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Economic Development: Future Employment Opportunities in Neighborhoods of Low Socio-economic Status in Tacoma

Natasha Boyde, UWT GIS Certificate Program

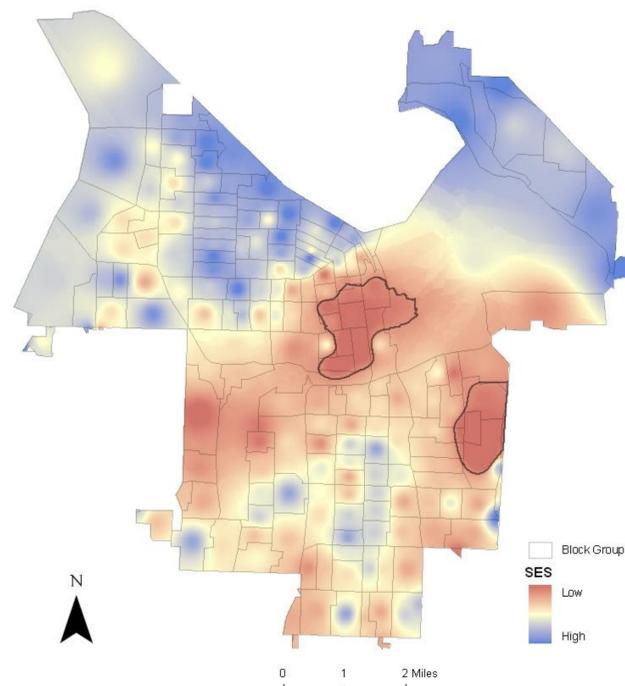
Purpose

As with many metropolitan areas, Tacoma is home to many residents of low socio-economic status (SES). Socio-economic status is a term that describes people who have many factors that contribute their SES, more than just poverty or income. This analysis has been done in an effort to address unemployment for residents of low SES by finding access to jobs that do not require long-distance commuting. By creating jobs within or adjacent to a neighborhood we can create job opportunities that utilize land already available and build sustainable neighborhoods with employment opportunities for residents. Finding job opportunities within a distressed neighborhood can also increase an individual's mobility, which could lead to a shift to higher SES. I chose to find parcels within walking and biking distance to advocate walking, biking, and to decrease our dependency on an individual car in order to have a job. This analysis also considers that individuals in low SES may not have access to reliable transportation, therefore may need employment closer to home.

A 3D Geography of Socio-economic Status in Tacoma



Socio-economic Status in Tacoma by Census 2000 Block Groups



To create an index of SES I utilized 2000 Census data, with 8 variables to identify SES: poverty, education, single-mother households, linguistic isolation, unemployment, race, plumbing and kitchen facilities. With these variables I created an SES score based on each variable's difference from the mean rate. The index and census data was joined to Census block group polygons. Once I had every block group with their SES score I interpolated to create a continuous raster surface of Tacoma. This raster identified two neighborhoods with the lowest SES in Tacoma: Hilltop and Salishan.

Acknowledgements

A special thanks to Dr. Matthew Kelley at the University of Washington, UWT GIS Certificate Program Professor, and the UWT 2010-2011 GIS Certificate Students.

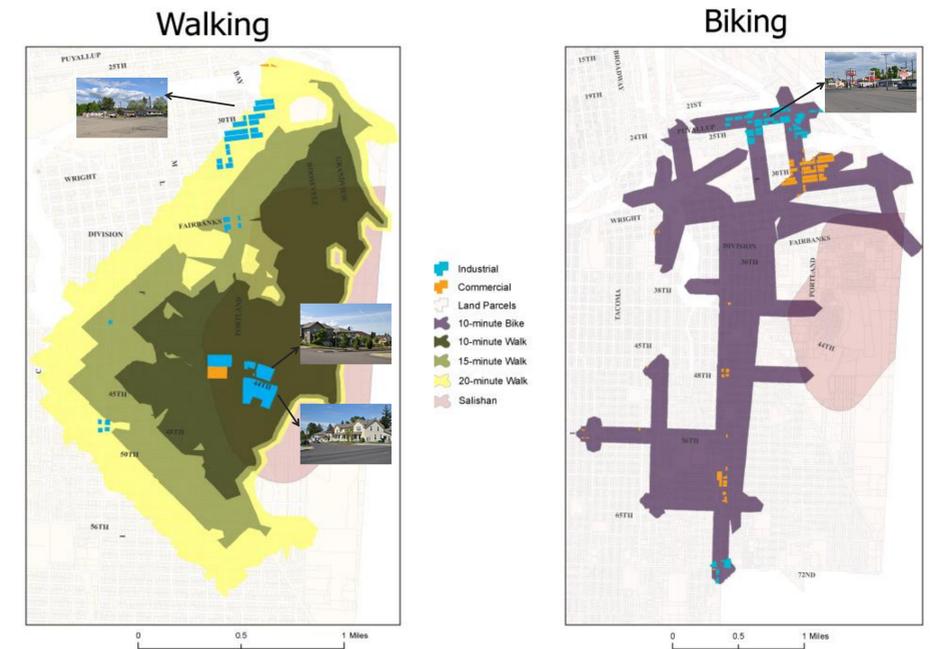
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Objectives

