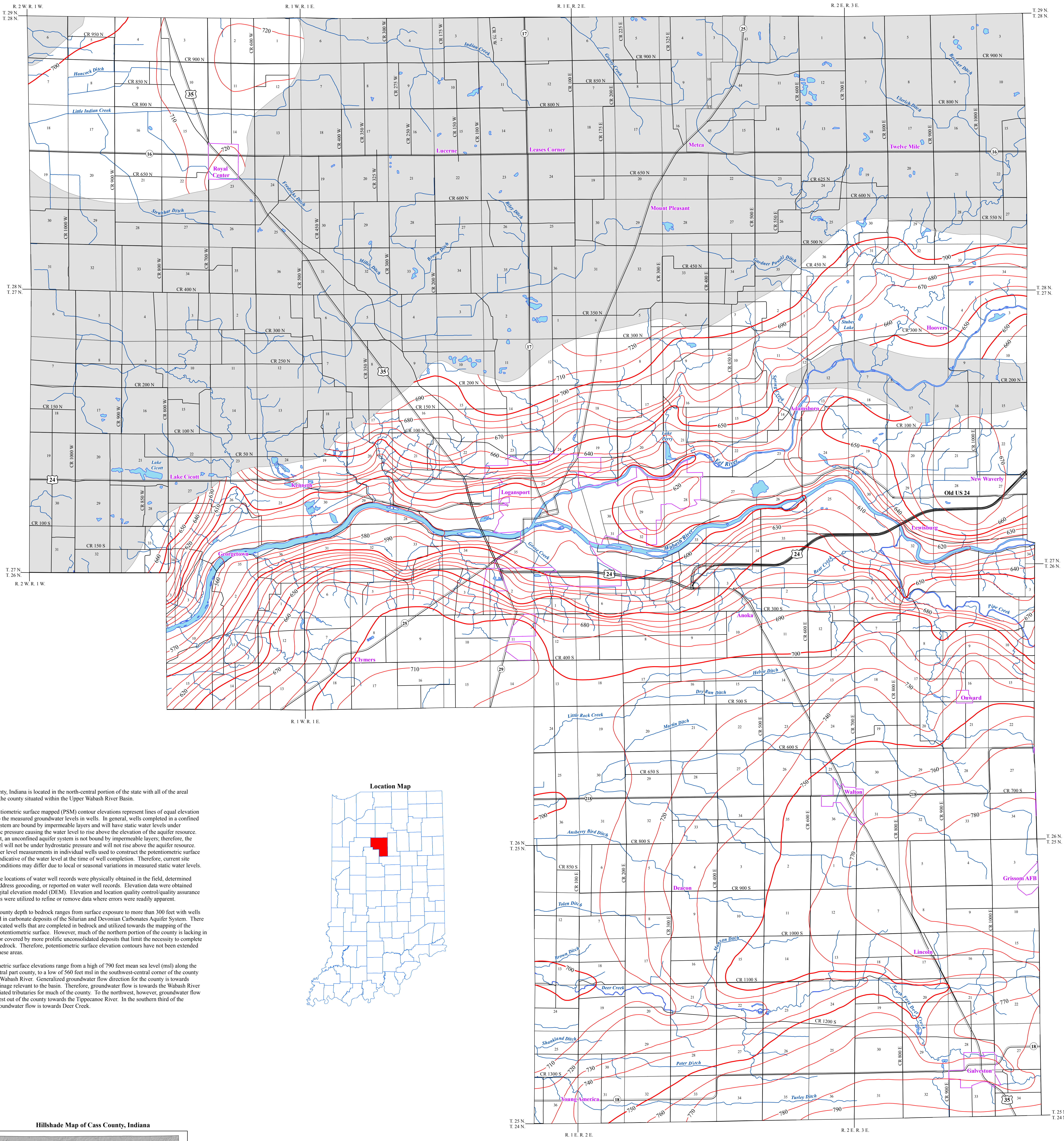


# POTENTIOMETRIC SURFACE MAP OF THE BEDROCK AQUIFERS OF CASS COUNTY, INDIANA



Cass County, Indiana is located in the north-central portion of the state with all of the areal extent of the county situated within the Upper Wabash River Basin.

