Pasco Park Equity Analysis

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Introduction

With a population of over 70,000 Pasco has continued to grow and develop, leaving city planners tasked with maintaining and improving public health through park access. The scope of this project is to find areas that are in need of parks and locations where parks are feasible to construct.

Methodology

In order to create a valid representation of park equity, we first created an index comprised of five factors from data collected by the American Community Survey. These factors are intended to represent vulnerable groups such as young and old populations, heavily populated areas, areas of low income, and areas that lack car access. The resulting index depicted census blocks on a scale of park need, ranging from very low to very high. In order to incorporate distance from parks as a negative factor we utilized the Network Analyst tool in ArcMap, and weighted individual city parcels based on their distance from the nearest park. Factoring these data into our ACS need index, we could now access areas where parks could potentially be constructed. To do this, we intersected areas with a need level of “High” or “Very High” need with landcover polygons that filtered out developed land as well as land being used for agriculture.

Findings

Based on our analysis, we have identified optimal regions for the city of Pasco to implement new parks based on in need feasible regions that overlap land already owned by the city. These regions are fairly stratified throughout the city, but largely include areas in the southeast and west sides of the city. Conversely, our analysis has shown that there are areas in the central south and north of the city that are currently being well served in regards to park access.

References

Boone, C., Buckley, G., Grove, J., & Sister, C. (2009). Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland. *Annals of the Association of American Geographers, 99*(4), 767-787.

U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Tables B01003, B01001, B02001, B19001, B25003; using American FactFinder; <http://factfinder.census.gov>; (1 May 2019).

Xingyou Zhang, Hua Lu, & Holt, J. B. (2011). Modeling spatial accessibility to parks: a national study. *International Journal of Health Geographics*, *10*(1), 31–44. https://doi-org.offcampus.lib.washington.edu/10.1186/1476-072X-10-31