

Potentiometric Surface Map of the Unconsolidated Aquifers of LaPorte County, Indiana

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LaPorte County, Indiana is located in the northwestern portion of the state and is situated within two major drainage basins. The northern portion of the county is within the Lake Michigan Region and the rest of the county is within the Kankakee River Basin. Major drainage systems include the Kankakee River, the Little Kankakee River, and Trail Creek along with several tributaries.

Coordinate locations of water well records were physically obtained in the field, determined through address geocoding, or reported on water well records. Elevation data were either obtained from topographic maps or a digital elevation model (DEM). Elevation and location quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

The generalized unconsolidated potentiometric surface map contour elevations represent lines of equal elevation to which groundwater levels will rise in wells. Static water level measurements in individual wells used to construct the potentiometric surface map are indicative of the water level at the time of well completion. Therefore, current site specific conditions may differ due to local or seasonal variations in measured static water levels.

In LaPorte County well depths 100 feet or less were a priority in mapping the potentiometric surface. However, deeper wells were often compared and used in areas where data was sparse. There are approximately 12,100 water well records in the county of which, about 5,800 (47%) are located. About 4,465 (77%) of the located wells are less than 100 feet in depth. Approximately 5,000 water well records were used to construct the groundwater equipotential lines.

Potentiometric surface elevations range from a high of 800 feet mean sea level (msl) in the northwestern portion of central LaPorte County, to a low of 590 feet msl in the northwest corner. Generalized groundwater flow direction, therefore, appears to be toward Lake Michigan for most of the Lake Michigan Region. Groundwater flow for the central and southern portions of the county within the Kankakee River Basin appears to be to the southeast.

In general, the potentiometric surface in the lower two-thirds of LaPorte County, portions close to the Kankakee River, and areas near Lake Michigan are under semi-confined or unconfined conditions. However, the remaining portions of LaPorte County may be under confined conditions.