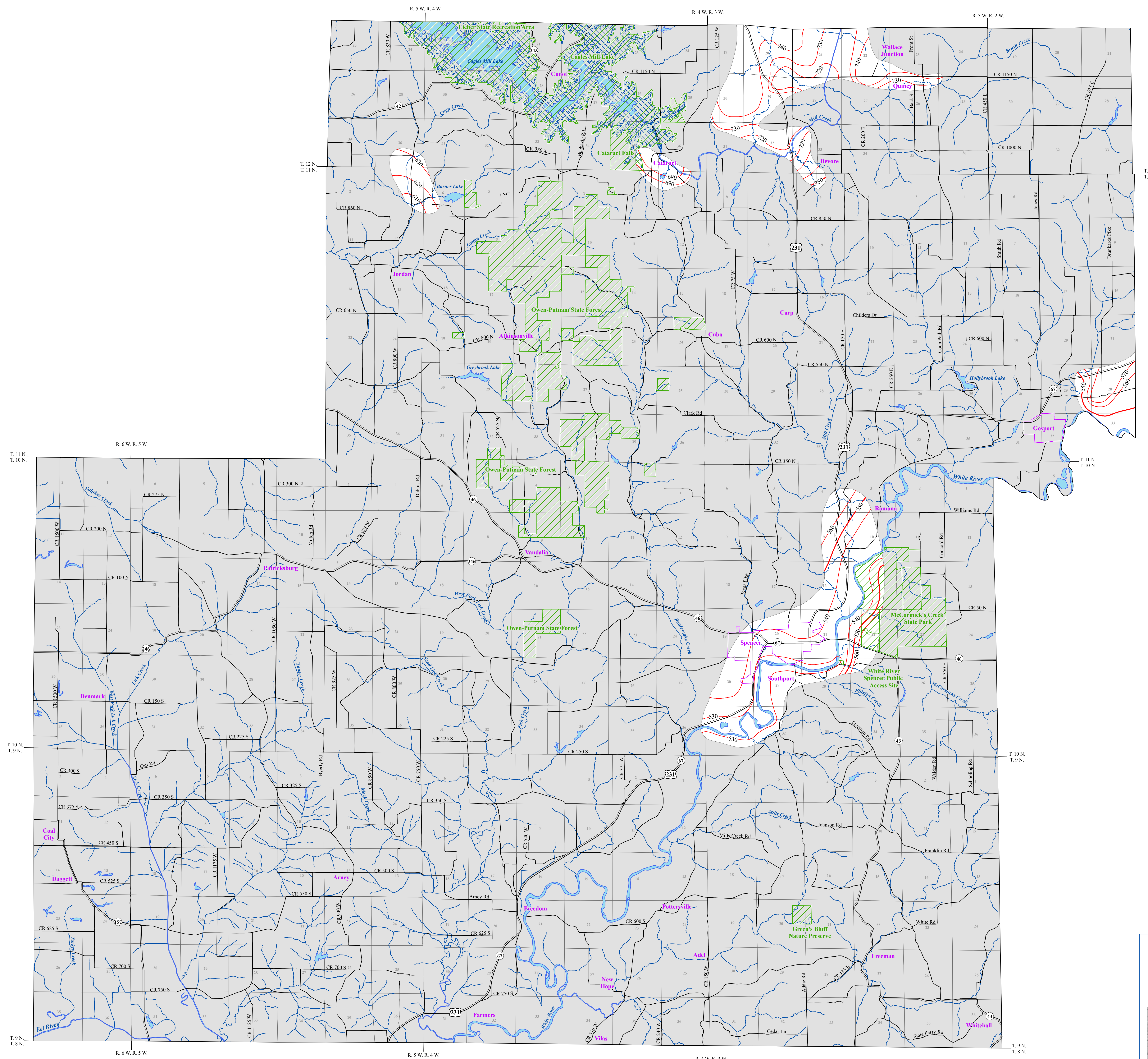


POTENTIOMETRIC SURFACE MAP OF THE UNCONSOLIDATED AQUIFERS OF OWEN COUNTY, INDIANA



Owen County, Indiana is located in the west-central part of the state and is entirely within the White and West Fork White River Basin.

The potentiometric surface mapped (PSM) contour elevations 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.

