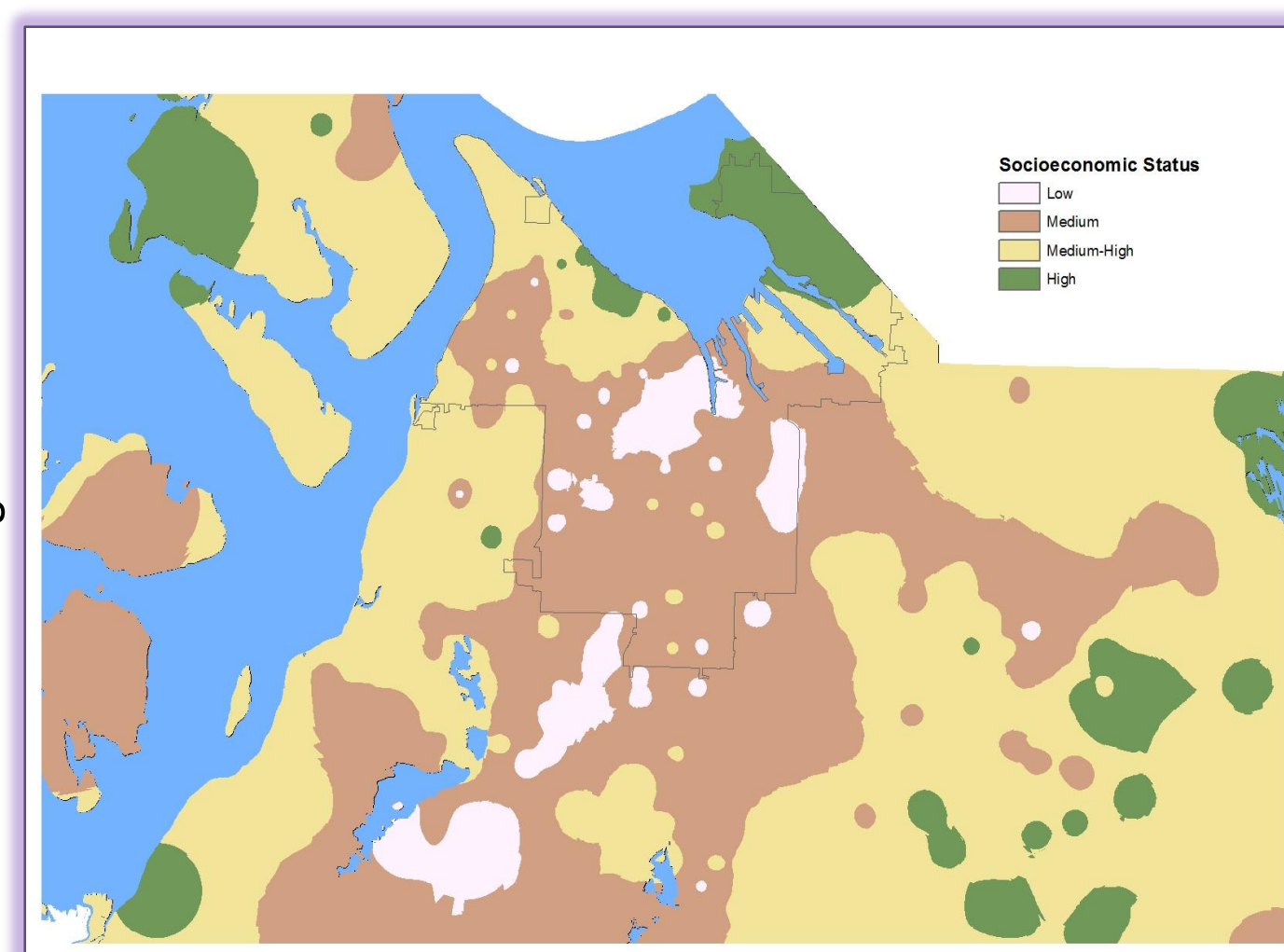