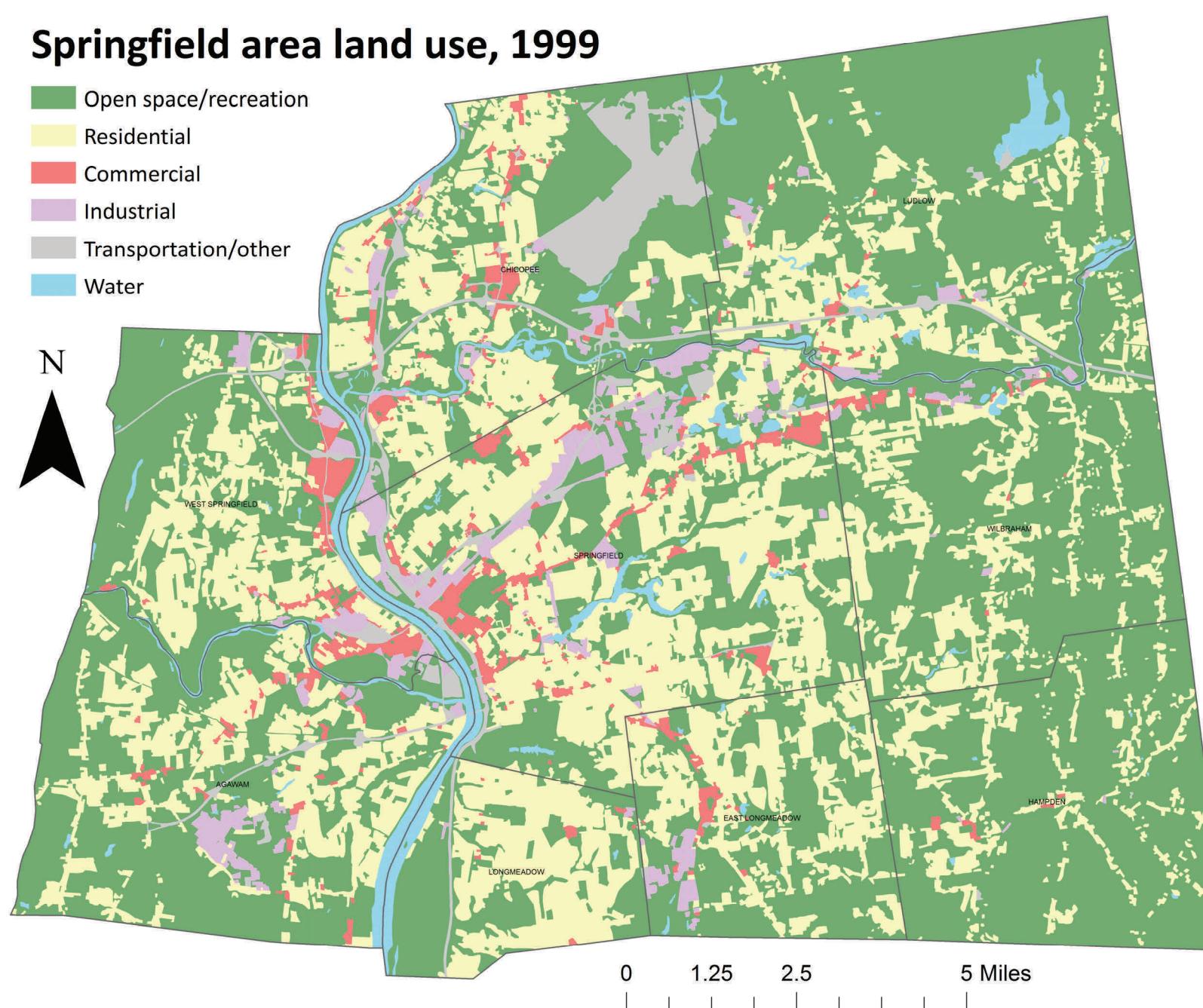
