## Geomark *Insights*

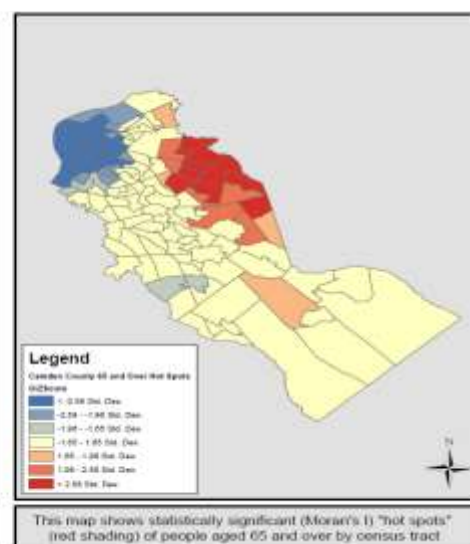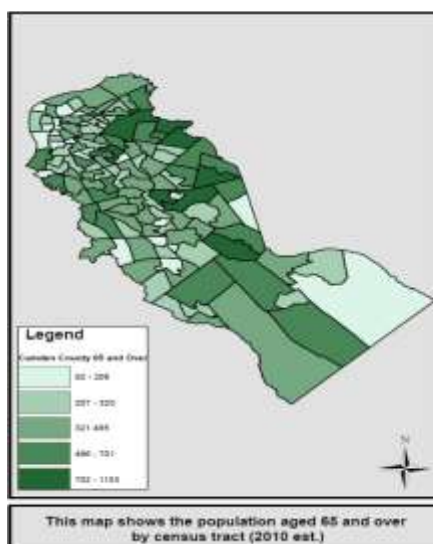### Utliizing Spatial Data in Municipal Planning

Using the power of maps within a Geographic Information System (GIS) to visualize planning data, municipalities can see spatial relationships between firms and their competitors and between their locations and the communities they serve. Combining spatial data with non-spatial data can allow a deep dive into demographics and life-style sectors to better understand the consumer segments they serve. In addition, as communities grow, it becomes essential to be able to model transportation and mobility networks to better understand where services are needed.
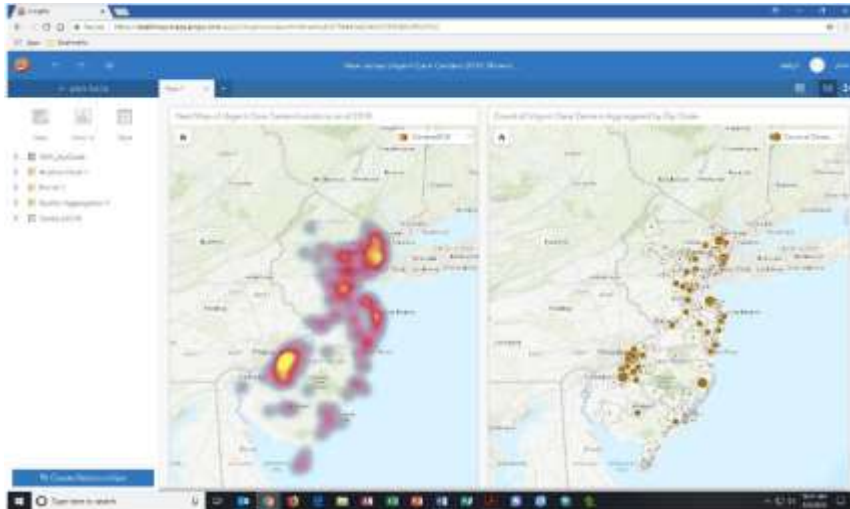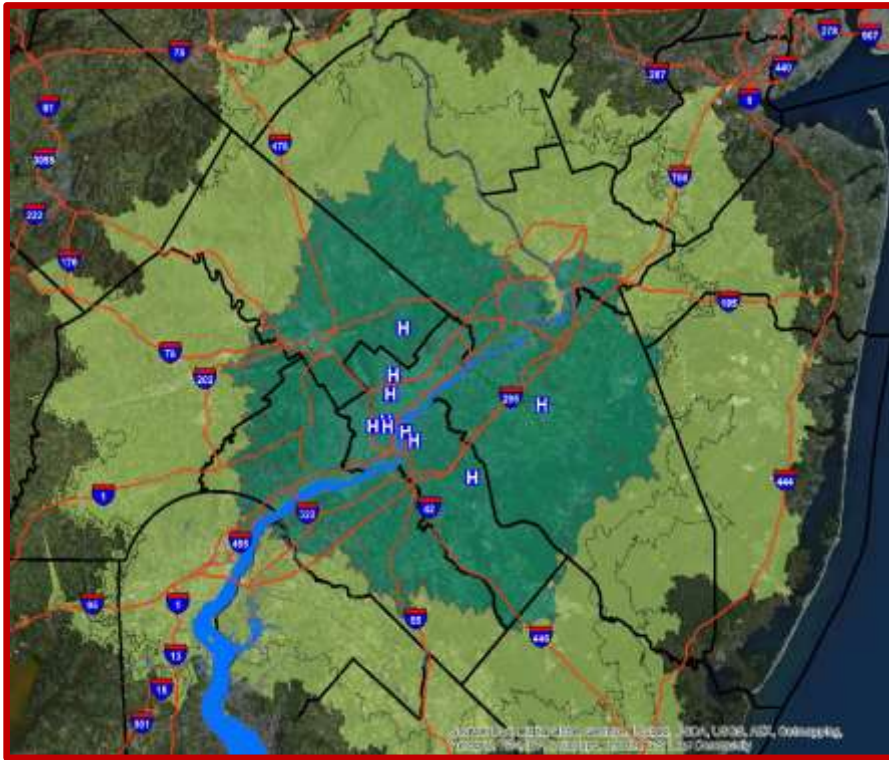

