

EXAMINING THE DEMOGRAPHICS OF THE DOG RIVER WATERSHED

Phillip B. Whatley, Department of Earth Sciences, University of South Alabama, Mobile, AL, 36688. Email: pbw401@jaguar1.usouthal.edu. Examining the Demographics of the Dog River Watershed.

This paper takes a closer look at the demographics of the inhabitants within the Dog River Watershed's ninety square mile area. The term "environmental sociology" has been coined to describe the relationship between society and the environment. Examining the population distribution provides insight into the environmental sociology of the area and can aid in providing better outreach to residents. 2000 Census block data has been visually symbolized using ESRI's ARCGIS mapping software. Figures including population density, income levels, ethnicity, and poverty levels were mapped. Results show most of the population concentrated in the west and midtown portion of the city limits and the highest concentration outside of the limits being in the Theodore area. Mapping shows the highest concentration of African American residents to reside in the midtown area while white residents are concentrated highest in the western area of the city. The HUD low to moderate level income families are mostly concentrated north of I-10 and East of I-65. A better understanding of the people who live, work, and play in this watershed could help fuel new ideas to revitalize recreation facilities and aid in reaching out to citizens to help maintain it. The relationship between race, education and environmental activism needs to be better understood and its myths discredited to promote better understanding of environmental concern.

Keywords: Dog River Watershed, demographics, environmental sociology

Introduction

We have thoroughly examined what makes up the Dog River Watershed, but do we really know who make up the watershed? A significant portion of Mobile County residents live within this 90 square mile area and their demographic makeup is just as diverse as the wildlife that thrives here. Taking a closer look at the population demographics of the watershed could potentially lead to new methods of reaching out to the community that has such a deep impact on the quality of Dog River.

Ron Stewart of the USDA Forestry Service states that as demographics change during this century, so will most of the conservation messages and delivery processes used to convey them. Environmental education is vital in order to promote awareness. Stewart also cites the aging population of baby boomers and the upcoming Generation-X

as examples of changing recreation needs that should be addressed. A better understanding of age dispersion in the watershed could lead to the development of more-utilized recreation facilities.

Studies have found significant correlation between environmental attitudes with education, age, and residence. The term for the study of interaction between the environment and society has been coined “environmental sociology” (Dunlap 1979). The River Project of Los Angeles County undertook an extensive mapping project of population density, home ownership, ethnicity, and income in the Tujunga River Watershed in 2005. The website claims that “demographic, economic, and housing data for watershed communities at multiple geographic scales helps to achieve our goal of a comprehensive initial outreach program and ensure that a representative selection of stakeholders participates on the Watershed Management Plan committee” (Demographic Summary of the Tujunga Watershed 2005).

Research Question

How is the population distributed throughout the Dog River Watershed? Where are the most densely populated areas? Where are the areas of highest and lowest income and education levels? How does this information relate to environmental concern? How could this information be useful in raising awareness, future planning and management of the watershed?

Methods

Visualizing the information on a map aids in better understanding the distribution of the population within the watershed. I was able to input demographic information into ESRI's ARCMAP software using official data from the U.S. 2000 Census. This data is made available to the public on the City of Mobile's geodatabase website. My instructor Sam Stutsman gave me some additional internal city census data on education levels.

The city is divided into census blockgroups that are delineated based on neighborhoods, streets, and other regional features. According to the U.S. Census Bureau, the size of a blockgroup can range from 600 to 3,000 people with the optimum size being 1,500. I made graduated color maps and a dot density map in Arcmap based on the census data for these blockgroups cropped to within the watershed. The demographic parameters include Population Density (*Figure 1*), Women Over 25 with a Bachelors Degree (*Figure 2*), Men Over 25 with a Bachelors Degree (*Figure 3*), HUD Low-to-Moderate Income areas (*Figure 4*), Per Capita Income (*Figure 5*), as well as Black and White Population Distribution (*Figure 6*).