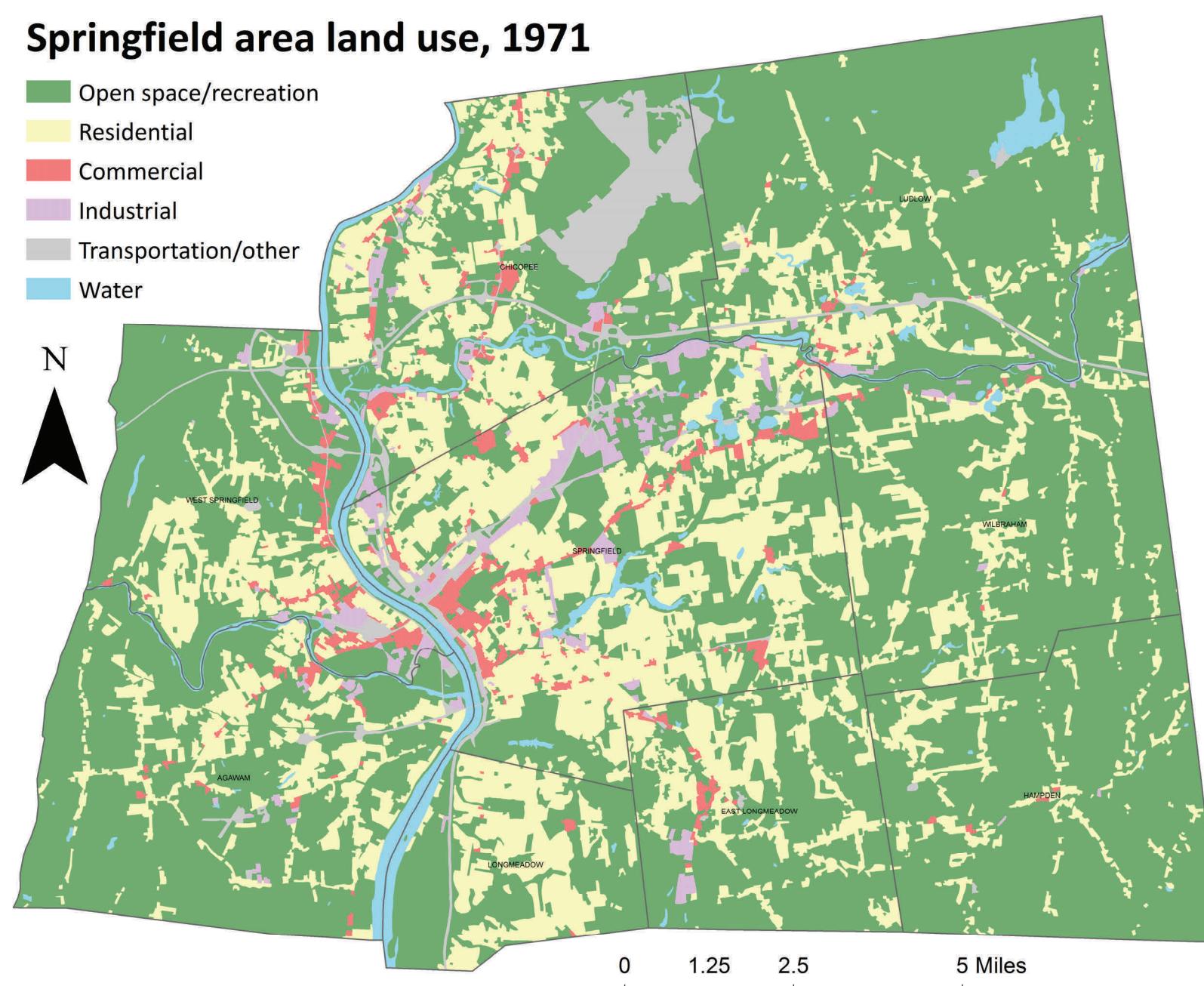


