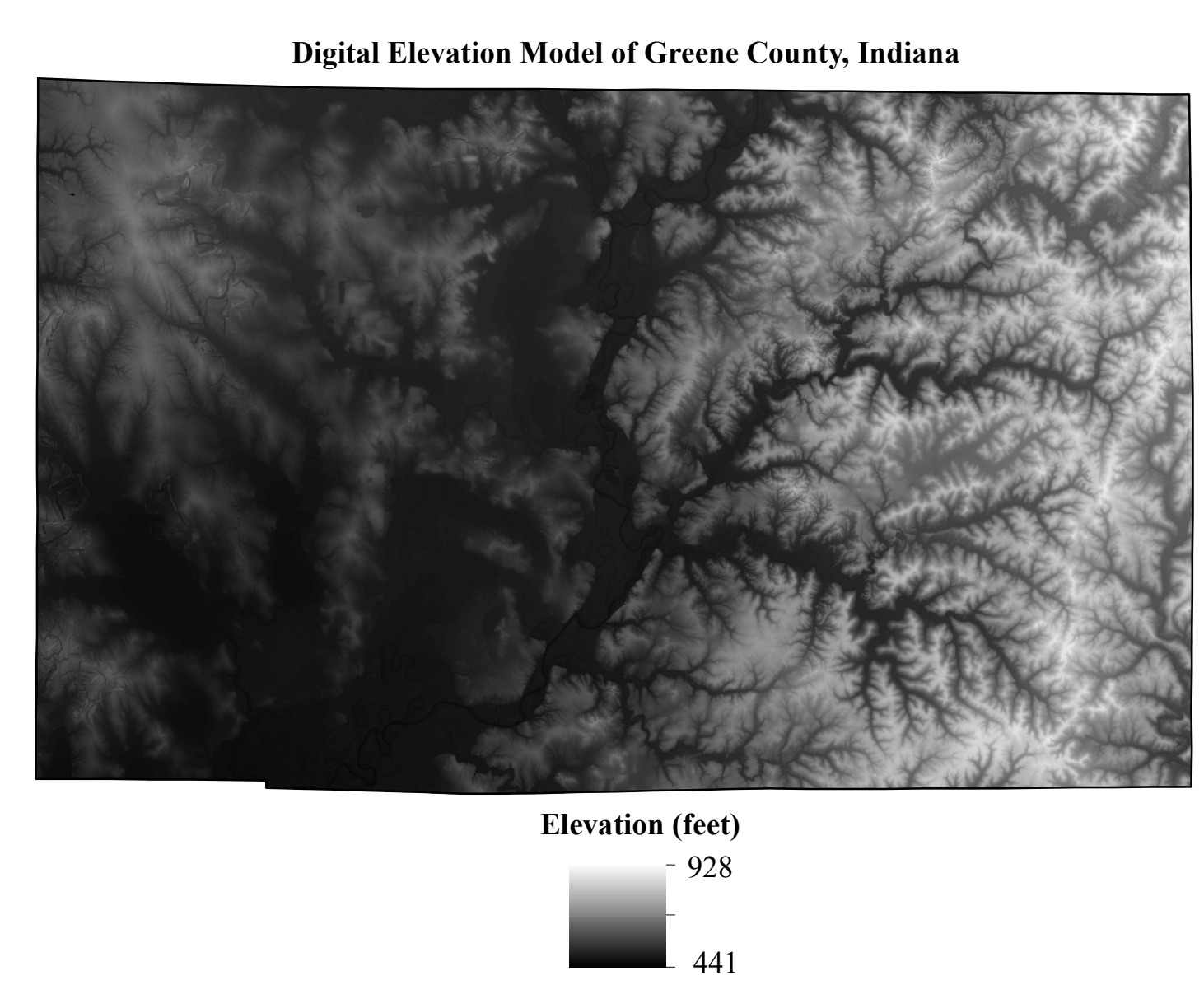
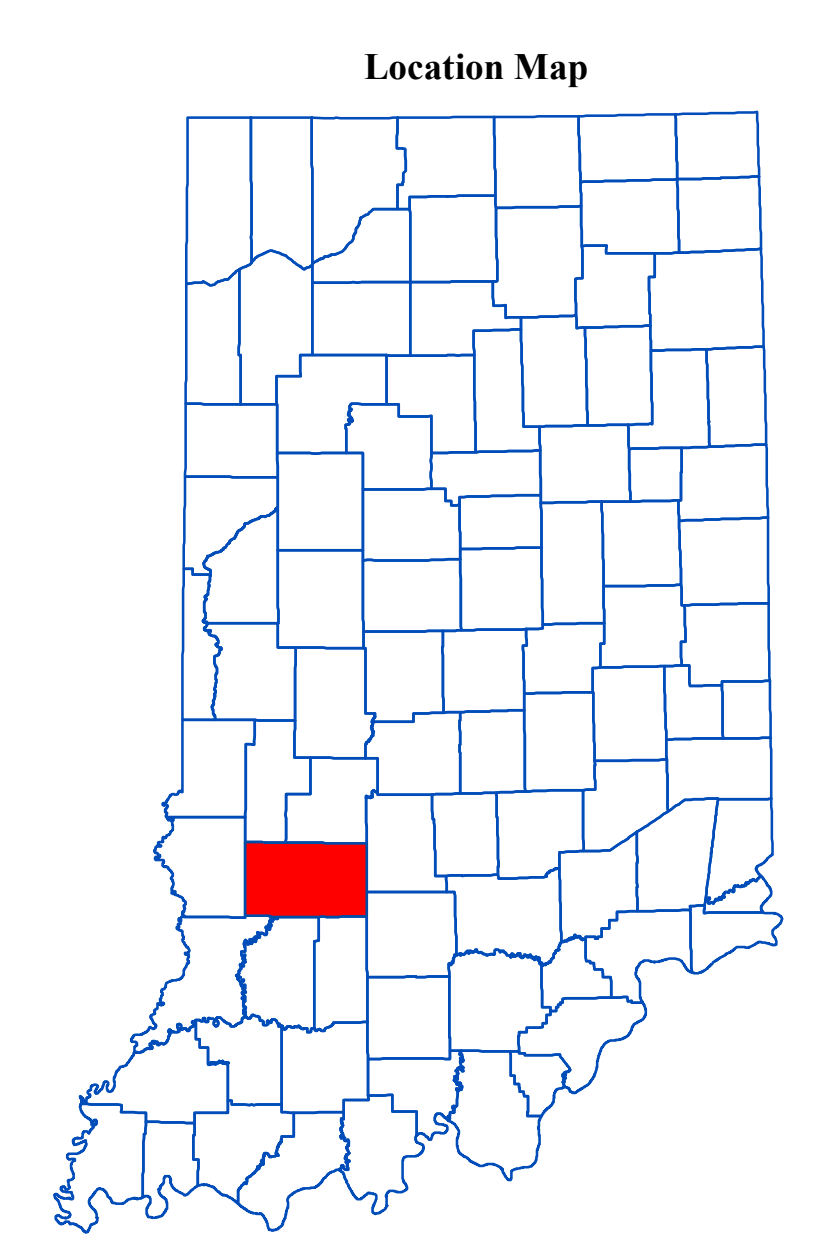