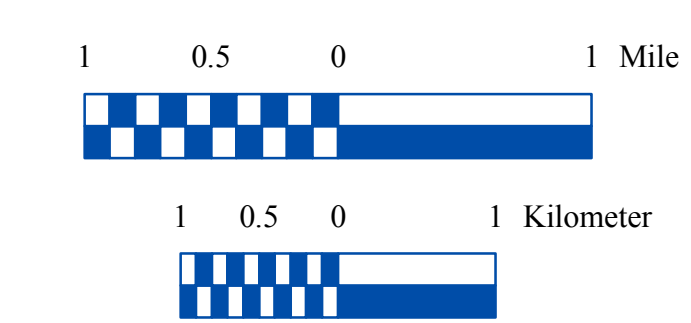
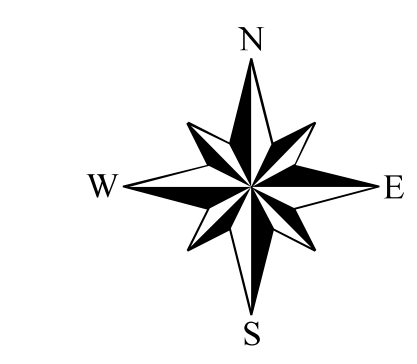
Static water level measurements in individual wells used to construct the potentiometric surface map are indicative of the water level at the time of well completion. Therefore, current site specific conditions may differ due to local or seasonal variations in measured static water levels.

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 (DEM). Elevation and location quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

Nearly all of Owen County is extremely limited in unconsolidated aquifer potential. Therefore, potentiometric contours have not been extended throughout much of the county. However, isolated areas where greater unconsolidated aquifer potential is present provides enough well data to allow PSM contours to be mapped, mainly in the northern and east-central sections of the county.

Well depths 100 feet or less were a priority in mapping the potentiometric surface in Owen County. However, deeper wells were used to complement the mapping in areas where wells at depths of less than 100 feet were sparse. There are 100 unconsolidated located water well records in the county that were utilized towards the mapping of the unconsolidated potentiometric surface; 68 within the priority depth range. Potentiometric surface elevations range from a high of 750 feet mean sea level (msl) in the north-central part of the county, to a low of 530 feet msl in the east-central part of the county along the White River.

Generalized groundwater flow direction for the county is towards major drainage relevant to the basin. In the northern arcal extent of Owen County groundwater flow is mostly towards Mill Creek. In the east-central part, groundwater flow is towards the White River.

