

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

Vigo County, Indiana is located in the west-central part of the state along the border with Illinois and is mostly within the Middle Wabash River Basin. However, the southern third of the county is within the Lower Wabash River Basin and the southeast part of the county is 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.

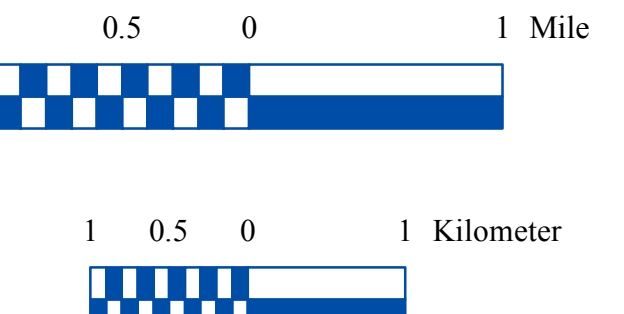
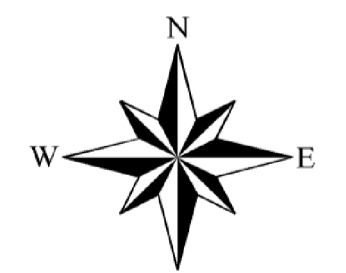
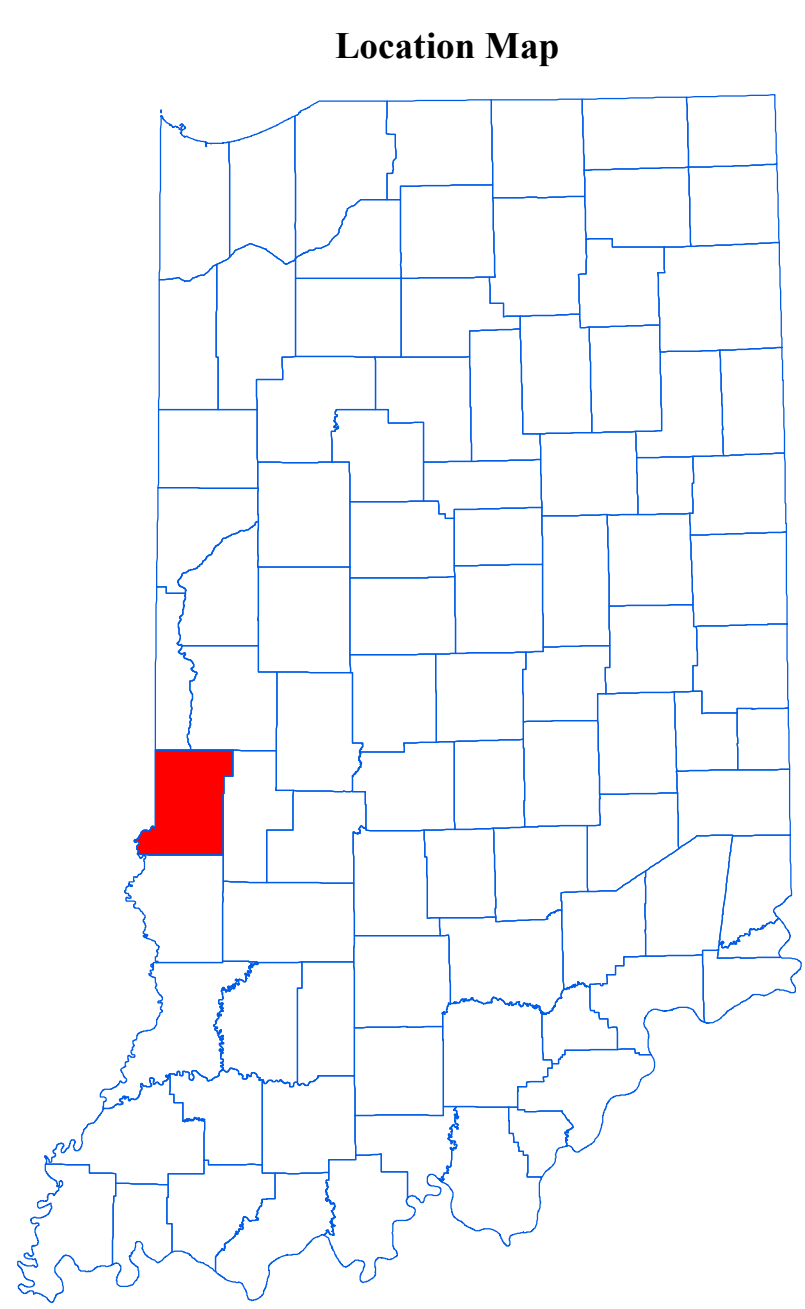
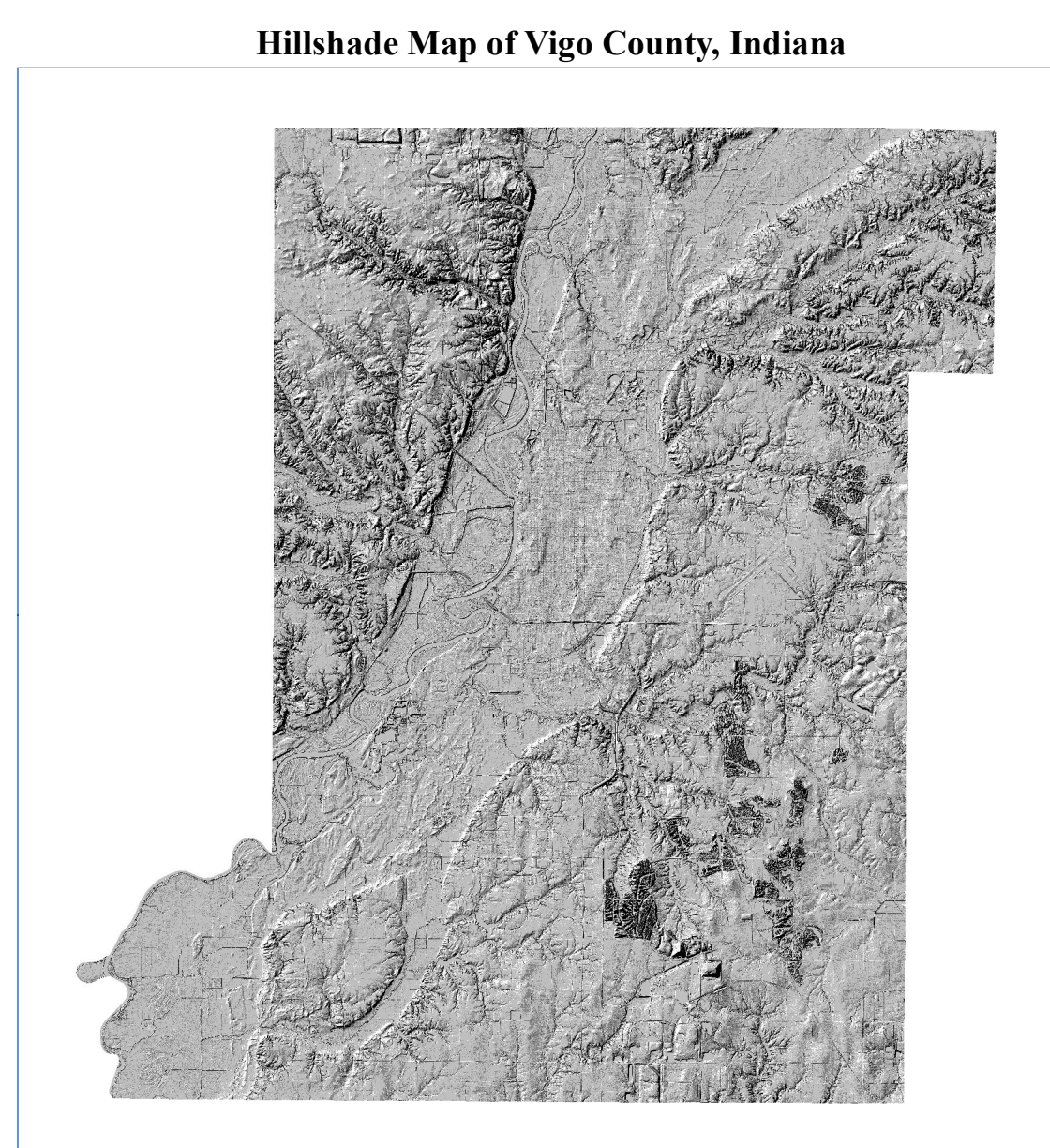
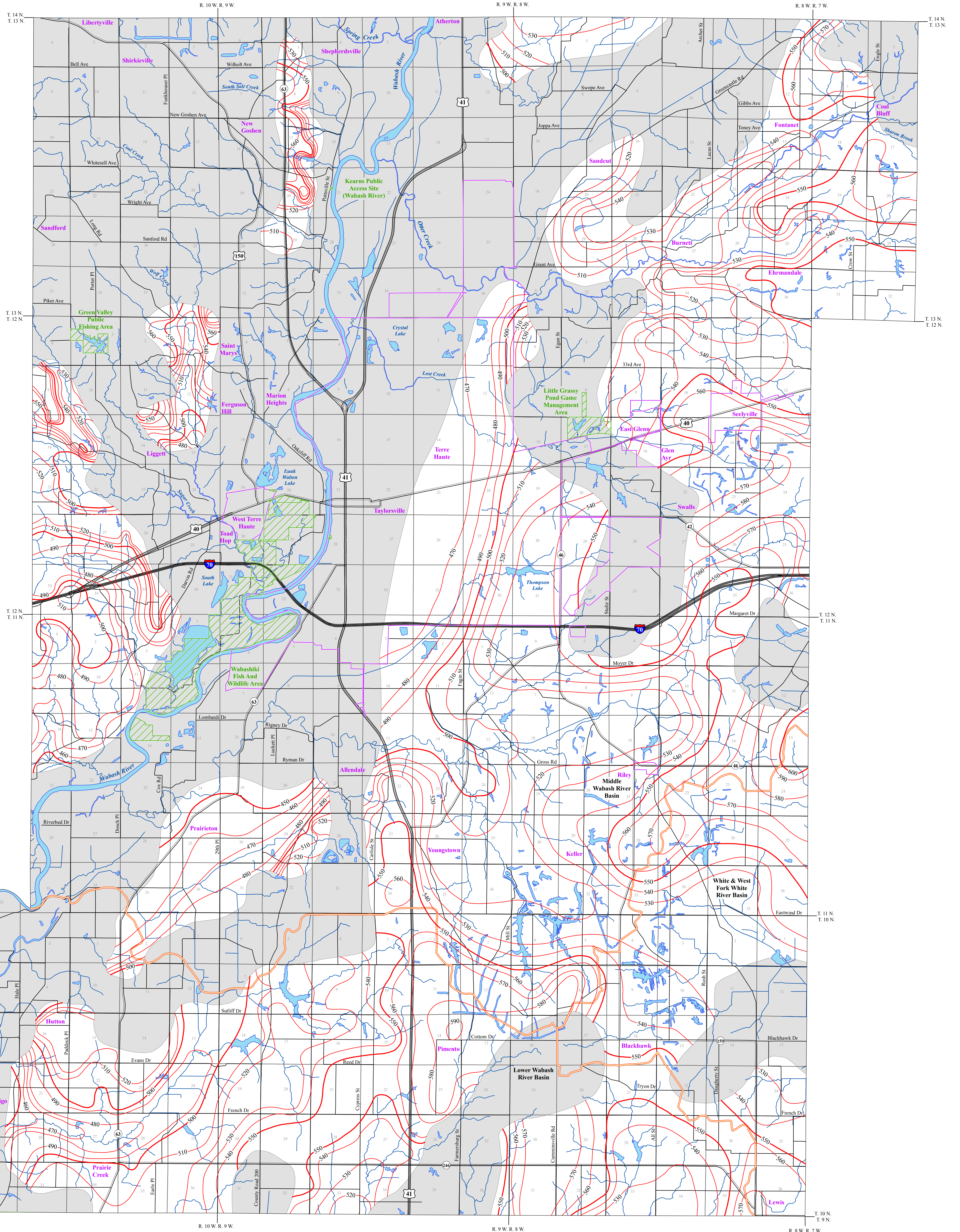
Coordinate locations of water well records were physically obtained in the field, determined through address geocoding, or reported on water well records. Elevation data were obtained from a digital elevation model (DEM). Elevation and location quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