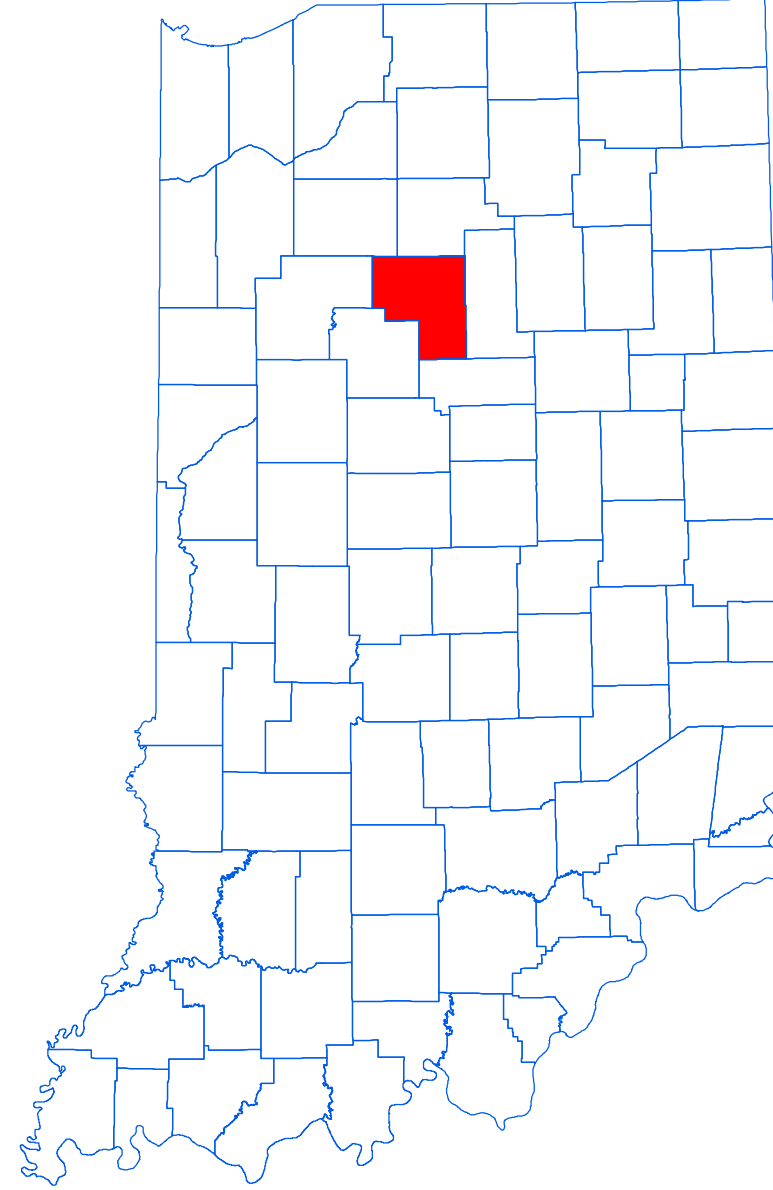
The potentiometric surface mapped (PSM) contour elevations represent lines of equal elevation relative to the measured groundwater levels in wells. In general, wells completed in a confined aquifer system are bound by impermeable layers and will have static water levels under hydrostatic pressure causing 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.

In Cass County depth to bedrock ranges from surface exposure to more than 300 feet with wells completed in carbonate deposits of the Silurian and Devonian Carbonates Aquifer System. There are 941 located wells that are completed in bedrock and utilized towards the mapping of the bedrock potentiometric surface. However, much of the northern portion of the county is lacking in data and/or covered by more prolific unconsolidated deposits that limit the necessity to complete wells in bedrock. Therefore, potentiometric surface elevation contours have not been extended through these areas.

Potentiometric surface elevations range from a high of 790 feet mean sea level (msl) along the south-central part county, to a low of 560 feet msl in the southwest-central corner of the county along the Wabash River. Generalized groundwater flow direction for the county is towards major drainage relevant to the basin. Therefore, groundwater flow is towards the Wabash River and associated tributaries for much of the county. To the northwest, however, groundwater flow is southwest out of the county towards the Tippecanoe River. In the southern third of the county groundwater flow is towards Deer Creek.

Location Map



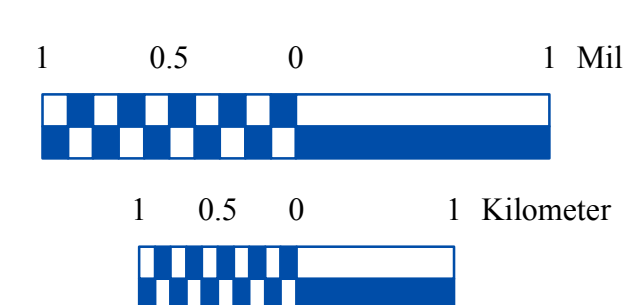
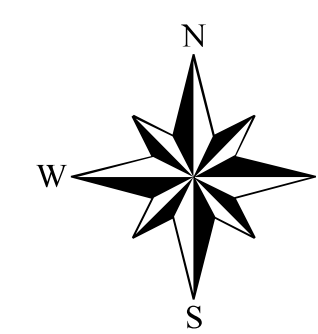
Hillshade Map of Cass County, Indiana



Vertical Exaggeration 3x

## EXPLANATION

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



### 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 1:100,000 scale. System1 (line shapefile, 2003) is from the Indiana Department of Transportation and based on a 1:24,000 scale. Populated Areas in Indiana 2000 (polygon shapefile, 20021000) is from the U.S. Census Bureau and based on a 1:100,000 scale. 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. Digital Elevation Model image is derived from the Indiana OrthoLIDAR Statewide Collection Program (2011). Cass County Bedrock No Aquifer Material or Limited Data (polygon shapefile, Maier, 2013) and Potentiometric Surface Contours of the Bedrock Aquifers of Cass County, Indiana (line shapefile, Maier, 2013) are based on a 1:24,000 scale.

### Potentiometric Surface Map of the Bedrock Aquifers of Cass County, Indiana

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December 2013