Results

Projecting the data in graduated colors reveals the distribution of the different demographics. Most of the population in the watershed is concentrated within the city limits of Mobile and the bordering western areas of the county. The areas of highest per capita income are found in the subdivisions around the Grelot / Cody Road area as well as areas north of Airport Blvd in the SpringHill area. Another blockgroup of

significantly high income lies along the western portion of Dog River itself. This area is one of significant state political influence according to Stuart Hooper's research project.

The blockgroups containing HUD subsidized housing for low and moderate income families are mostly found near the downtown and midtown areas, portions around Airport Blvd / Azalea area, and some areas around Dauphin Island Parkway.

Blockgroups with the highest concentration of white population lie in the western portion of the city limits and bordering areas as well as the Theodore/Dawes area of the county.

The blockgroups with highest concentration of black population lie in the downtown area, immediately south of Airport Blvd, and some regions in the far south portion of the county. The highest concentration of females with bachelors degrees also lies in the western portion of the city limits and bordering areas.

Discussion and Conclusions

Thorough examination of the demographic layout in the Dog River Watershed could prove to be beneficial in more effectively communicating to those living within it and in planning for its future management. The article *Demography and the Environment* touts the narrow scope of research for demographers in the environmental field and emphasizes the significant role that demographics hold relating to environmental factors (Pebley 1998). A better understanding of the people who live, work, and play in this area could help fuel new ideas to revitalize and maintain the Dog River Watershed.

The idea of an "action gap" among the races and social classes was popular in the 1980's. It was fueled by the idea of Maslow's Hierarchy of Needs (Figure 7). This proposed that humans were first immediately concerned with basic personal needs,

sustenance, and safety. Researchers tried to classify environmental concern under a leisure activity, which is found further up on the hierarchy of needs. Therefore, it was thought that concern for the environment should be low for the poorer classes of citizens (Kolmuss 2002).

New research is showing less of a correlation between income and concern. Environmental concern has been reclassified under the hierarchy of needs by many as “an issue affecting a person’s survival and well-being” (Bowler 2004). However, there is a difference between concern and taking action. It is still suggested that in order to take environmental action, resources must be made available. Thus, higher wealth makes environmental concern more likely. Another factor suggesting greater environmental concern is gender and education. Highly educated females are more likely to be concerned, but higher education in general is also a factor.

Using these findings, areas of higher income and education levels could be tapped into for financial assistance in maintaining the watershed. Political lobbying by influential citizens could prove effective in getting more funds and better environmental policies implemented at a state or local level. An area downtown with lower education levels and high density could be selected as a site for a watershed education center. In addition, grassroots social movements such as those of church, community centers, subdivision committees, and other organizations could be tapped into to help promote awareness. Eventually enough funding could be collected to purchase advertising space on local billboards or television channels. By comparing the surveyed data of the population characteristics of the Dog River watershed with results of these findings, the inhabitants of the watershed can be reached out to in new and innovative ways.