This project is a GIS analysis of SES in Tacoma that a) creates a geography of SES across the city, b) identifies neighborhoods of distress, and c) identifies vacant and under-utilized parcels within walking and biking distance of these neighborhoods. I chose to identify neighborhoods of low SES and find how one factor, employment, can be improved upon independently—that is, without a need for other resources, just walking or biking in very little time to a place of employment near home. Before I began my GIS analysis of Tacoma I expected Hilltop to have the lowest SES in Tacoma, and expected to find several vacant parcels in the neighborhood. My goal was to find parcels in distressed neighborhoods and use them to their maximum potential. Once vacant and under-utilized parcels are identified, I propose these parcels be developed and/or re-purposed to create employment opportunities.

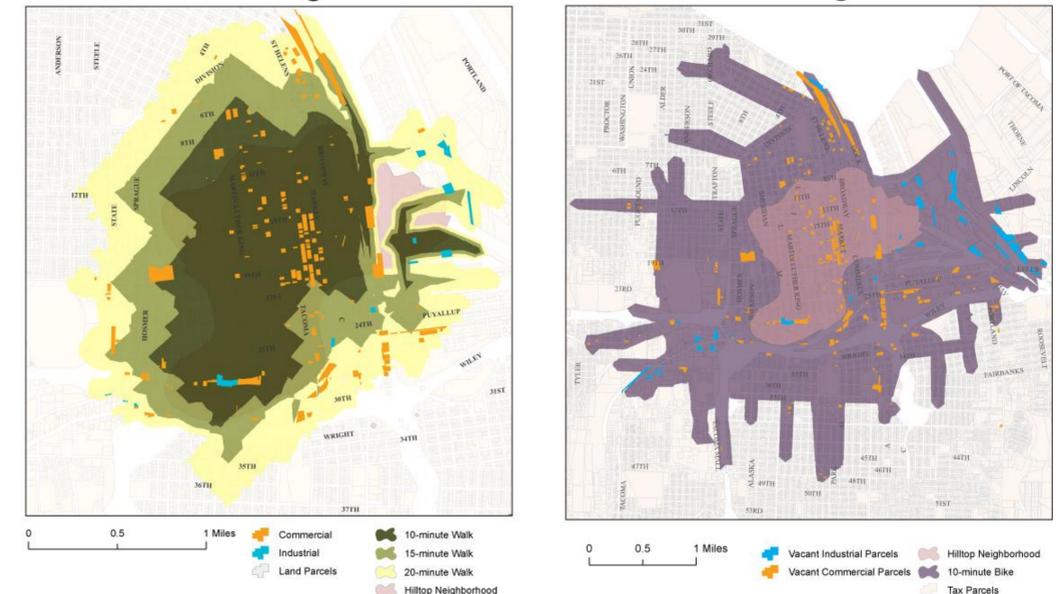
Under-utilized Parcels Within Salishan Networks



Network Analyst and Parcel Analysis

I created random points within each neighborhood to designate as start points for a resident to begin their work journey. I then used Network Analyst to find where a resident could walk from each neighborhood in 10, 15, and 20 minutes, and also where they could bike to in 10 minutes. I found vacant and under-utilized parcels using several SQL queries.

Vacant Parcels Within Hilltop Networks



Results

The neighborhoods with the lowest SES in Tacoma are Hilltop and Salishan. The parcel analysis of Hilltop found many vacant commercial and industrial parcels that can be developed into potential job opportunities for residents. The parcel analysis of Salishan found hardly vacant parcels, however there are many parcels that are zoned for commercial or industrial use but are being used in other ways. These parcels could be re-purposed and developed into employment opportunities for residents.