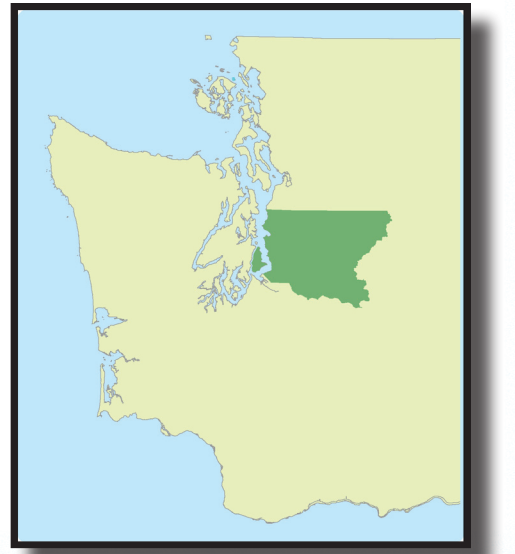


Defining healthy communities within the framework of economic vulnerability: A study of King County, Washington

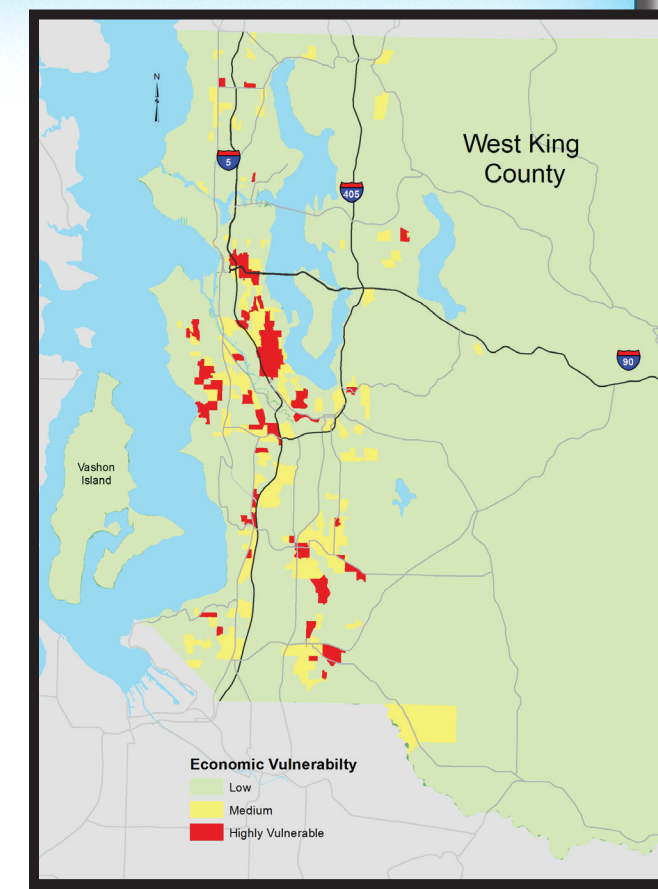
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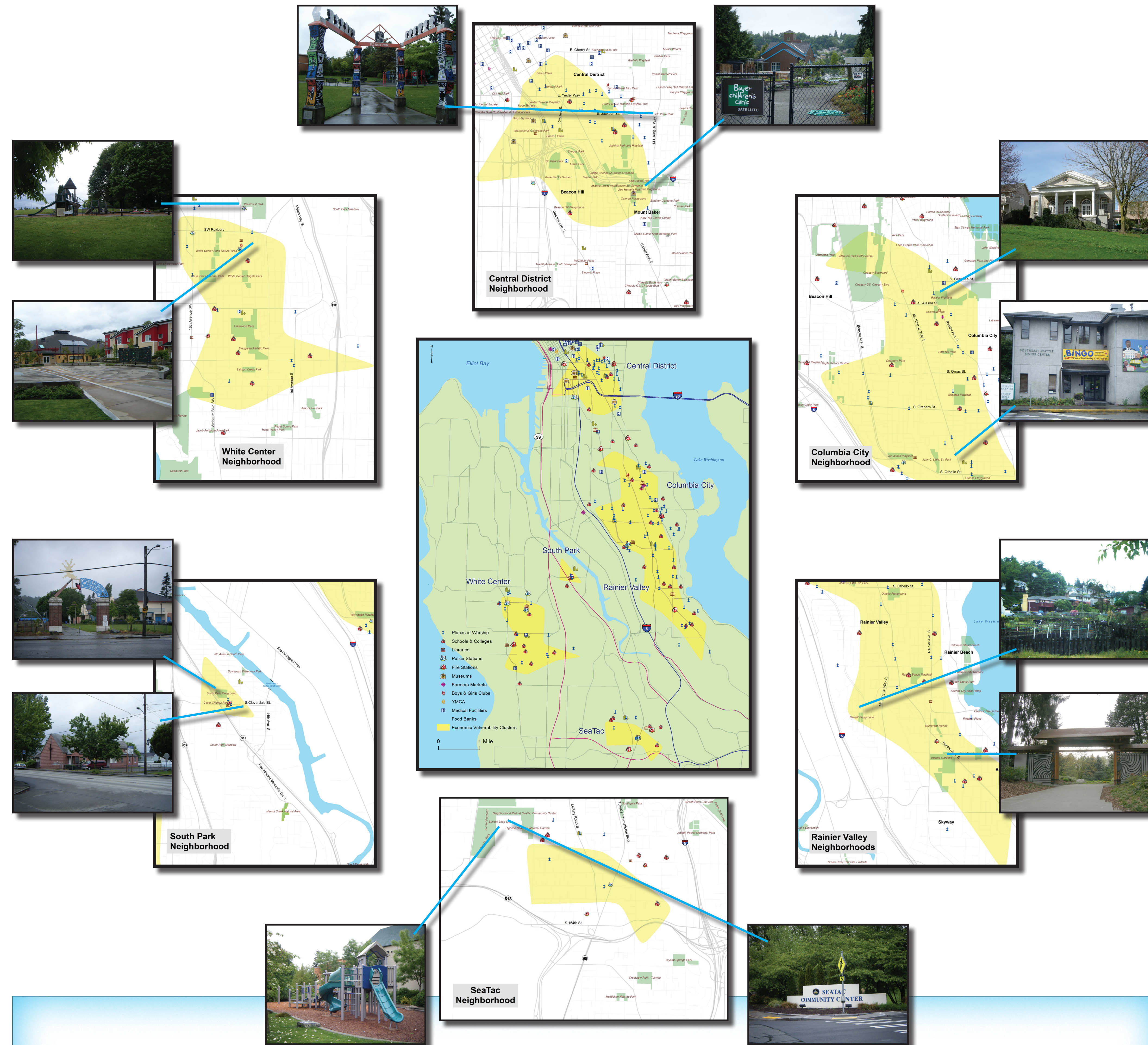
Purpose