Figures and Tables

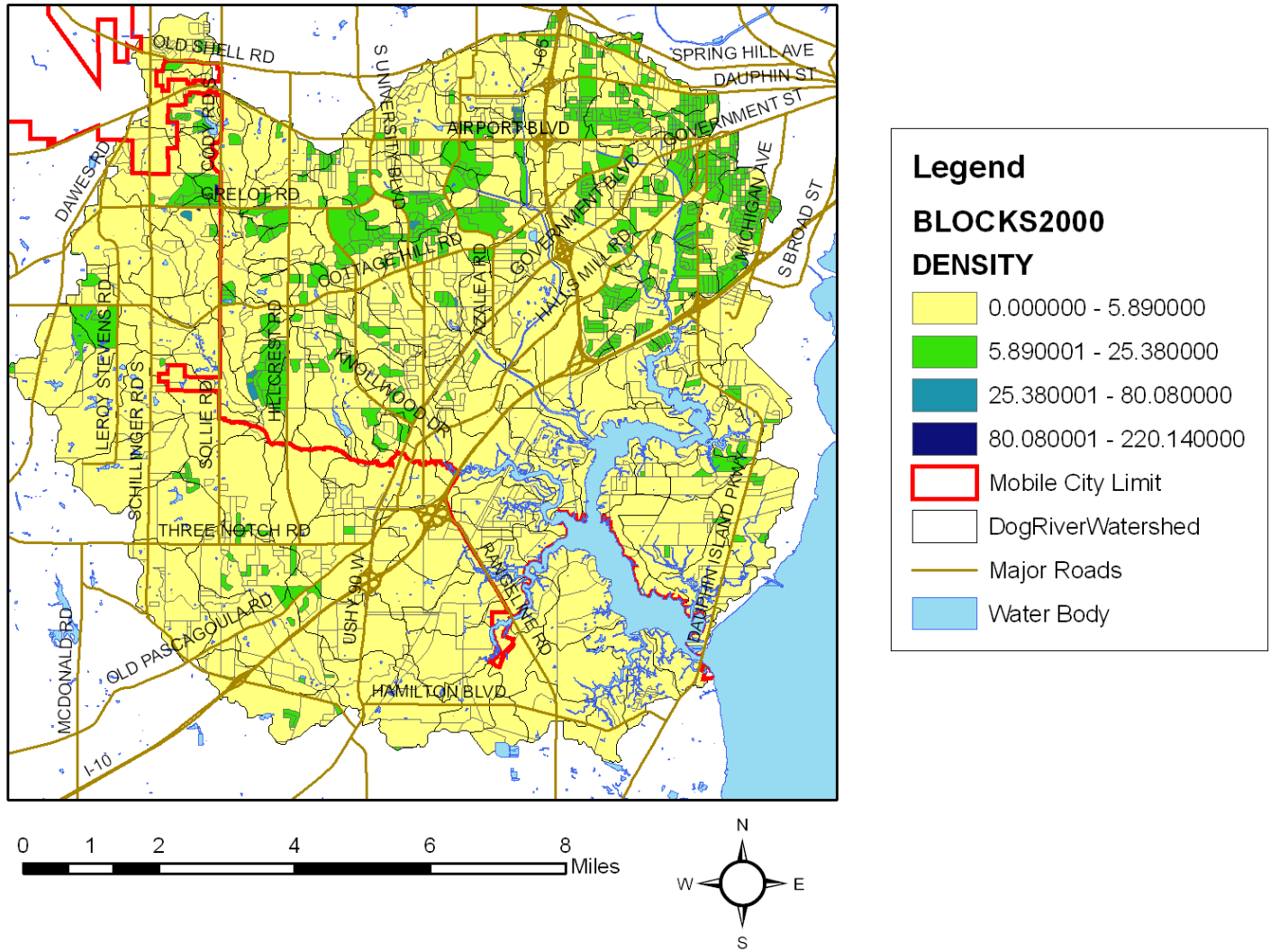


Figure 1, Population Density

