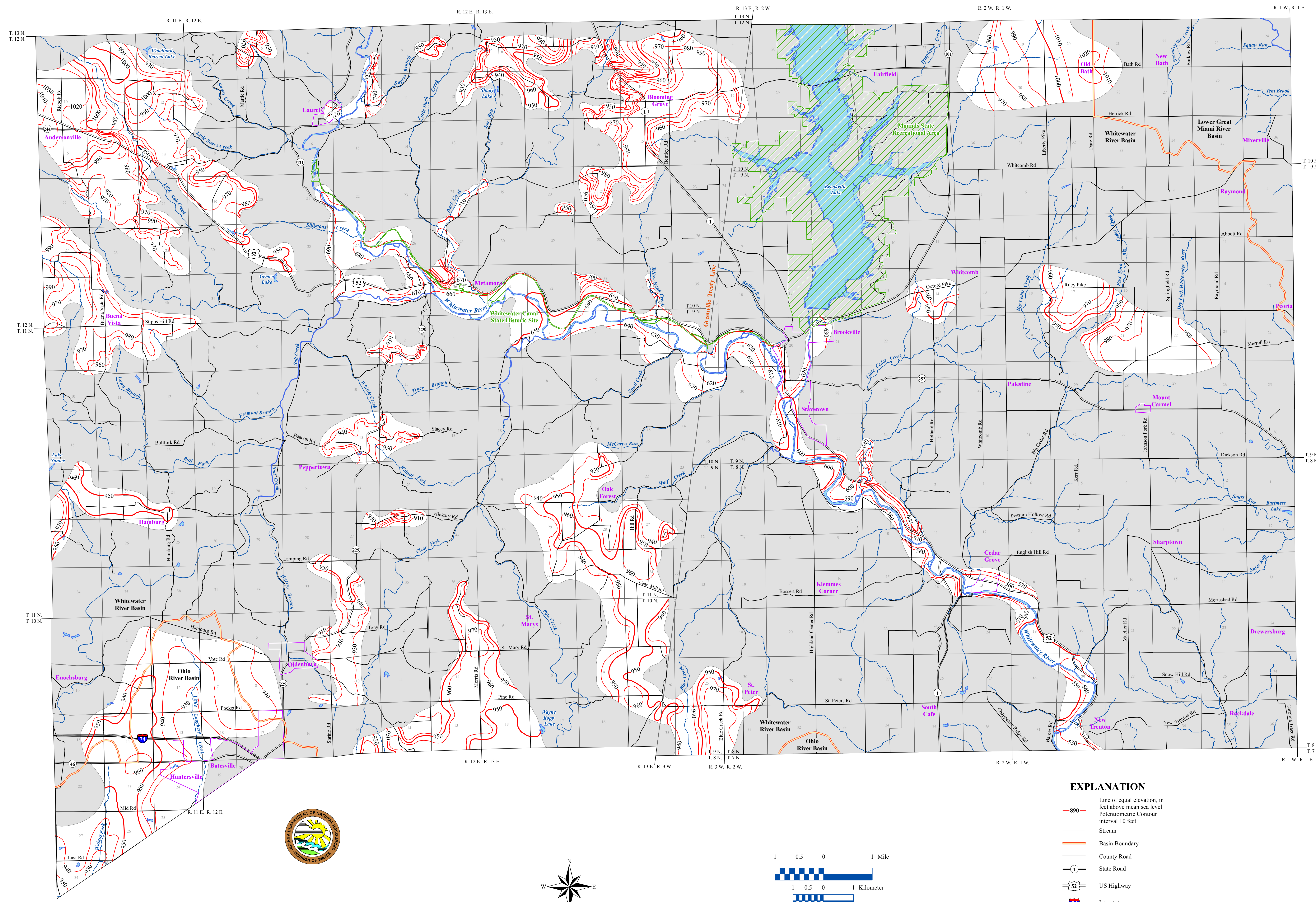


POTENTIOMETRIC SURFACE MAP OF THE UNCONSOLIDATED AQUIFERS OF FRANKLIN COUNTY, INDIANA



Franklin County, Indiana is located in the southeast central part of the state and is within the boundaries of three river basins. Nearly the entire county is located within the Whitewater River Basin. However, part of the south-central area of the county and the southwest corner is located in the Ohio River Basin and the northeastern area of the county is located in the Lower Great Miami 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 recharge. 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 recharge.

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.