When driving through the local neighborhoods or suburbs of any city, it is easy to recognize those which are friendly, inviting, or safe; and those where you lock your car doors when driving and you surely would not want to live. I wondered what the factors were that gave each community its character. I set out to map the demographics of King County and religious, cultural, recreational and other assets, to find viable, vibrant and interracial communities which represent healthy interdependence between members. In the process I was also able show communities at risk that could benefit from additional services.



Objectives

The main goal of this project is to locate high risk neighborhoods of King County and identify the type of community assets within the vicinity of those neighborhoods. To do this I first had to pinpoint the high-risk areas of King County based on a socio-economic index rating. I then mapped many of the positive community assets. My hypothesis was that rural areas were both economically depressed and under-served by social and health services, resulting in what I termed "communities at risk". Lastly, mapping the service areas of medical facilities and food banks would uncover communities too far away to benefit from them.



Methods

I started by building an asset layer that would reflect a healthy community. After obtaining addresses for libraries, museums, food banks, YMCAs, Boys & Girls Clubs, and churches, I brought them into ArcMap as points and added fire stations, police stations, public and private schools, farmers markets, medical facilities, parks, public health clinics and food banks, all from the King County GIS Center.

Next, I downloaded the following socio-economic block group data from the U.S. Census website: nonwhite population, child population, elderly population, school attendance, poverty, family low income, single head-of-household, housing vacancy, rent-to-income, mortgage-to-income, public transportation use, language isolation, and dropout rate. From these I created a socio-economic index which measured the ratio of each of these variables to total population, and classified them in a -2 to 2 range (2 representing a high percentage of the variable).

Using tools in ArcMap, I isolated the block groups with a total score of 8 or higher, which were theoretical areas of economic vulnerability. Adding the community asset layer to this layer resulted in a map which could be analyzed to test my hypothesis.

I performed Network Analyses to find the service areas of those food banks and medical facilities within a 5, 10, and 20 minute walk time. I added a bus route layer to show communities with bus service routes to food banks and medical facilities. My findings indicate that while all the target communities have access to food banks, the food bank in Rainier Valley is too far for most residents to walk to, and they would have to rely on bus service. The Medical Facilities are mostly clustered north of the Central area of Seattle, with bus service from all communities. Rainier Valley, SeaTac and South Park are without local clinics, and have to travel some distance for health care

Results

My initial hypothesis was proven false when the data showed that almost all of the economically vulnerable areas were in the South Seattle and South West King County region. I expected there to be pockets of low income and economic depression in greater King County, but if there are they do not show up at the block group level.

Interesting observations:

- There are 31 Boys and Girls Clubs in Seattle and West King County, many of them offering before and after school child care. Seven are in south King County, and only three of those are in target neighborhoods. Those three do not specify if they offer before or after school childcare.
- Although all target communities have parks and playgrounds, some are located in unsafe areas, and seemed abandoned.

Through this study, I have highlighted five areas of high socio-economic risk, and, by adding community assets, the abundance or lack thereof designates them as 'healthy' or 'unhealthy'. At one end of the spectrum the Central District of Seattle, whether through the work of community volunteers or gentrification, is a thriving hub of an ethnically diverse population with many community gathering facilities and social services in place. At the other end, SeaTac and South Park represent forgotten populations, of which their neighborhoods would improve with an influx of social services, programs, and guidance.

Citations

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Data projected in NAD 1093 HARN StatePlane Washington North FIPS 4601 Feet. Census data was provided courtesy of US Census Bureau, King County orthographic map courtesy of WSDOT, and shapefile data by permission of King County.

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