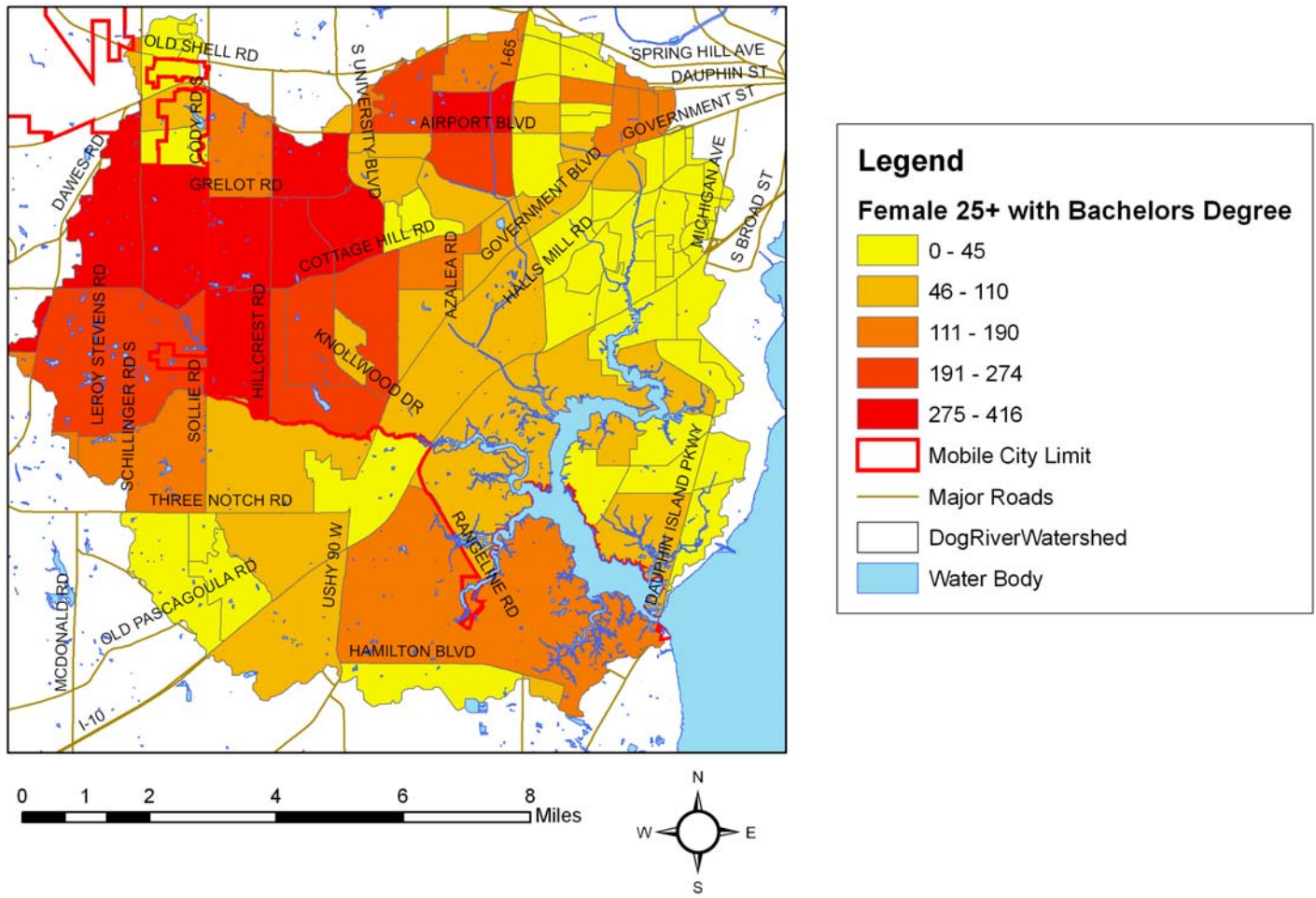


Figure 2, Females 25+ with Bachelors Degree

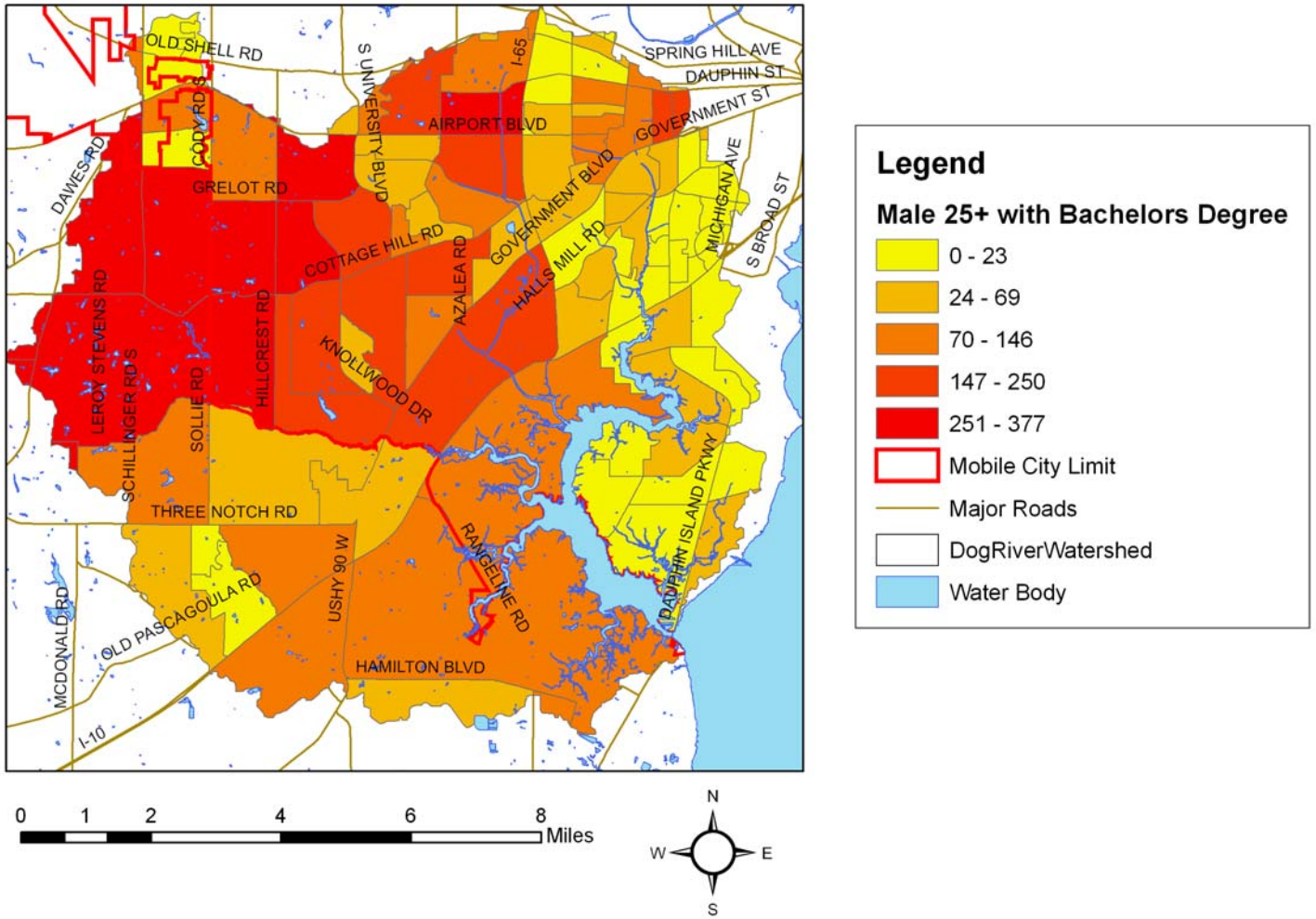