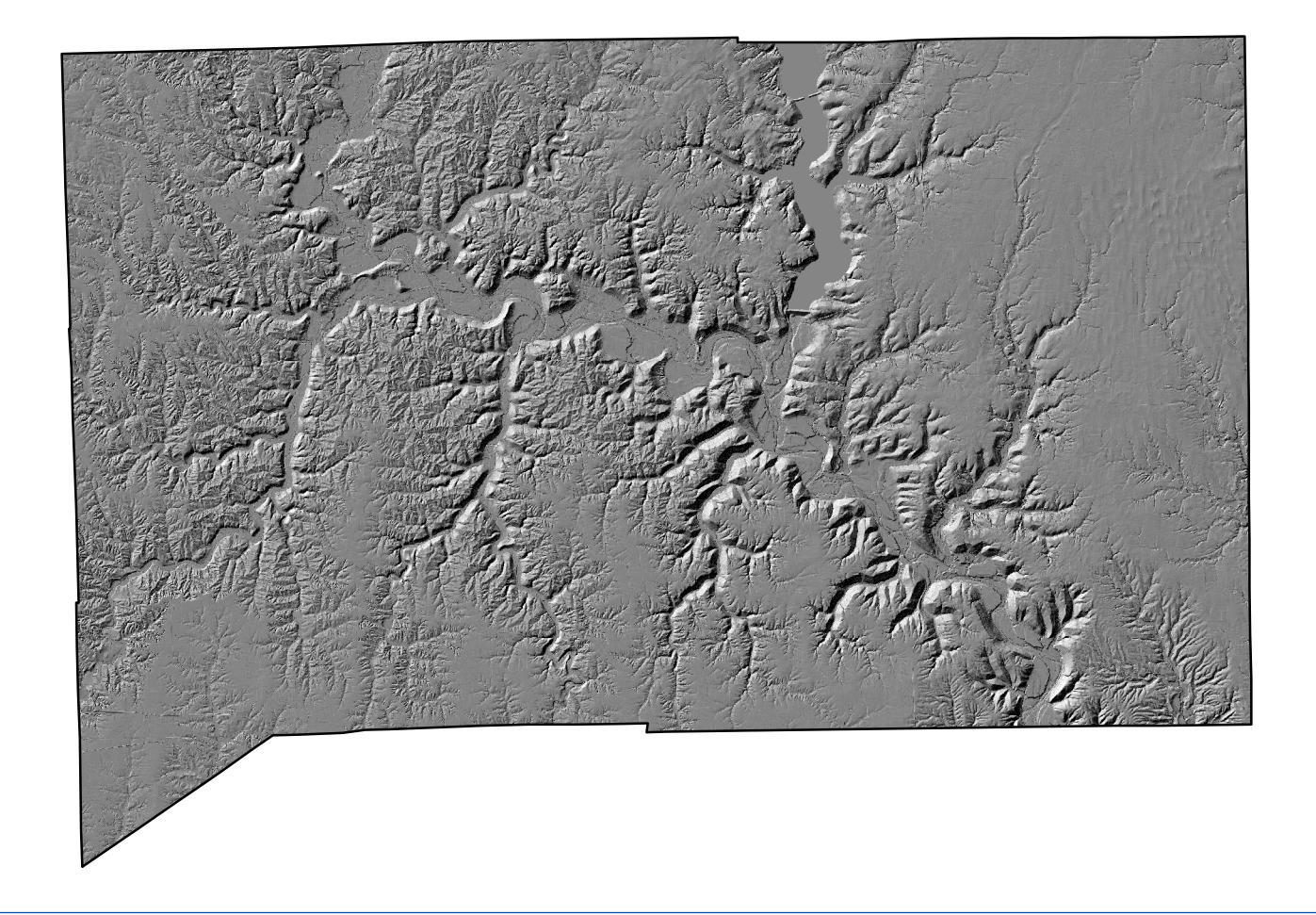
Well depths 100 feet or less were a priority in mapping the potentiometric surface in Franklin County. However, deeper wells were used to complement the mapping in areas where wells at depths of less than 100 feet were sparse. There are 528 unconsolidated located water well records in the county with 503 within the priority depth range.

Much of Franklin County has limited unconsolidated aquifer potential. However, many wells, in these areas are large diameter bucket wells with porous concrete casing that utilize thin sand and gravels seams or reportedly "wet" clays. These wells make up about 68 percent of all unconsolidated wells in the county and are extremely limited in flow capability.

