

Population Growth and Land-Use Change

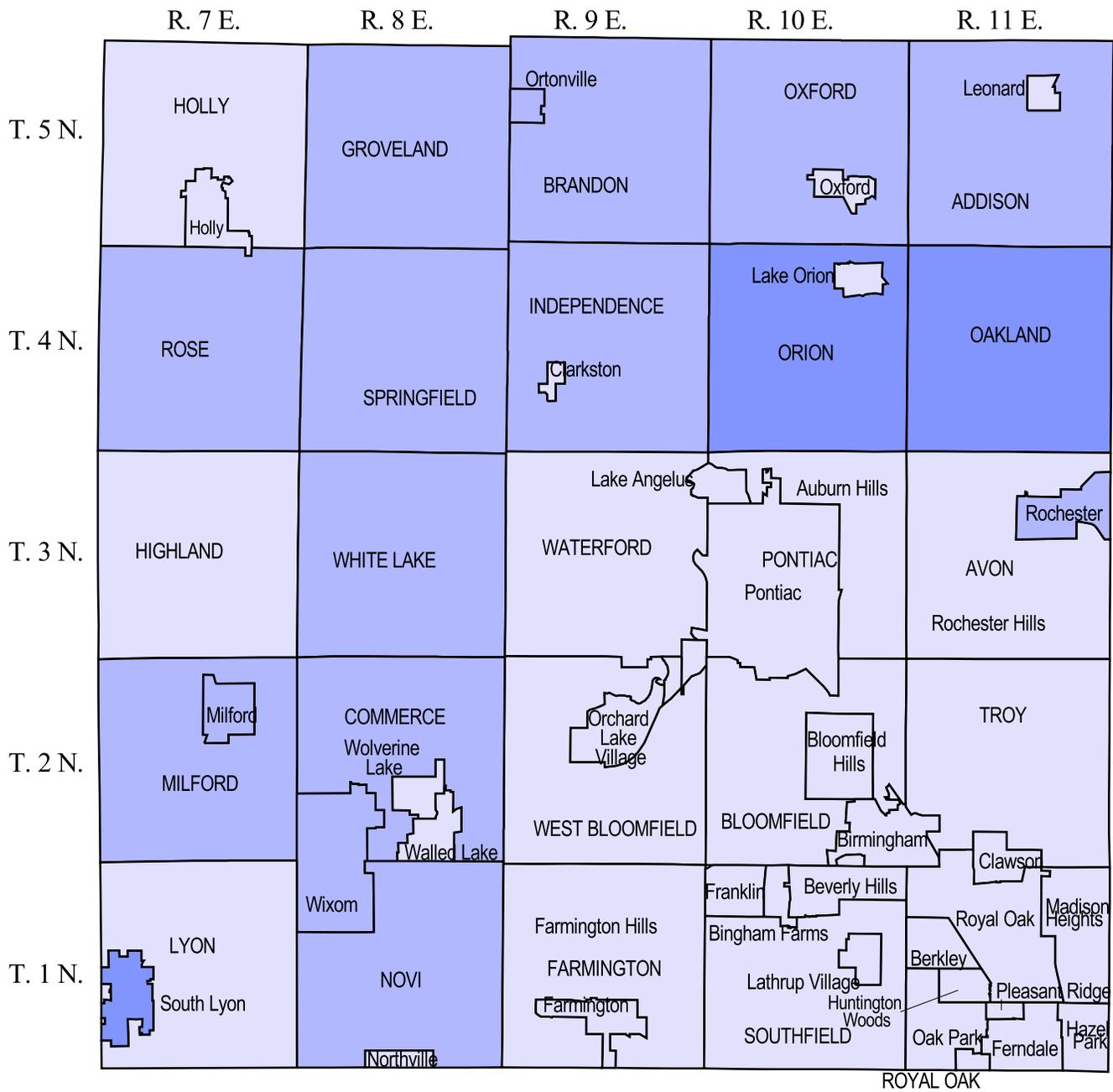
Oakland County has grown dramatically in the last several decades. The Southeast Michigan Council of Governments (SEMCOG) provides estimates of actual population based on information from county and local governments to supplement Census data. The population has increased from about 700,000 in 1960 to nearly 1.2 million in 1998. The rate of population growth has been relatively consistent, with the population increasing by more than 100,000 people per decade. Population growth has not been spatially uniform (fig. 1). Population growth between 1990 and 1998 has exceeded 60 percent in some municipalities, and has exceeded 20 percent in 18 of 58 minor civil divisions (Southeast Michigan Council of Governments, 1999).

The expansion of residential areas resulting from the increase in population has resulted in marked changes in land use. A comparison of land-use data compiled by the Michigan Department of Natural Resources (1978) and SEMCOG data compiled in 1995 indicates an increase in urban land use, primarily residential, accompanied by decreases in agricultural land, pasture land, and forest land (table 1). While some of these differences may be because of differences in the methods of compilation between agencies (specifically identification of wetlands in the 'Other' category), the trend is toward increasing allocation of land for urban use, with decreasing allocation for agriculture, forest, and pasture.

Table 1. Land use in Oakland County as a percentage of total county area, 1978 and 1995

Land use	1995 (percent)	1978 (percent)
Urban	48.7	39.3
Agriculture	11.7	15.0
Pasture	16.2	21.3
Forest	8.4	13.7
Other	15.0	10.7

The effects of human activities on water resources, whether ground water or surface water, are complex (Winter and others, 1998). The increased proportion of the county devoted to urban and residential land uses is accompanied by more wells that extract water, more impervious surfaces that block or redirect recharge, and more storm drains that divert precipitation into streams instead of aquifers. Over time, this can alter the availability and quality of hydrologic resources, both ground water and surface water, in Oakland County. Modifications in land use may also affect the proportions of ground water and surface runoff in rivers and streams, which can affect the chemistry, temperature, and general quality of the water for wildlife and for recreation. The need to better understand how the increased use of water for agriculture, recreation, and residential household uses affects ground-water and surface-water resources will surely increase as development intensifies (Winter and others, 1998).



Source:
Population data provided by Southeast Michigan Council of Governments (1999).

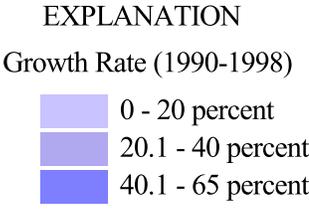
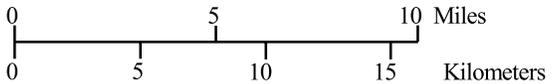


Figure 1. Rate of population growth in Oakland County, Michigan, from 1990 through 1998.