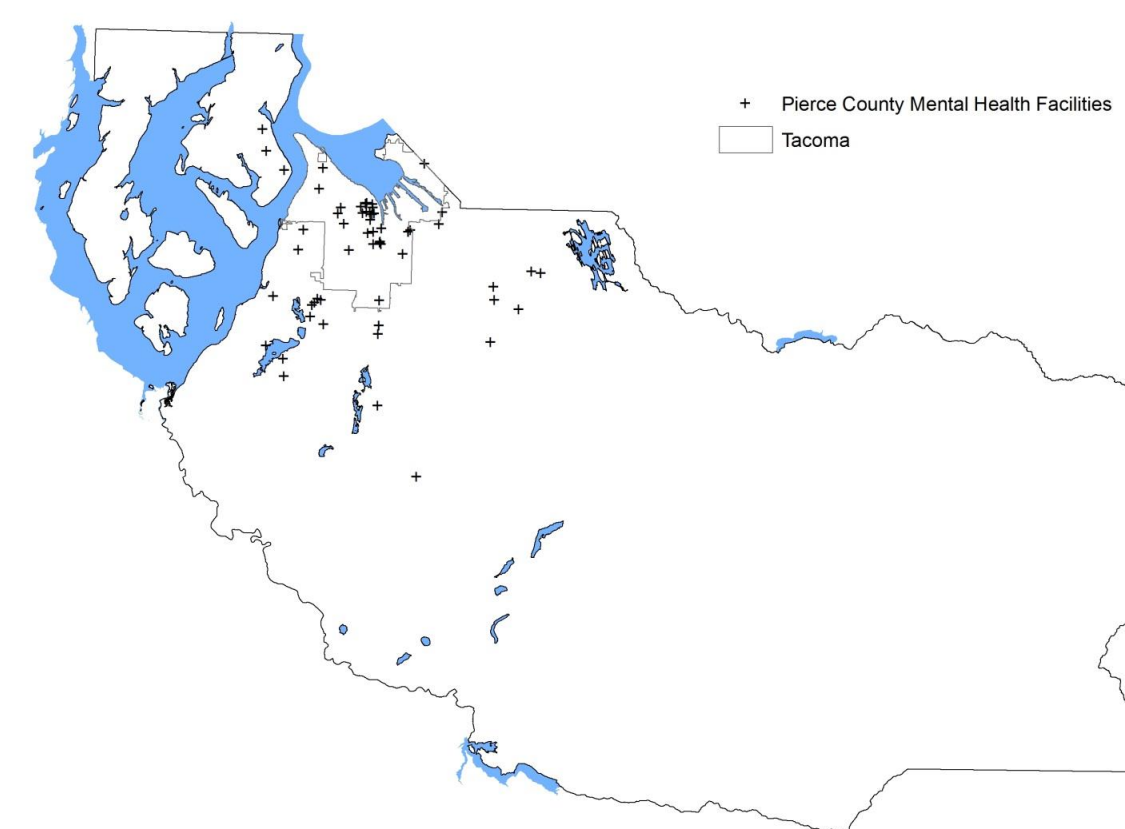