Visualizing Population Change around Springfield, Massachusetts

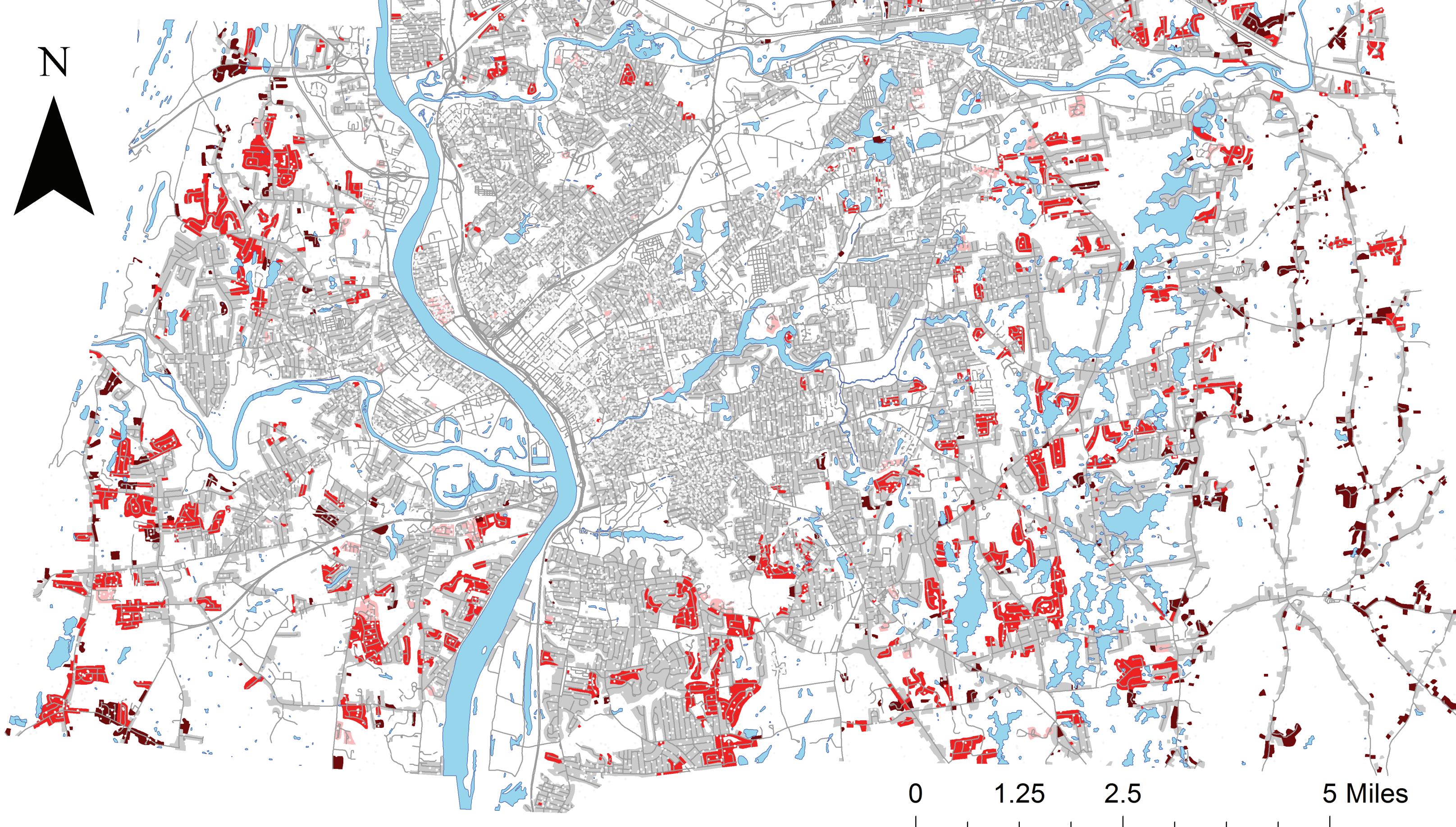
The city of Springfield, Massachusetts, like many small and mid-sized former industrial cities across much of the United States, has experienced a significant population loss since the middle of the 20th century. At the 1960 decennial Census, Springfield's population exceeded 174,000. In 2010, the city's population stood at just over 153,000, a decline of nearly 14 percent.

Two forces are typically invoked to explain industrial cities' decline: deindustrialization and suburbanization. This analysis is concerned with the latter. Specifically, how has population shifted in the Springfield area in the last six decades?