This image shows a heat map (left) of urgent care centers in New Jersey and the locations of the centers (right) aggregated at the zip code level. The aggregated data can then be used to perform demographic profiles as well as life-style segmentation analysis.

Hot Spot Analysis

Hot Spot Analysis is often used to begin the process of determining optimal sites for a new store location based on a particular demographic variable. It can also be used to understand the distribution of a particular demographic population within census tracts, for example.


This map shows the population aged 65 and over by census tract (2010 est.)

This map shows statistically significant (Moran's I) "hot spots" (red shading) of people aged 65 and over by census tract

This map shows 30- and 60-minute drive-times around several hospitals in New Jersey and Pennsylvania. Access for emergent and non-emergent care is an important issue for patient care within municipalities.
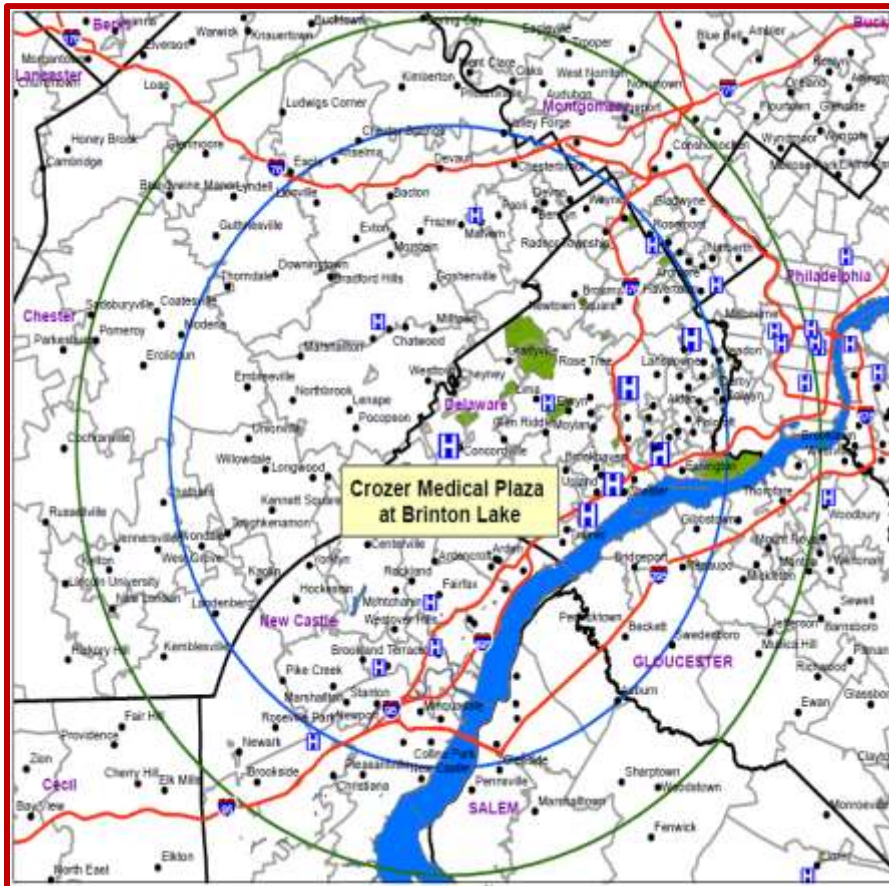
Having an understanding of service area by some level of geography is important for strategic planning. Understanding which towns are included in the service area can help municipal planners better meet their constituents needs.