Figure 3, Males 25+ with Bachelor's Degree

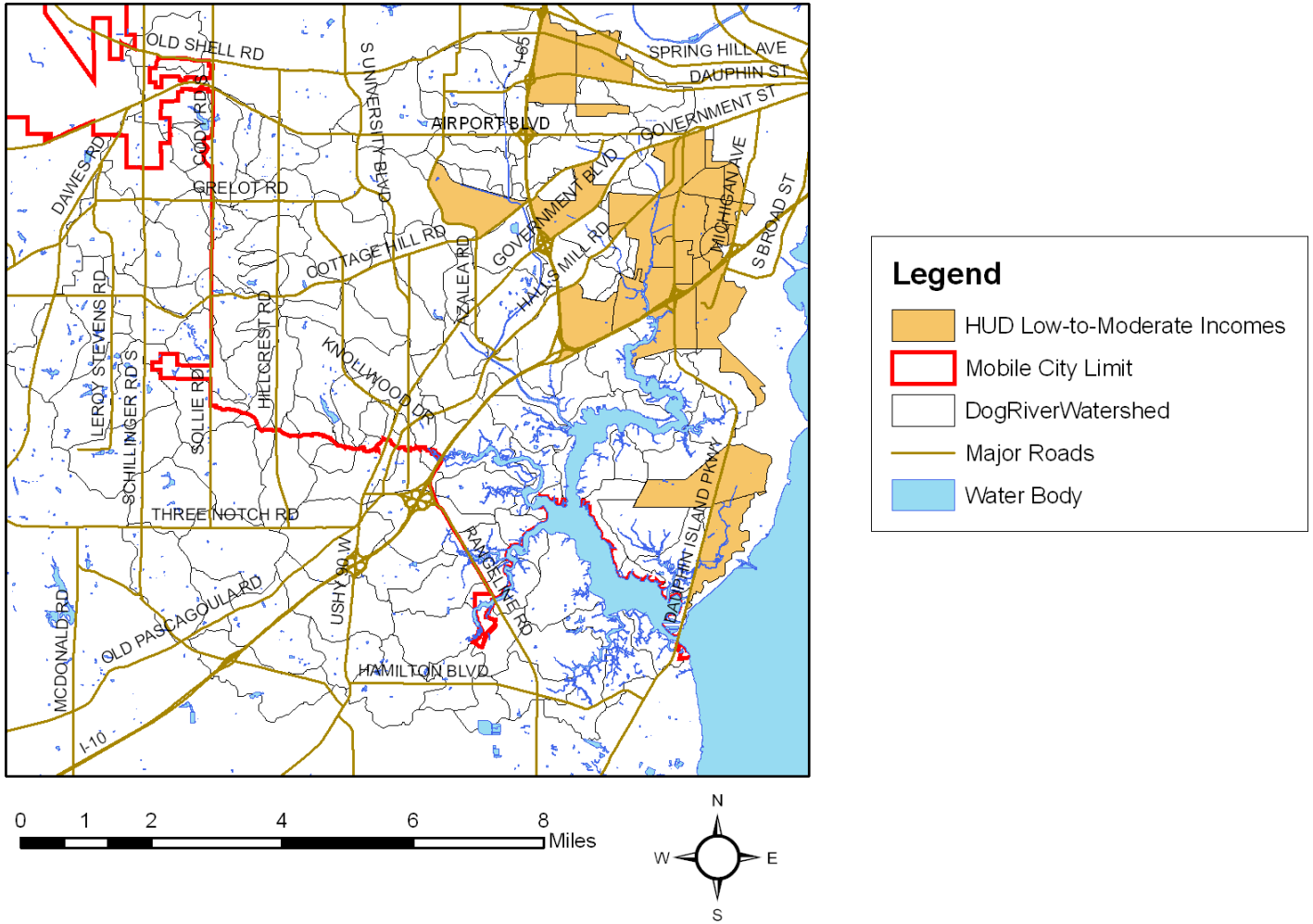