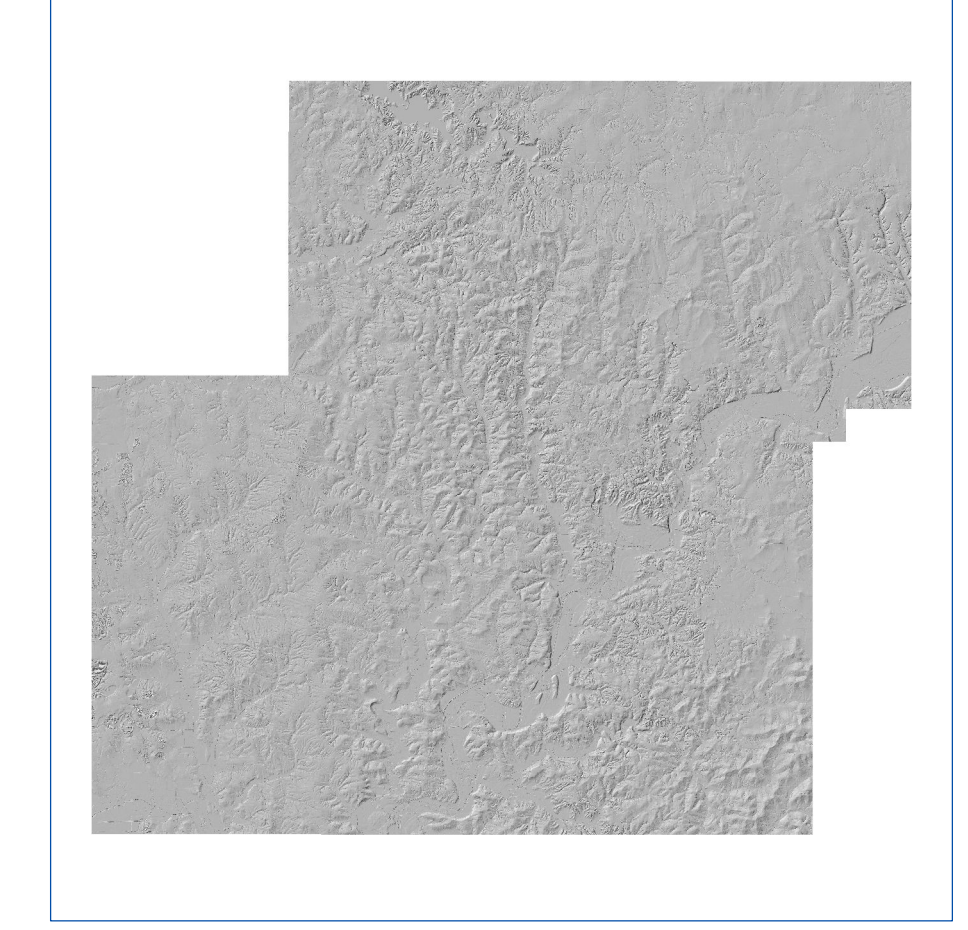


EXPLANATION

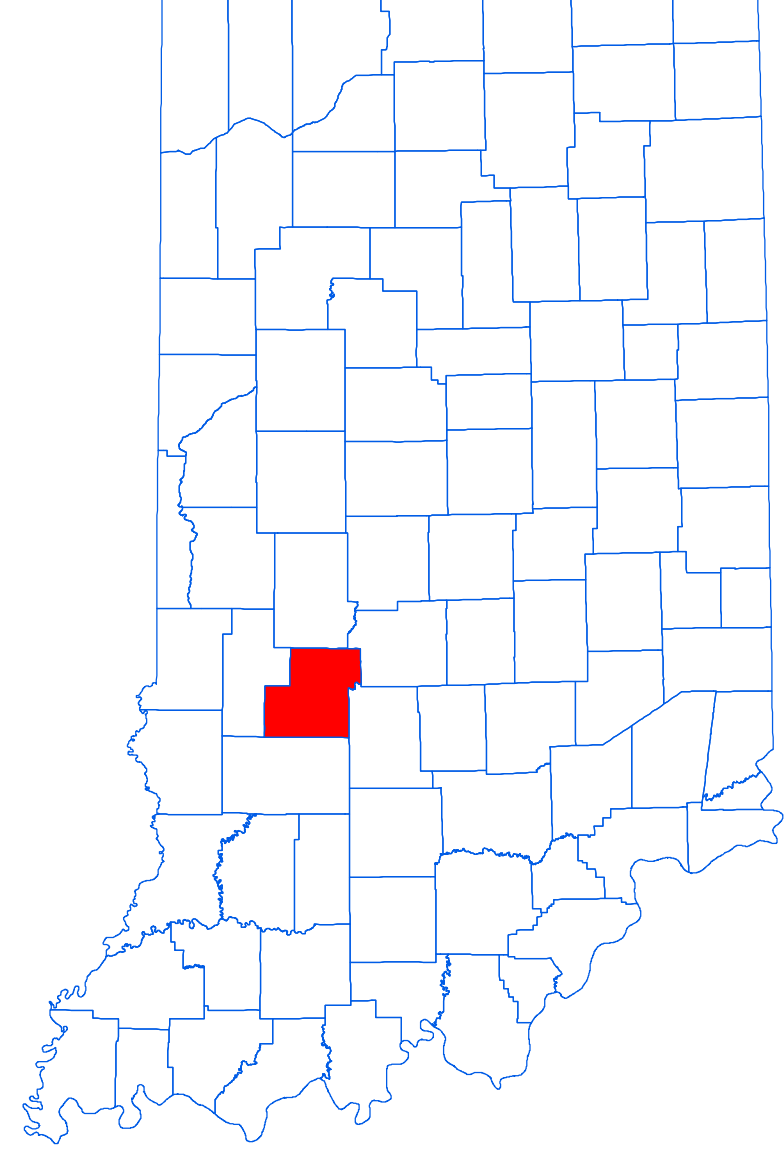
- Line of equal elevation, in feet above mean sea level
- Potentiometric Contour interval 10 feet
- Stream
- County Road
- State Road
- US Highway
- Municipal Boundary
- State Managed Property
- Inundated Area
- Lake & River
- No Aquifer Material or Limited Data



Hillshade Map of Owen County, Indiana



Location Map



Map Use and Disclaimer Statement

We request that the following agency be acknowledged in products derived from this map: Indiana Department of Natural Resources, Division of Water.

This map was compiled by staff of the Indiana Department of Natural Resources, Division of Water using data believed to be reasonably accurate. However, a degree of error is inherent in all maps. This product is distributed "as is" without warranties of any kind, either expressed or implied. This map is intended for use only at the published scale.

This map is created from several existing shapefiles: Township and Range Lines of Indiana (line shapefile, 20020621), Land Survey Lines of Indiana (polygon shapefile, 20020621), and County Boundaries of Indiana (polygon shapefile, 20020621) are all from the Indiana Geological Survey and based on a 1:24,000 scale. Roads (TIGER and INDOT) (line shapefile, 2005) is from the Indiana Department of Transportation and based on a 1:24,000 scale. Incorporated Boundaries in Indiana (polygon shapefile, 20060501) is from the Graphics and Engineering Section, Indiana Department of Transportation. Hydrography, Streams (NHID) (line shapefile, 20081218), Rivers (NHID) (polygon shapefile, 20081218), and Lakes (NHID) (polygon shapefile, 20081218) are from the U.S. Geological Survey and based on a 1:24,000 scale. Managed Lands IDNR IN (polygon shapefile, 20100920) is from the Indiana Department of Natural Resources and based on a 1:24,000 scale. The Hillshade image is derived from the Indiana OrthoLIDAR Statewide Collection Program (2013). Owen County Unconsolidated No Aquifer Material or Limited Data (polygon shapefile, Maier, 2016) and Potentiometric Surface Contours of the Unconsolidated Aquifers of Owen County, Indiana (line shapefile, Maier, 2016) are based on a 1:24,000 scale.

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

by
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