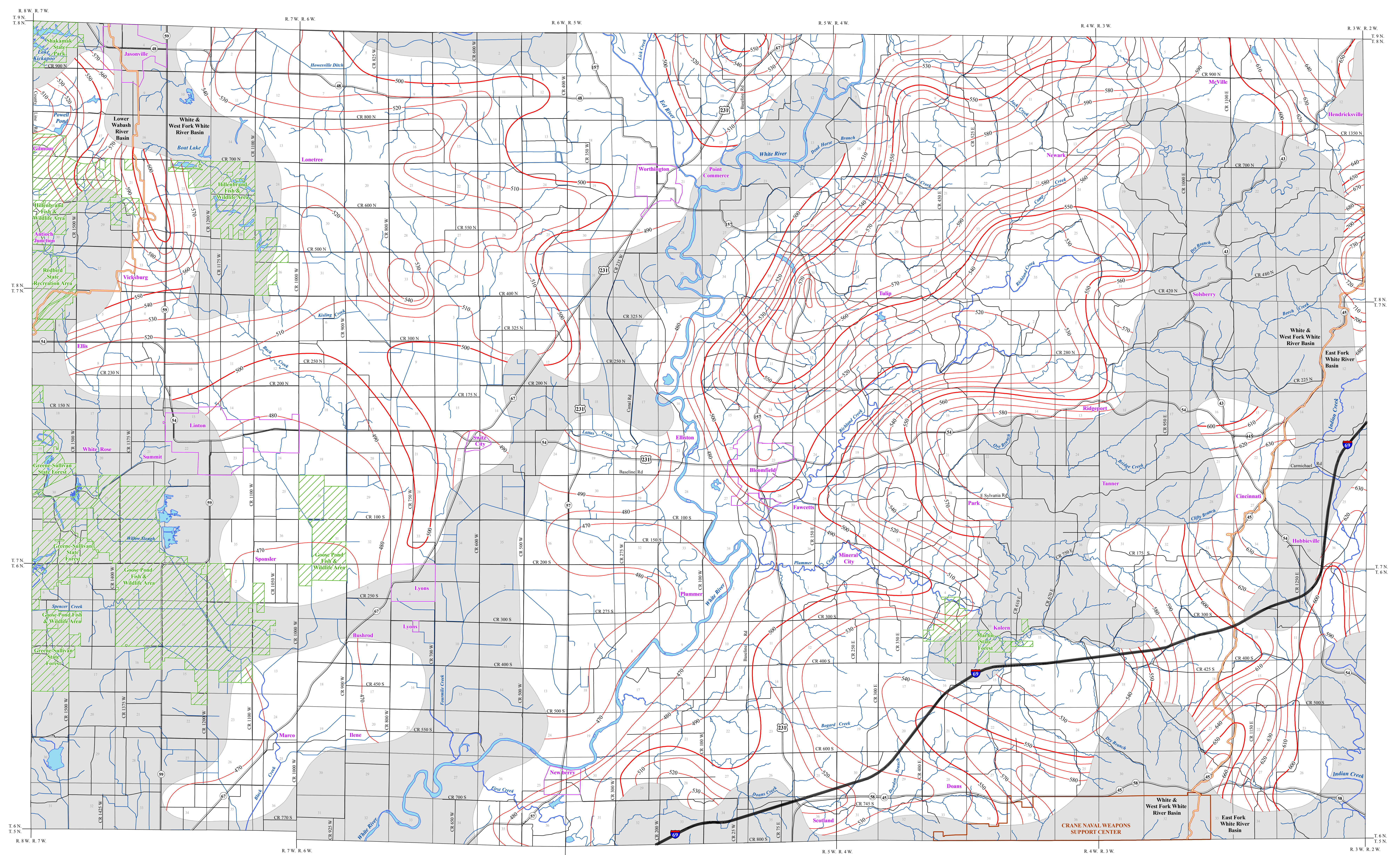