Figure 4, HUD Low-to-Moderate Income Areas

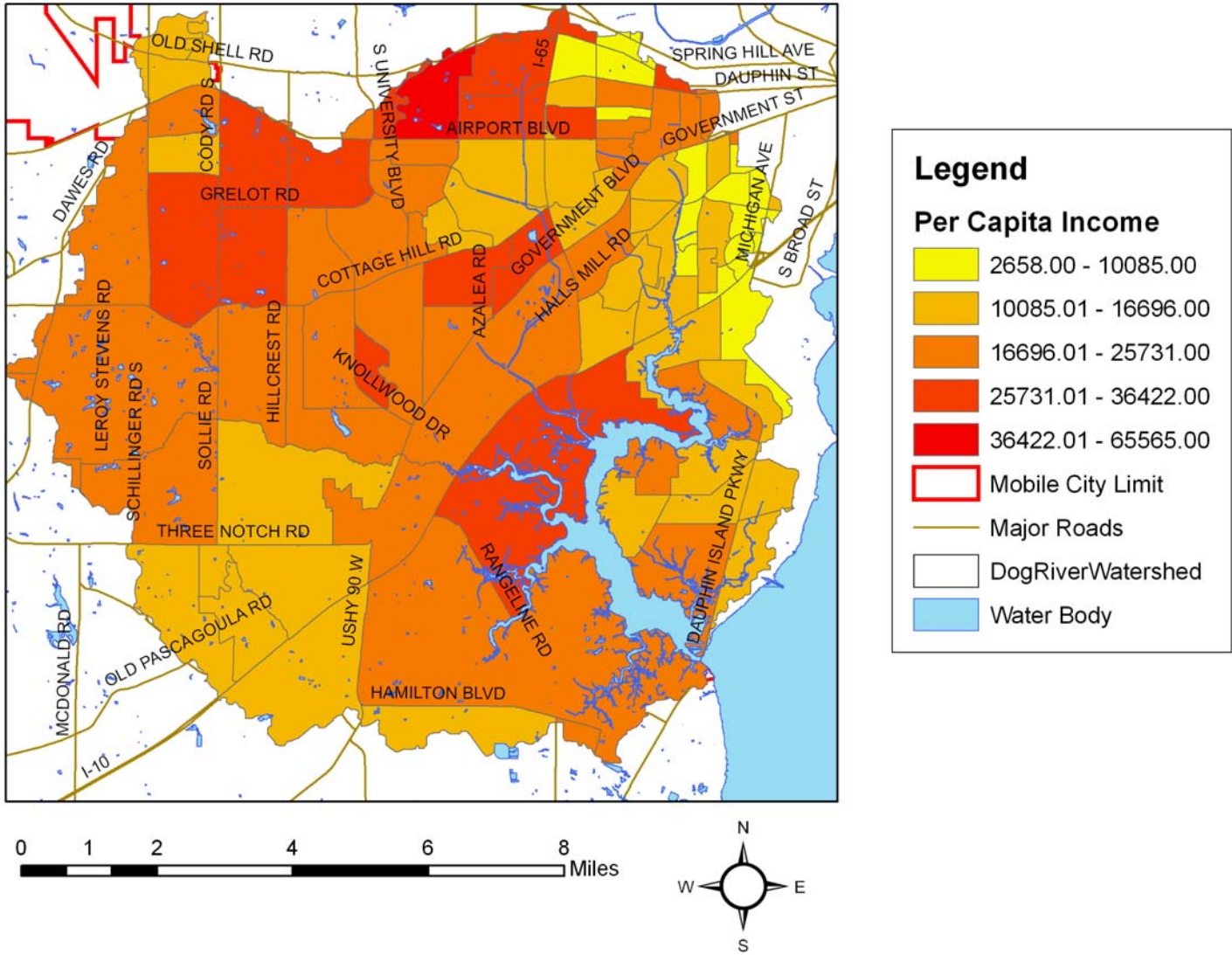


Figure 5, Per Capita Income

