

Ground-Water Resources

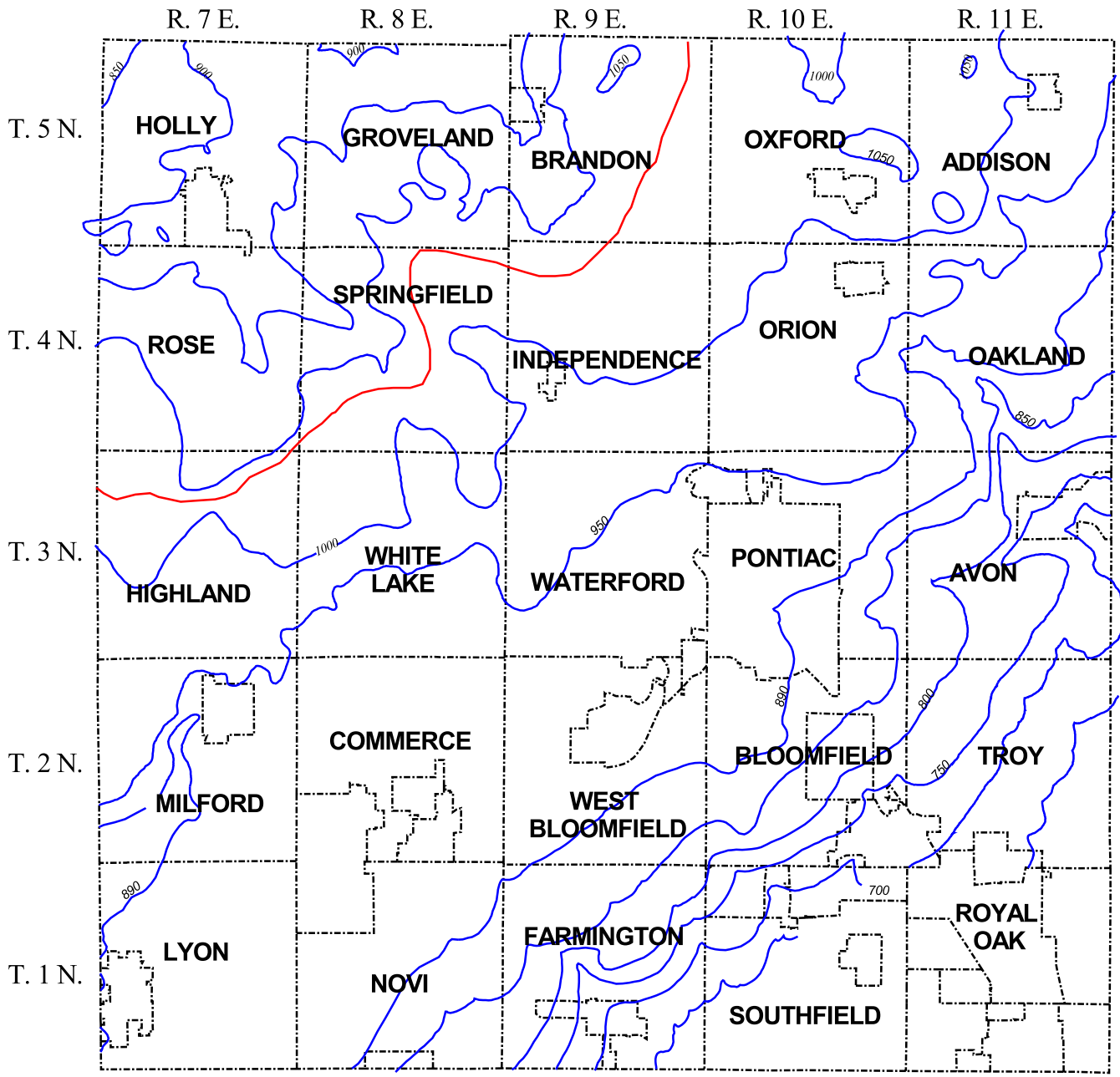
The CAER developed a map of ground-water levels in Oakland County (fig. 6), derived from the elevations of rivers and lakes and the elevations of ground water in the glacial aquifer. Ground-water elevations were obtained from drillers' logs and Oakland County's WELLKEY database. Because the drillers' logs were collected over a period of several decades, the derived surface represents an approximation over time, rather than a specific time.

In general, the configuration of the water table is a subdued version of the landscape topography. Accordingly, the water-level map developed by the CAER shows a region of higher water levels along the northern edge of the outwash plain region, corresponding to the part of Oakland County where the land surface is highest. The high region in the water table surface forms a ground-water-flow divide. Northwest of this divide, ground water generally flows towards Saginaw Bay. Southeast of this divide, ground water generally flows toward Lake Erie and Lake St. Clair.

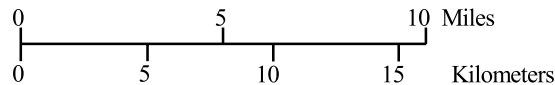
This map represents the water levels in the glacial aquifer only. Evaluation of Oakland County's WELLKEY database indicates more than 97 percent (8,458 of 8,654) of the wells in the database are completed in the glacial aquifer. Several examples of confined aquifers and artesian wells have been noted by authors in the past (Mozola, 1954; Leverett and others, 1906). In these regions, water within these confined systems may be under pressure, and would rise to a different level than the level portrayed in figure 6.



Domestic wells like this one provide drinking water to more than 233,000 Oakland County residents.



Source:
Elevation contours and flow divide produced
by the Center for Applied Environmental
Research at the University of Michigan - Flint.



EXPLANATION

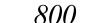


-  Water-table contour. Elevation in feet above sea level. Contour interval 50 feet.
-  Municipal boundary
-  Ground-water flow divide

Figure 6. Elevation of the water-table surface in Oakland County, Michigan.