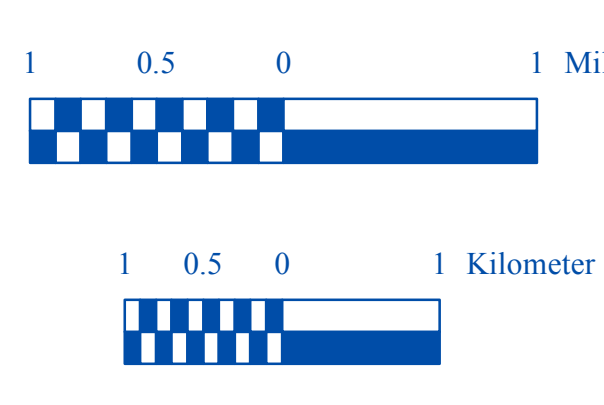
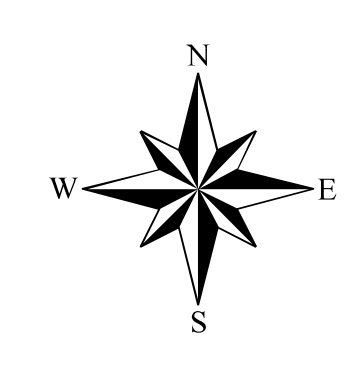