New residential development, 1971 to 1999

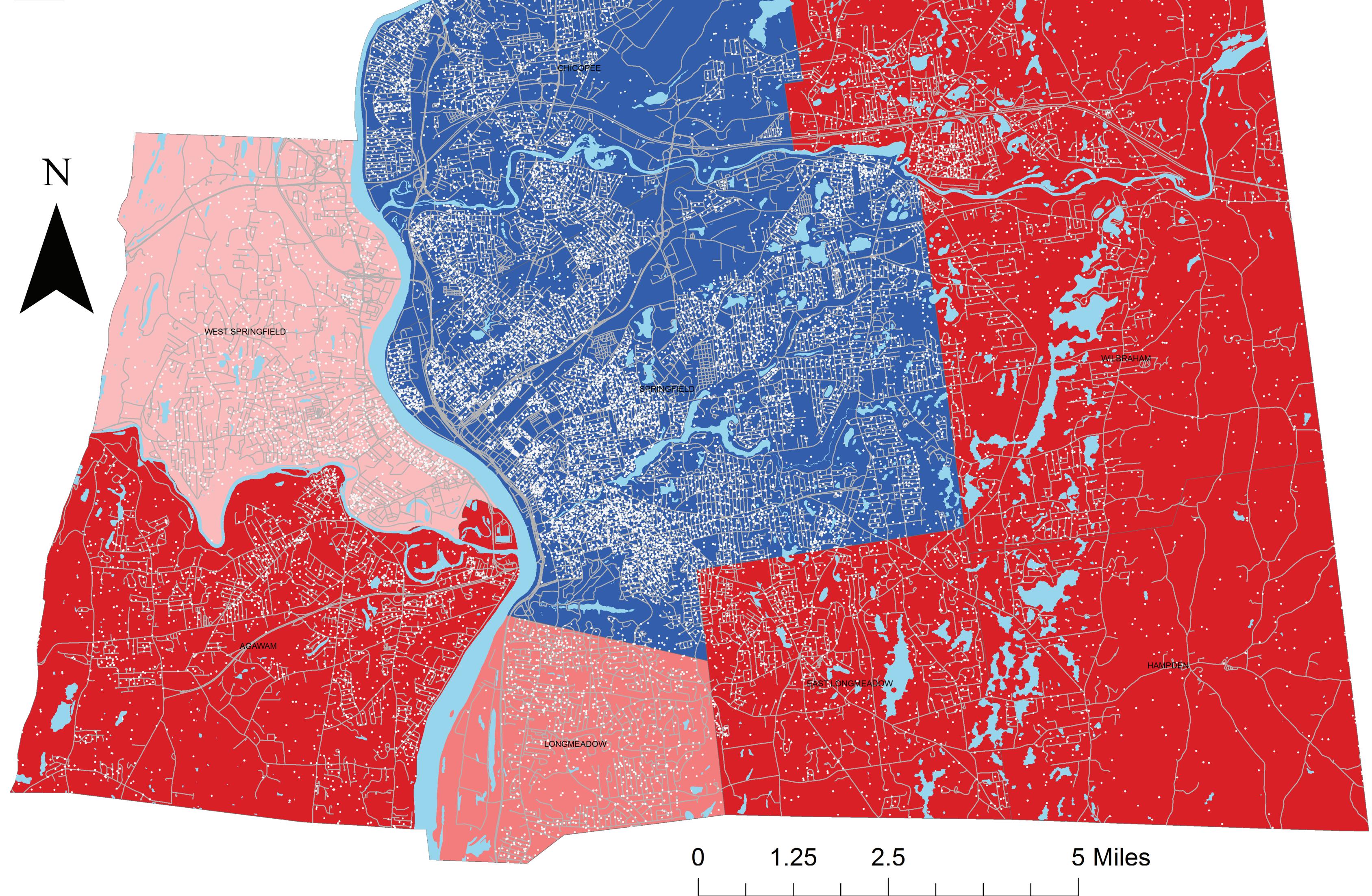
- Multifamily
- Lot size between 0.25 and 0.5 acre
- Lot size greater than 0.5 acre