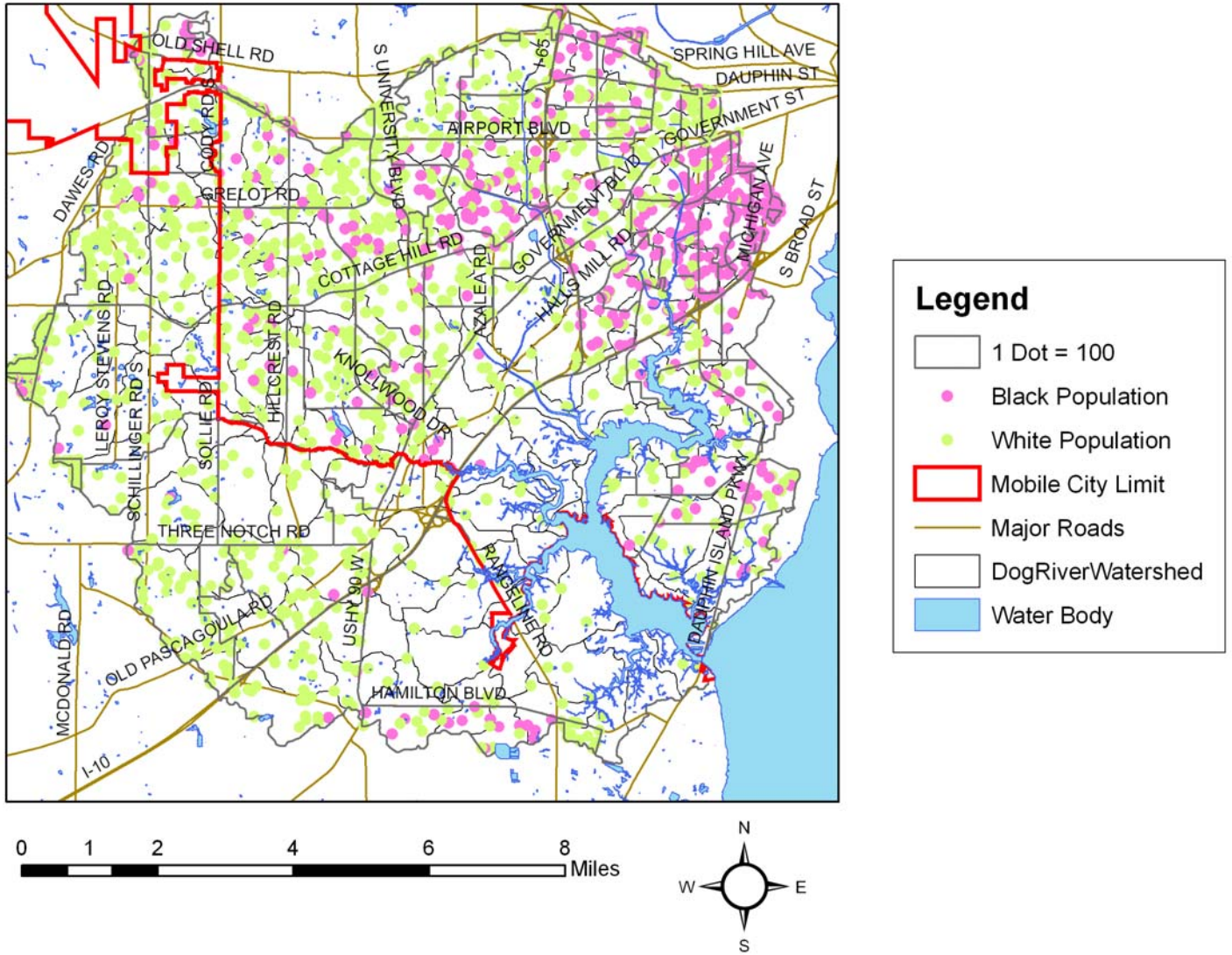


Figure 6, Black and White Population

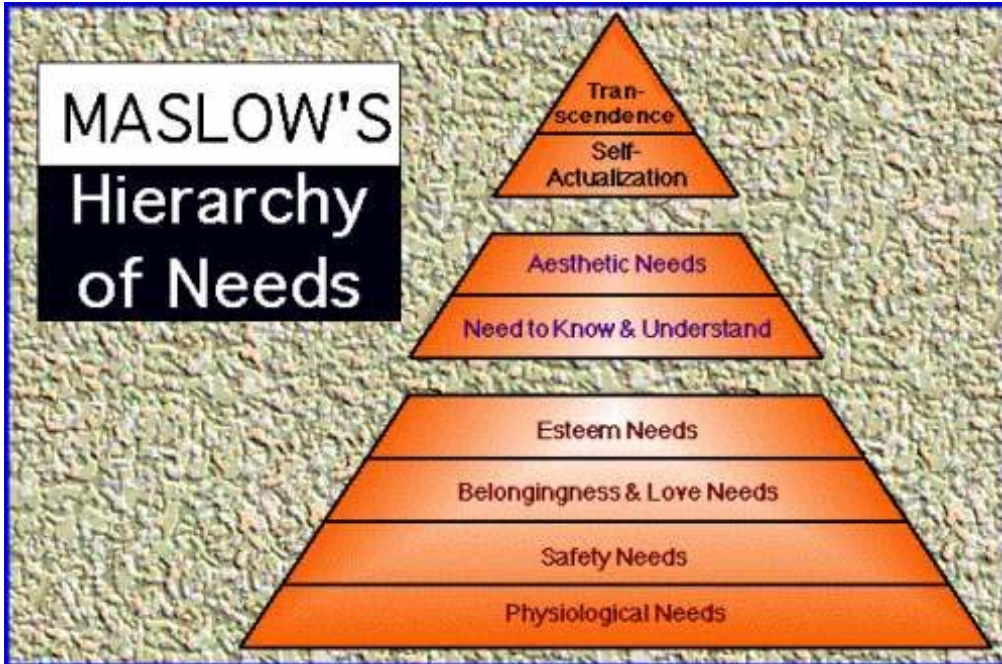


Figure 7, Maslow's Hierarchy of Needs

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