Wells producing from bedrock deposits are limited with parts of the county lacking in data. This is primarily due to bedrock as a limited aquifer resource, and/or available existing unmaintained materials. Therefore, potentiometric surface elevation contours have not been extended throughout areas of the county.

Bedrock for the county includes sandstone and shale of the Pennsylvanian Racoon Creek Group to the northeast; shale, sandstone, limestone and coal of the Carboniferous Group in the central and southeast parts of the county as well as some small areas of the northeast. There are 917 located wells that are completed in bedrock and are utilized towards the mapping of the bedrock potentiometric surface. Total well depths generally range from 25 to 499 feet with depths to the bedrock surface at 2 to 158 feet.

Potentiometric surface elevations range from a high of 600 feet mean sea level (msl) along the east-central edge of the county, to a low of 450 feet msl in the southwest near the Wabash River.

Generalized groundwater flow direction for the county is towards major drainage relevant to the basin. Therefore, in Vigo County groundwater flow is mostly southwest towards the Wabash River. However, to the southeast part of the county within the White and West Fork White River Basin, groundwater flow is to the southeast towards the Ed River in Clay County.



**EXPLANATION**

- 540 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
- State 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 Graphics and Engineering Section, Indiana Department of Transportation. Hydrography, Streams (NHDI) (line shapefile, 20081218), Rivers (NHDI) (polygon shapefile, 20081218), and Lakes (NHDI) (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, 2005) from the National Resource Conservation Service 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). Vigo County Bedrock No Aquifer Material or Limited Data (polygon shapefile, Maser, 2016) and Potentiometric Surface Contours of the Bedrock Aquifers of Vigo County, Indiana (line shapefile, Maier, 2016) are based on a 1:24,000 scale.

**Potentiometric Surface Map of the Bedrock Aquifers of Vigo County, Indiana**

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