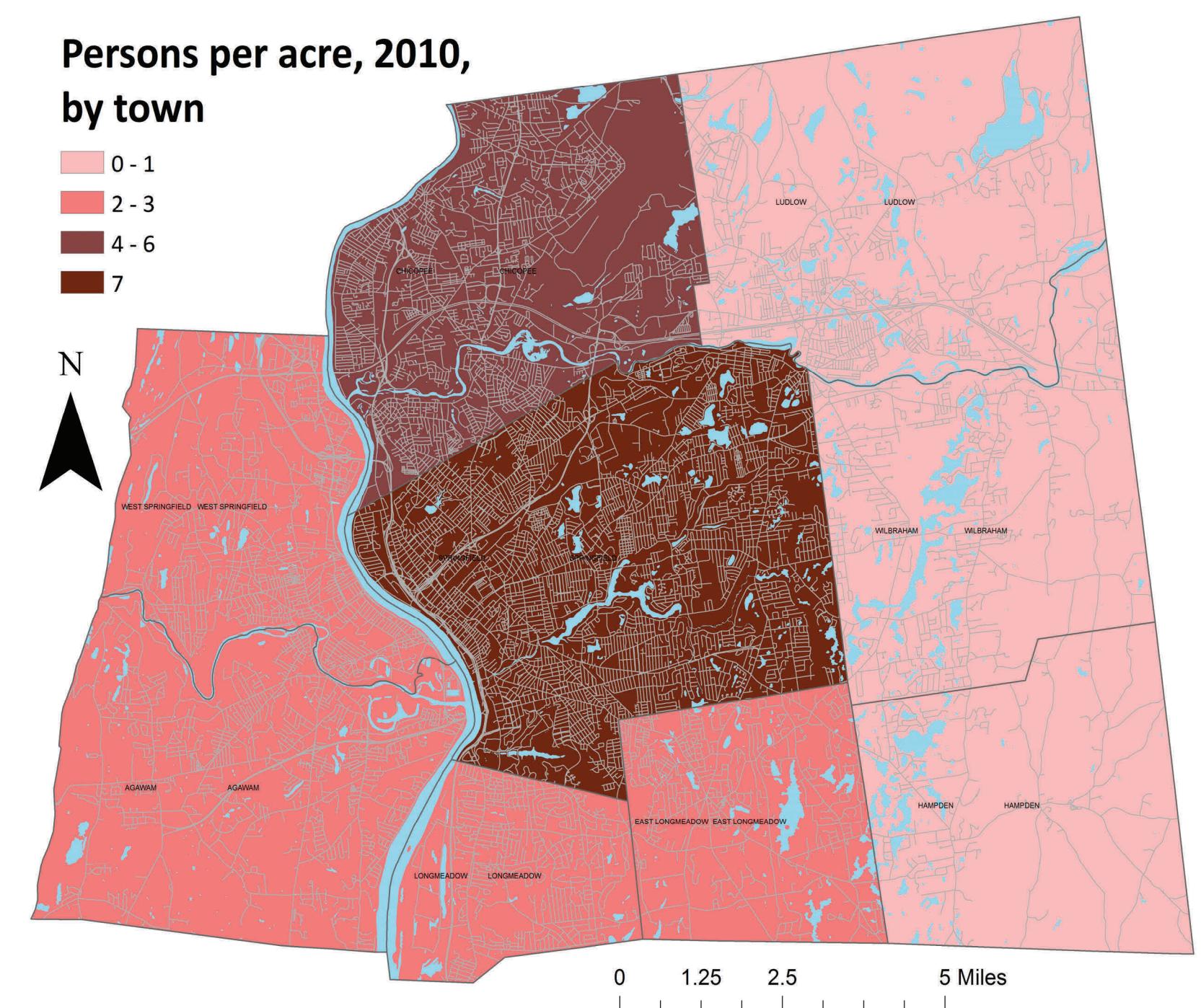
Growth in population, 1960 to 2010

with dot density overlay; each white dot = 20 persons

- Population decline
- Up to 20% growth
- 20% to 50% growth
- 50% growth and above



Rather than explore the entire Springfield metro area, this analysis examines just Springfield and the eight cities and towns contiguous to it: Agawam, Chicopee, East Longmeadow, Hampden, Longmeadow, Ludlow, West Springfield, and Wilbraham. It assesses these communities in two ways: First, by analyzing changes in residential land use over time, and second, by analyzing changes in population over time. The two maps at left show overall land use in 1971 and 1999, years for which comparable data are available. The changes may not look significant here. But the large map below shows new residential development between 1971 and 1999. Springfield occupies the center of the map; it saw little new residential development...



... Yet the ring of red around the city shows that thousands of acres of low-density residential development occurred in the towns surrounding Springfield.

The large map above shows population change in each of the nine cities and towns between 1960 and 2010. As you can see, both Springfield and its northern neighbor, Chicopee, lost population. All of the surrounding towns gained population. Overlaid on this map is a dot density analysis. Using data at the Census block level, each dot represents 20 people as of 2010. It shows clearly that as density decreases, population growth rates increase. Using Census blocks, rather than tracts, provides a finer-grained view of the distribution of population.

The small map above provides another — albeit cruder — way to visualize population density. It simply divides the number of people in each community by the number of acres in the community to produce each community's uniform density (persons per acre). Of course, this is a significant oversimplification. Take Chicopee, for example: The city's west side is relatively densely settled, but there are few people on the city's east side, because an airport occupies much of the area. The dot density analysis at the block level overcomes this limitation to provide a truer sense of the area's population density.

Springfield is clearly a victim of suburbanization. Population losses in the city moderated after 1980. Still, reversing the suburbanization trend will likely be crucial to the city's future well-being.

Tom Kiley, December 2012

Tufts University, Department of Urban and Environmental Policy & Planning

Data Sources: Massachusetts Office of Geographic Information (MassGIS) and U.S. Bureau of the Census