A powerful aspect of geospatial analysis is the ability to show variables as layers. This is especially important to understanding the location of assets and the Social Determinants of Health (SDoH) of a municipality's constituents.
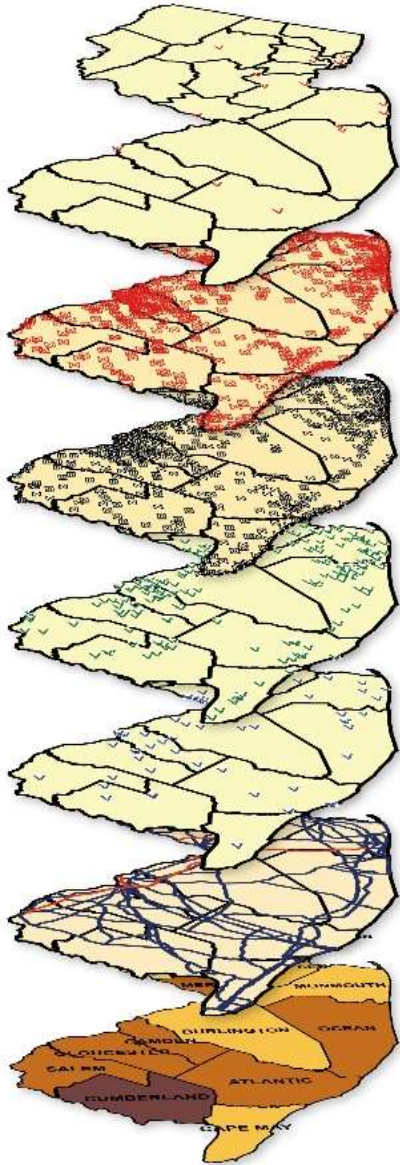
Location of potential neighborhood hazards

Availability of Police, Fire, EMS Stations

**Availability of Economic, Educational and Job Opportunities**

**Availability of hospitals and clinics**

Availability of Green spaces and recreational locations

Transportation networks

Social variables (poverty level, per capita income, educational attainment, etc.)