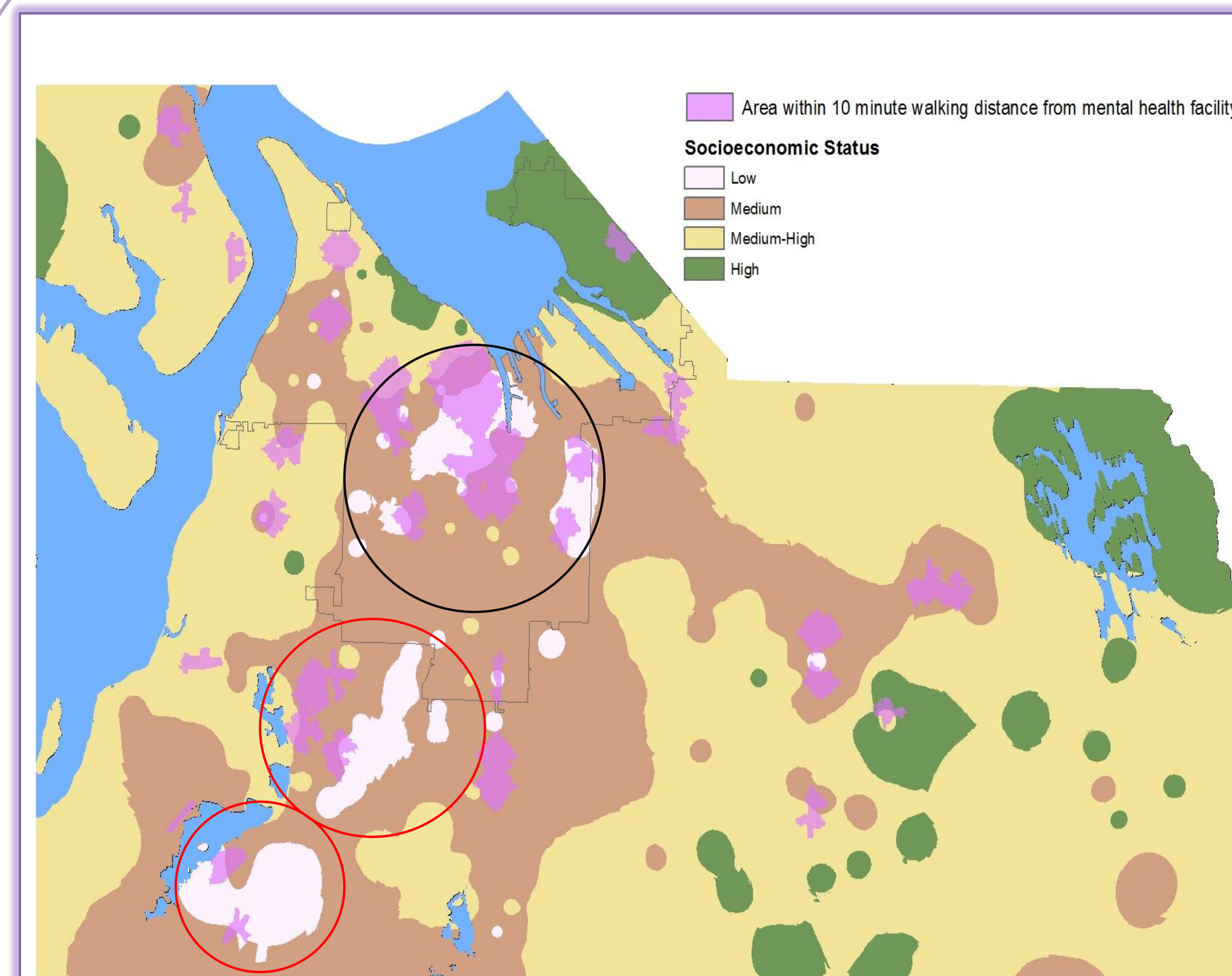
Figure 1

