

6-1-2008

# Neighborhood Perception: The Effects of Population Density and Income Rate on Ones Idea of Neighborhood Size

Ryan Augustin  
ryan22@uw.edu

Follow this and additional works at: [https://digitalcommons.tacoma.uw.edu/gis\\_projects](https://digitalcommons.tacoma.uw.edu/gis_projects)

 Part of the [Urban, Community and Regional Planning Commons](#), and the [Urban Studies and Planning Commons](#)

---

## Recommended Citation

Augustin, Ryan, "Neighborhood Perception: The Effects of Population Density and Income Rate on Ones Idea of Neighborhood Size" (2008). *GIS Certificate Projects*. 1.  
[https://digitalcommons.tacoma.uw.edu/gis\\_projects/1](https://digitalcommons.tacoma.uw.edu/gis_projects/1)

This GIS Certificate Project is brought to you for free and open access by the Urban Studies at UW Tacoma Digital Commons. It has been accepted for inclusion in GIS Certificate Projects by an authorized administrator of UW Tacoma Digital Commons.

# Neighborhood Perception: The effects of population density and income rate on ones idea of neighborhood size

## Project Purpose:

The purpose of this project is to research and determine if various types of demographic data have a link to a persons perceptual size of their neighborhood. In this case study, the demographics chosen were total population as well as income rate.. There are two main ways in how neighborhood boundaries are defined.; 1) by a municipality 2) by personal beliefs of boundaries. The point of this research is to see if the surrounding conditions affect that personal belief.

**Hypothesis:**  
Population Density and Income Rate do not have an effect on the size of neighborhood perception

## Objectives:

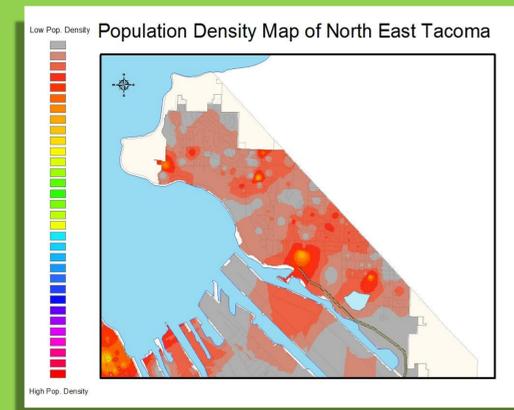
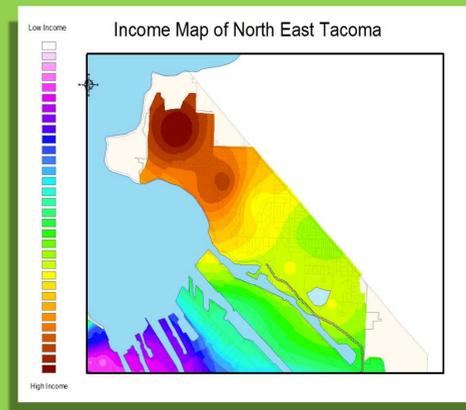
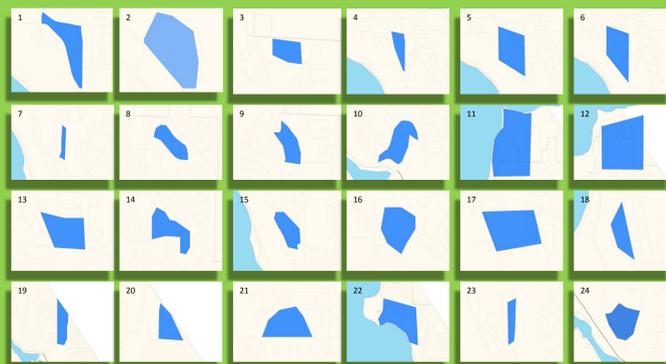
The main objective of this project was mainly to see if the demographic data of total population and income rate have an effect on the perceptual boundaries of ones neighborhood.

\*These two demographic types were picked prior to picking the geographic extent of this project.

## Results:

All of the previous steps of planning, researching, surveying/sampling, and analyzing had finally taken course. Though the data that I received is only for half of my original project plan, I was still able to see if the two demographics I picked (population density and income rate) take an effect on neighborhood perception. When it comes to the question; Does **income rate** effect ones neighborhood perceptual size? The answer to this question from the data that I collected is **yes**. Besides 2 outliers in the highest income portion of NE Tacoma, the neighborhood polygon samples that I received do seem to get smaller. The two outlier polygons that affected the overall numbers were much bigger than the others, which made the mean income for each of those polygons not as specific instead they are more generalized to their neighborhood region. To answer the question of; Does **population density** effect ones neighborhood perceptual size? The answer to this question is no. Unlike the income data analysis, the perceptual size of the neighborhood did not follow the flow of population like they did with the income data. Even though the population level is very consistent around the neighborhood, the polygons size do not differ following the population change.

## Polygons



## Methods:

### Survey Map:

#### Tools used:

- 'Clip' tool

#### Data used:

Tacoma Boundary (polygon), Firehouses (point), hospitals (point), parks (polygon), schools (polygon), Streets (line segment), King Co. boundary (polygon), Transit Network (line segment)

### Population Density Map

#### Tools used:

'clip tool'  
'feature to point'  
'select by attribute'  
'Interpolation IDW'  
manipulate symbology

#### Data used:

Total population

### Income Map:

#### Tools used:

'clip tool'  
'feature to point'  
'select by attribute'  
'Interpolation IDW'  
manipulate symbology

#### Data Used:

total income

### Polygon Digitizing:

#### Tools used:

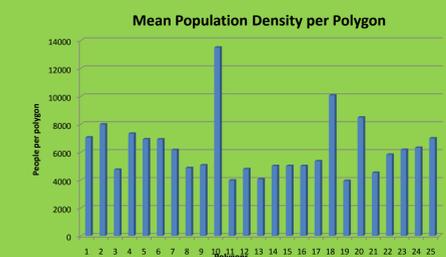
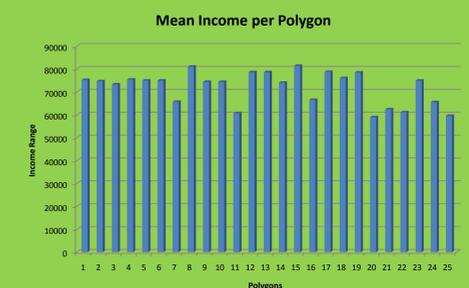
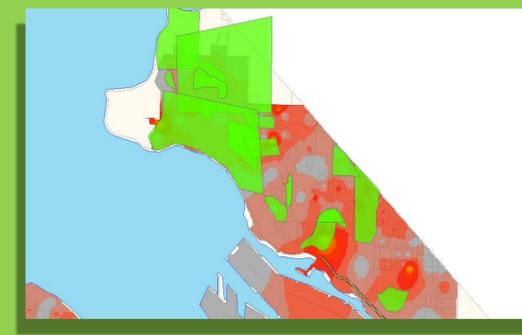
'create feature class'  
'editor' tool bar

### Data Analysis:

#### Tools used:

'Zonal Statistics as table'

## Maps with Polygons



This map research was conducted by:  
Ryan Augustin  
GIS Certificate Program  
The University of Washington-Tacoma