Tourism is an important industry in New Jersey. Understanding where tourists visit and how much they spend is an important consideration for municipalities. Additional variables might include tax receipts, employment, and how much is spent on transportation, lodging and food and beverage. (Data Source: Tourism Economics)
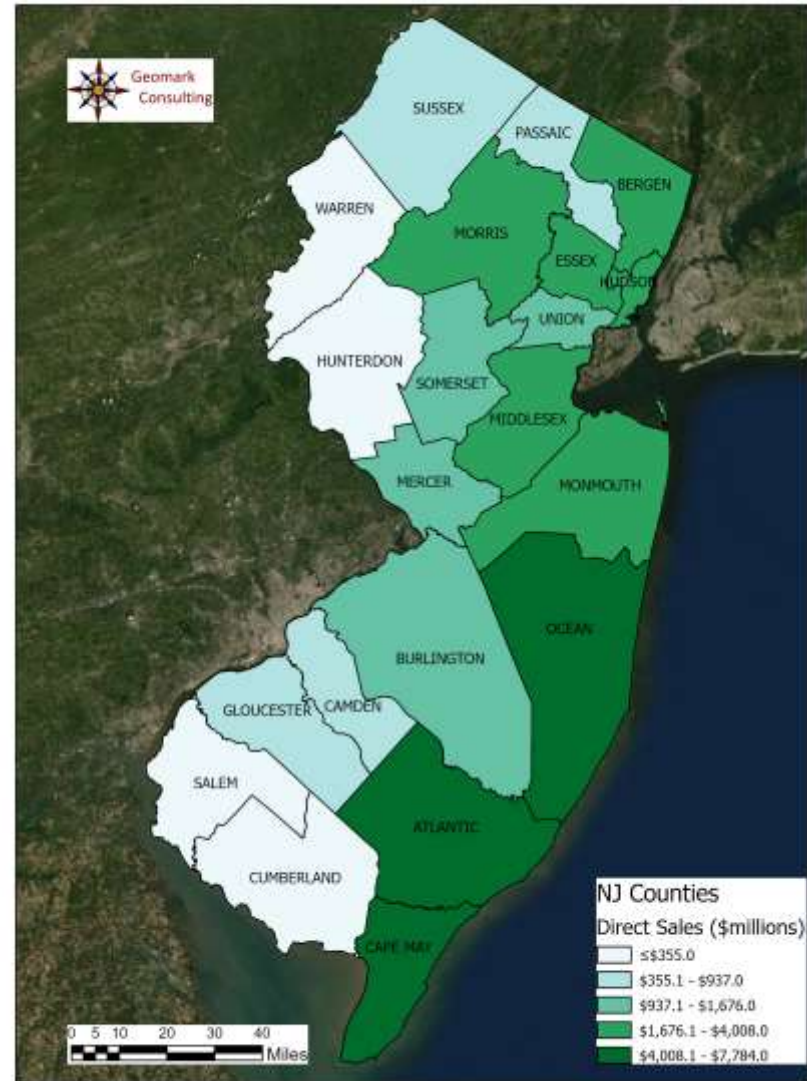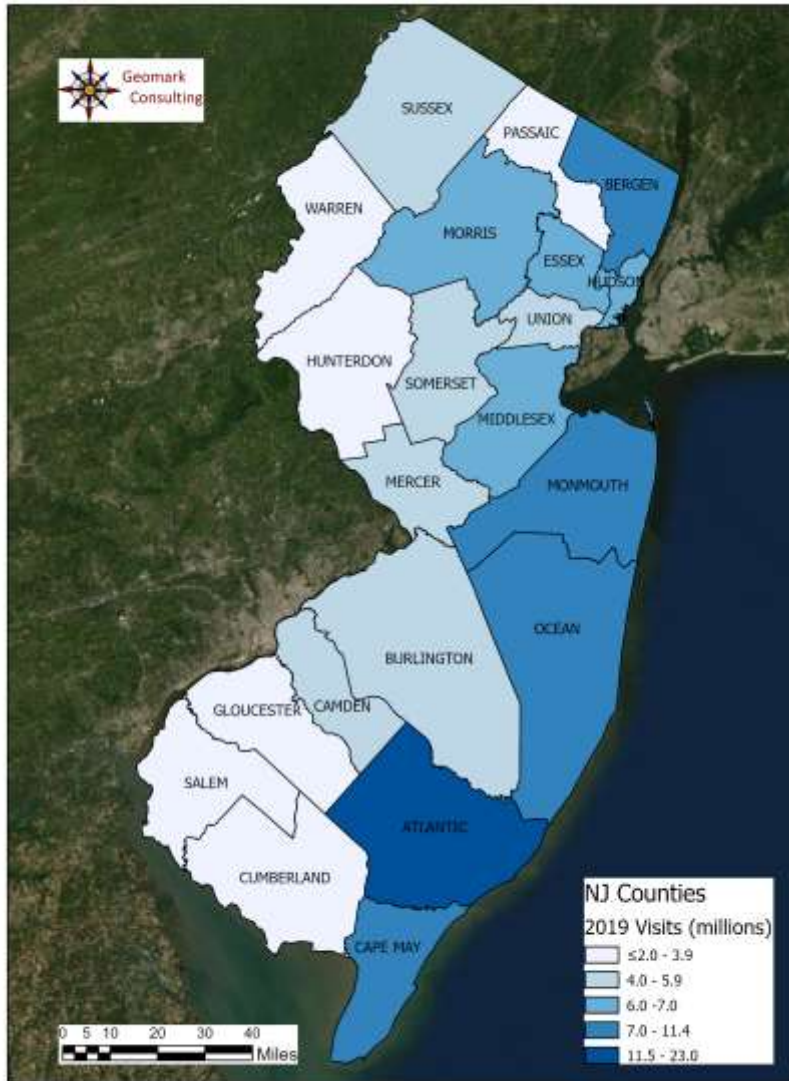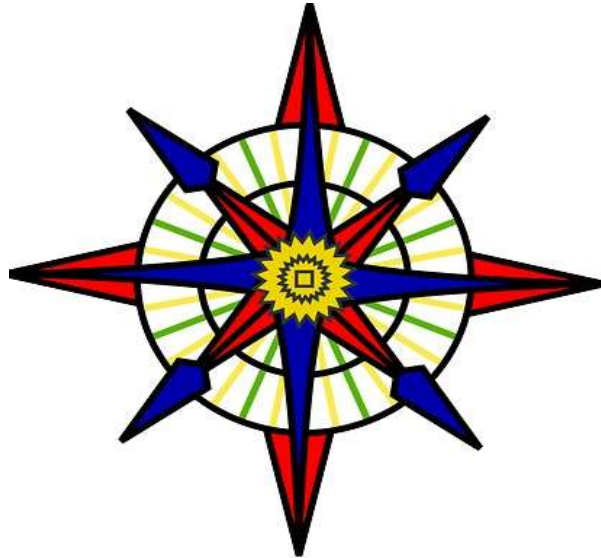
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