Figure 2

Figure 5

Results

My final image displayed in Figure 5 illustrates the areas in Pierce County that are at a high risk for depression. The light pink color shows low socio-economic status, and in turn is at a high risk for depression. As you can see within the red circle, the areas right outside of Tacoma have a low SES and have very few mental health facilities within a 10 minute walk. Where as the major area in Tacoma (black circle) there is low SES, there are many mental health facilities within a 10 minute walk.
A 10 minute walk time was used because a lot of the time, if you have a lower SES, you do not always have access to the use of a car. Using a reasonable walk time (10 minutes) allows an accurate analysis of those who are being either under or over served by mental health facilities.

Citations

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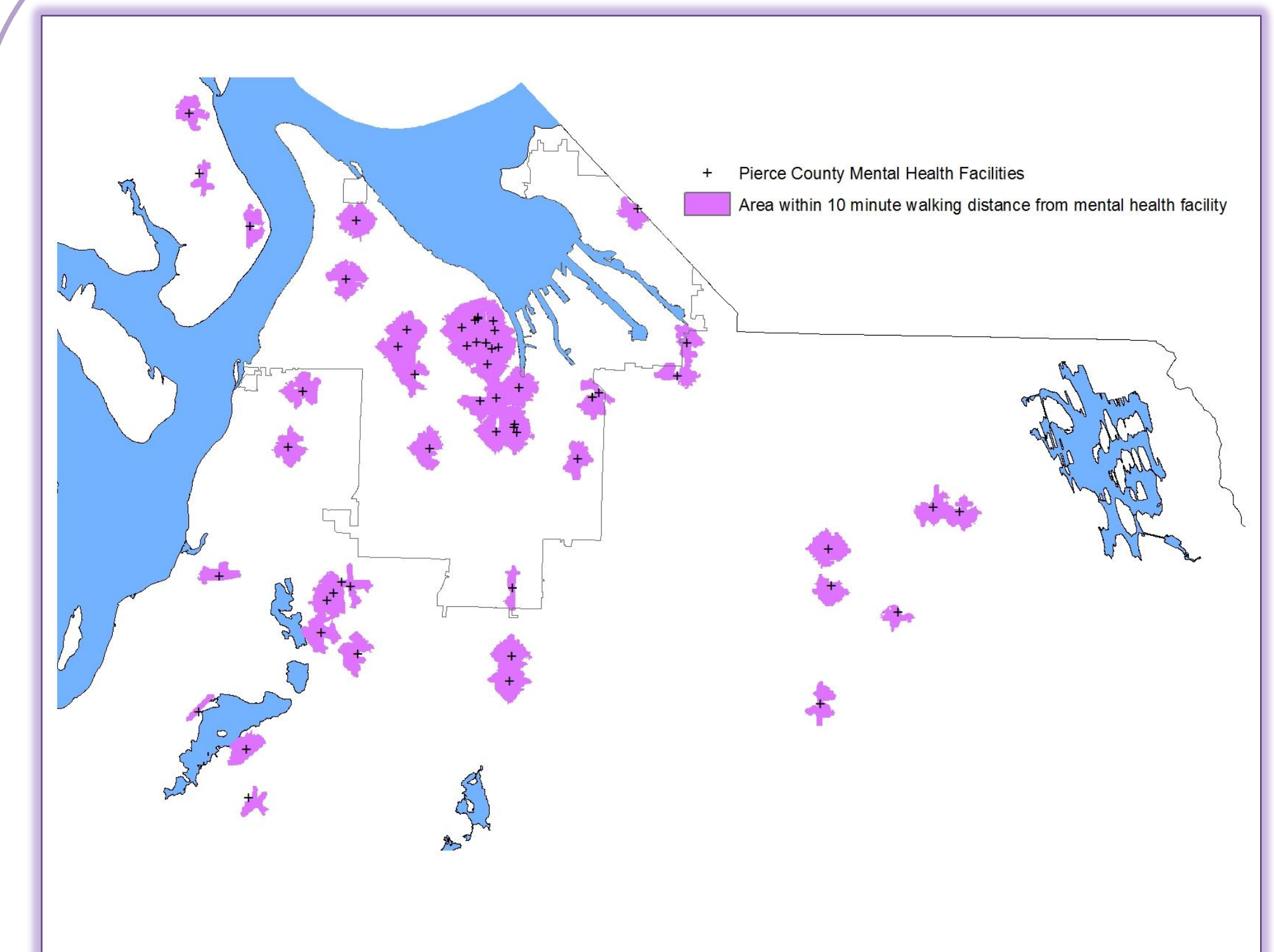
Figure 3