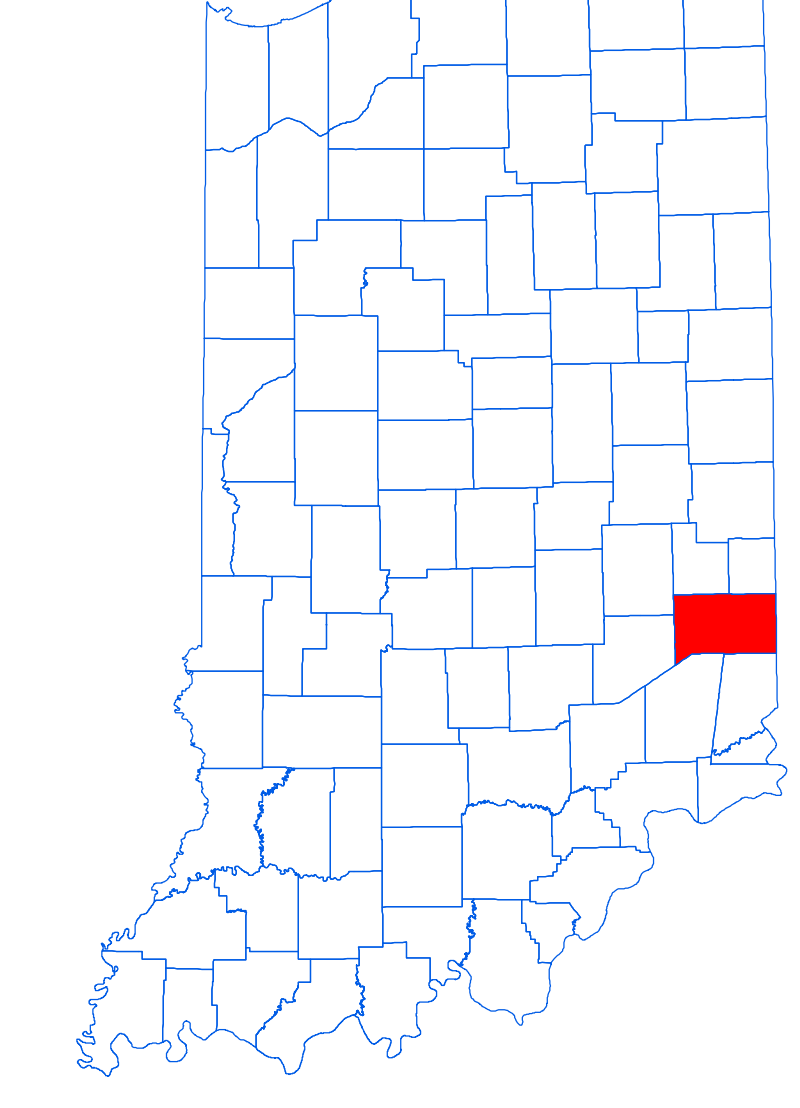
Potentiometric surface elevations range from a high of 1040 feet mean sea level (msl) along the Rush-Franklin county lines in the northwest part of the county, to a low of 530 feet msl along a small portion of the Whitewater River in the southeast part of the county near the Dearborn-Franklin county lines. Portions of the county are generally lacking in data, primarily in areas where ridge top highs and steep, incised valleys are present. Potentiometric surface elevation contours, therefore, have not been extended throughout these areas.

Generalized groundwater flow direction for Franklin County is towards major drainage relevant to the basin. Therefore, for the Whitewater River Basin groundwater flow is generally towards the Whitewater River and its tributaries. Along the northeastern part of the county, within the Lower Great Miami River Basin, groundwater flow is generally east. For the southwest part of the county in the Ohio River Basin, groundwater flow is generally south towards Little Laughery Creek.

Hillshade map of Franklin County, Indiana

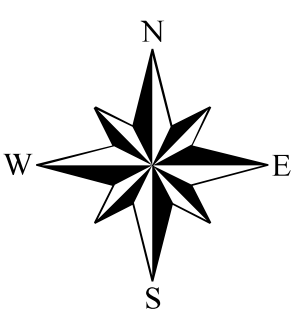
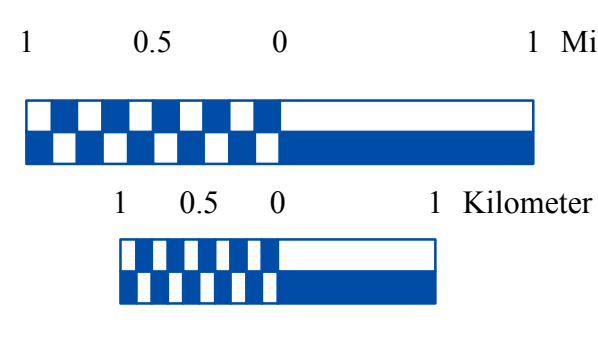


Location Map



EXPLANATION

- 890 Line of equal elevation, in feet above mean sea level
- Potentiometric Contour interval 10 feet
- Stream
- Basin Boundary
- County Road
- State Road
- US Highway
- Interstate
- Municipal Boundary
- DNR Managed Lands
- 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. System (line shapefile, 2001) 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. Basin boundaries are modified from Watershed Boundary Dataset (polygon shapefile, 2008) from the Natural Resource Conservation Service and based on a 1:24,000 scale. Managed Lands (DNR IN) (polygon shapefile, 20100920) is from the Indiana Department of Natural Resources and based on a 1:24,000 scale. Digital Elevation Model image is derived from the Indiana Ortho-IRIS Stereo Collection Program (2012). Franklin County Unconsolidated Aquifer Material or Limited Data (polygon shapefile, Maier, 2014) and Potentiometric Surface Contours of the Unconsolidated Aquifers of Franklin County, Indiana (line shapefile, Maier, 2014) are based on a 1:24,000 scale.

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

by
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