Regional Overview:
The Genesee-Finger Lakes Region is comprised of nine counties in upstate New York bordered by Lake Ontario and several Finger Lakes. The metropolitan center of the region, Rochester, has been shrinking in population since the 1950s. From 1950 to 2000, the City of Rochester shrank by 34% while the region grew by 27% from 1960 to 2000. As evidenced by these figures, much of the population left the high-density center city in exchange for newly developed low-density suburban and exurban tracts. Sprawl has caused various negative consequences to the region’s social and physical health. It has encouraged racial and class segregation, overdependence on cars, and the destruction of open space to name a few. Although the effects of sprawl are easily sensed, they are not easy measured or quantified. The literature on this topic supports the notion that the presence or absence of sprawl in a growing region cannot be confirmed by one growth characteristic, but requires the temporal intersection of various growth characteristics.

Moving out of the City:
Map 1 illustrates the percent change in population from 1970 to 2000 for the four counties in the region that had census tract data for the entire study period. Although the region was steadily growing during this 30-year period, several tracts lost population—decline within the City of Rochester is consistent and evident. Several village and town centers also lost population, while the surrounding exurban and second-tier suburbs gained significant populations. The data for this map was generated by joining results from the 2010 American Community Survey and Census TIGER (Topologically Integrated Geographic Encoding and Referencing) data for the census tracts in the 9-county region.

Fragmentation of Land Uses – Fragmentation of Social and Physical Landscapes
Map 3 illustrates the interaction of these three principal land uses. Low levels of fragmentation are indicated by areas on the map that have only one land use in the surrounding area—this could be a completely urban environment with no undeveloped land or it could be a completely forested area of land with no nearby development. As evidenced by the map, the vast majority of the region is highly fragmented, meaning that all three land uses are interacting. In this region, it most likely means that low-density residential development is infringing on agricultural land. Future fragmentation studies of regions with varying land use and growth patterns will elucidate the severity of the land use fragmentation of this region.

Conclusion:
Independently, these maps cannot definitively prove sprawl in the Genesee-Finger Lakes Region. Analyzed as a whole, however, they illustrate that the region’s population has left the high-density city for low-density suburbs and exurbs. Much of this newer development is located on former agricultural land and follows along major roadways. The method of visualizing fragmentation of land uses in a region will become more elucidating once the same techniques are applied to other regions with different growth patterns so that these various regions can be analyzed concurrently.