After locating all mental health facilities, I ran a service area analysis, to see the areas that would be within a 10 minute walk to all the mental health facilities displayed in Figure 3.
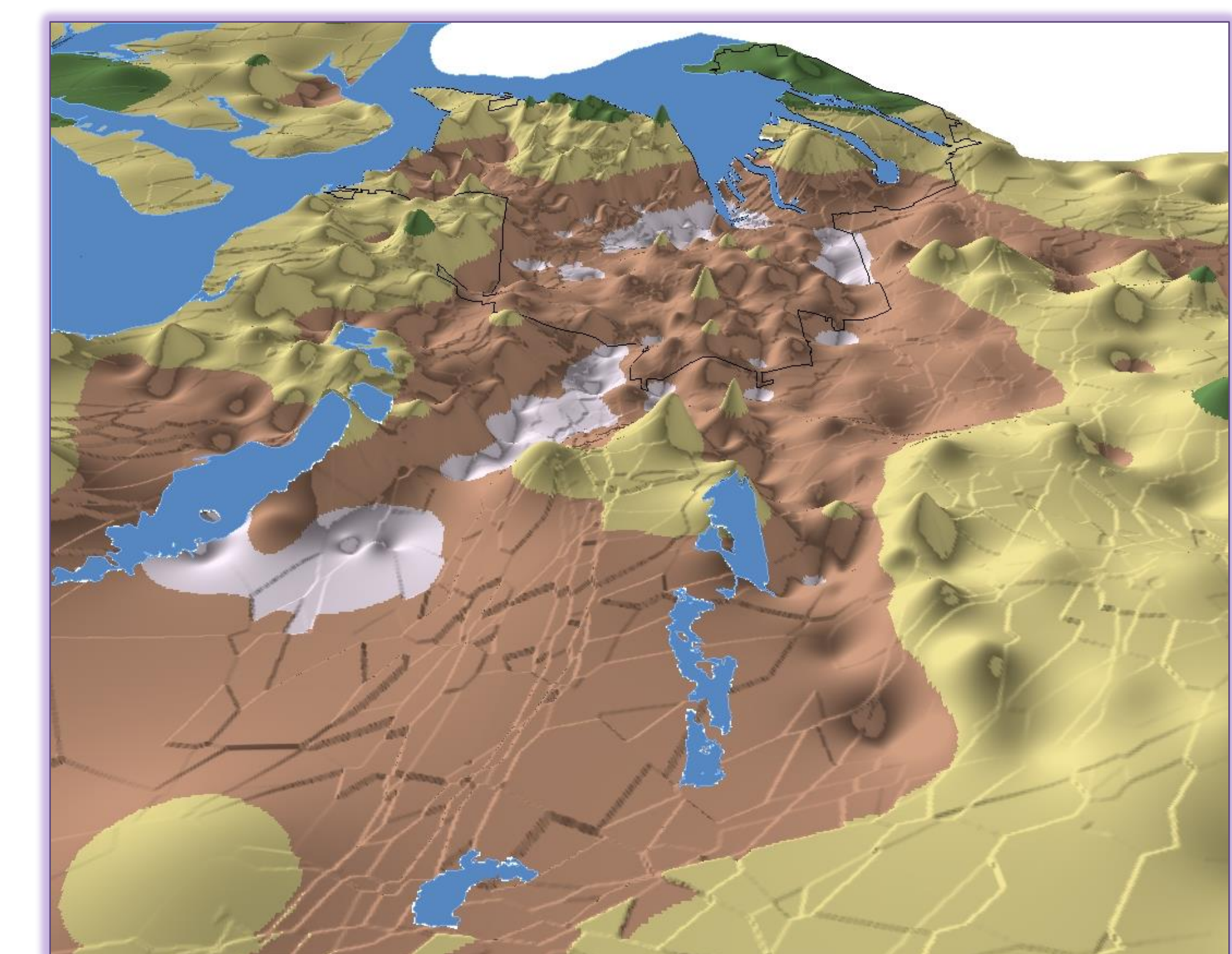
Figure 4

A 3D image of low to high socio-economic status in Pierce County.

Acknowledgements

Area within 10 minute walking distance from mental health facility

Socioeconomic Status
Low
Medium
Medium-High
High

Pierce County Mental Health Facilities