

# **Potentiometric Surface Map of the Unconsolidated Aquifers of Jackson County, Indiana**

By  
Randal D. Maier  
Division of Water, Resource Assessment Section  
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Jackson County, Indiana is located in the south-central part of the state and is entirely within the East Fork White River Basin.

The mapped potentiometric surface contours represent lines of equal elevation relative to the measured groundwater levels in wells. In general, wells completed in a confined aquifer system are bound by impermeable layers and will have static water levels under hydrostatic pressure causing the water level to rise above the elevation of the aquifer resource. In contrast, an unconfined aquifer system is not bound by impermeable layers; therefore, the water level will not be under hydrostatic pressure and will not rise above the aquifer resource.

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.

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 obtained from a digital elevation model. Elevation and location quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

Much of the north-central and western third of Jackson County is extremely limited in unconsolidated aquifer potential. Therefore, potentiometric contours have not been extended throughout these areas.

Well depths 100 feet or less were a priority in mapping the potentiometric surface in Jackson County. However, deeper wells were used to compliment the mapping in areas where wells at depths of less than 100 feet were sparse. There are 579 unconsolidated located water well records in the county that were utilized towards the mapping of the unconsolidated potentiometric surface.

Potentiometric surface elevations range from a high of 640 feet mean sea level (msl) near Freetown in the north-central portion of Jackson County, to a low of 530 feet msl along the East Fork White River in the central part of the county and along the Muscatatuck River in the southeastern part of the county.

Generalized groundwater flow direction for the county is towards major drainage relevant to the basin. Therefore, in Jackson County groundwater flow is towards the East Fork White River and associated tributaries. These include; the Muscatatuck River to the south and the Vernon Fork Muscatatuck River in the southeast.