# POTENTIOMETRIC SURFACE MAP OF THE BEDROCK AQUIFERS OF GREENE COUNTY, INDIANA



### EXPLANATION

- Line of equal elevation, in feet above mean sea level
- Potentiometric Contour interval 10 feet
- Stream
- County Road
- State Road
- US Highway
- Interstate
- Basin Boundary
- Municipal Boundary
- Crane Naval Weapons Support Center
- DNR Managed Property
- 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 1 (line shapefile, 2003) 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 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 INDR 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 OrthoLIDAR Statewide Collection Program (2013). Greene County Bedrock No Aquifer Material or Limited Data (polygon shapefile, Grove, 2017) and Potentiometric Surface Contours of the Bedrock Aquifers of Greene County, Indiana (line shapefile, Grove, 2017) are based on a 1:24,000 scale.

Greene County is located in the west-central portion of Indiana, and is bounded by the counties of Clay, Owen, Monroe, Lawrence, Martin, Daviess, Knox and Sullivan to the north, northeast, east, southeast, south, southwest and west, respectively. Nearly the entire county lies within the White and West Fork White River Basin, however, a relatively small portion in the northwest corner is situated within the Lower Washburn River Basin with another portion in the southeast corner of the county in the East Fork White River Basin.

The Potentiometric Surface Map (PSM) of the bedrock aquifers of Greene County was mapped by contouring the elevations of over 600 static water-levels reported on well records received primarily over a 50 year period. These wells are completed in aquifers at various depths, and typically, under confined conditions (bounded by impermeable layers above and below the water bearing formation). However, some wells were completed under unconfined (not bounded by impermeable layers) settings.

The potentiometric surface is a measure of the pressure on water in a water bearing formation. Water in an unconfined aquifer is at atmospheric pressure and will not rise in a well above the top of the aquifer, in contrast to groundwater in a confined aquifer which is under hydrostatic pressure and will rise in a well above the top of the water bearing formation.

Static water-level measurements in individual wells used to construct county PSM's are indicative of the water-level at the time of well completion, or reported on water well records. The location of the majority of the water well records used to make the PSM were field verified. Elevation data were obtained from a digital elevation model. Quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

Potentiometric surface elevations range from a high of 730 feet mean sea level (msl) in the northeast part of the county, to a low of 470 feet msl in the southwest portion of the county near the White River and Black Creek. Groundwater regional flow direction is generally to the south towards the White River, with localized flow towards the larger tributaries such as Richland Creek and Black Creek. In the Lower Washburn River Basin, regional groundwater flow is to the west towards the Washburn River. Within the East Fork White River Basin regional flow is generally to the south-southeast toward Indian Creek.

Bedrock potentiometric surface elevation contours have not been extended through portions of the county. These areas are lacking in data and/or covered by more prolific unconsolidated deposits that limit the necessity to complete wells in bedrock.

The county PSM can be used to define the regional groundwater flow path and to identify significant areas of groundwater recharge and discharge. County PSM's represent overall regional characteristics and are not intended to be a substitute for site-specific studies.

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

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