POTENTIOMETRIC SURFACE MAP OF THE BEDROCK AQUIFERS OF SULLIVAN COUNTY, INDIANA

Sullivan County, located in the northwestern corner of Indiana, is bounded by the counties of Tippecanoe, Wabash, and Montgomery to the west and north, Fountain to the northwest, Parke to the south, and Vigo to the east. Much of Sullivan County lies on the southeast coast of the Sugar Creek Basin. Although the Sugar Creek Basin is the dominant regional hydrologic unit, the county contains a mix of both upland and lowland areas. The elevation range is from 270 feet above mean sea level in the southwest to 600 feet above mean sea level (msl) in a few locations within the county.

The county PSM can be used to define the regional groundwater flow path and to identify the main recharge and discharge areas. County PSMs represent overall regional groundwater conditions, even though the location of individual groundwater features may not always match the county PSMs.

The potentiometric surface is a measure of the pressure on groundwater in a water-bearing formation. It is defined as the mean surface of the water table or, in the case of a confined aquifer, the surface at which the water table intersects the top of the confining layer. The potentiometric surface is often depicted as a contour map, with each contour line representing a constant head level. The head level is the elevation of the water surface relative to a datum, typically mean sea level (msl). In the case of a confined aquifer, the water surface pressure is equal to the elevation of the water table above the top of the confining layer.

The potentiometric surface elevations range from a high of 600 feet msl in the southeast to a low of 270 feet msl in the southwest. Elevations are depicted with a contour interval of 15 feet. Contour lines are generally spaced at intervals of 15 feet, although they may be closer or farther apart in areas where there are significant changes in the potentiometric surface.

The potentiometric surface is a valuable tool for hydrogeologists and water resource managers. It can be used to identify areas of high groundwater recharge and discharge, which is important for the management of groundwater resources. The potentiometric surface can also be used to identify areas where groundwater levels are particularly sensitive to changes in precipitation or other factors that affect groundwater flow.

The potentiometric surface can be derived from a variety of sources, including hydrogeological data, water level measurements, and hydrologic models. The data used to generate the potentiometric surface for Sullivan County were derived from a combination of these sources. The data were then interpolated using a Geographic Information System (GIS) to create a continuous surface.

The potentiometric surface for Sullivan County is a useful tool for hydrogeologists and water resource managers. It can be used to identify areas of high groundwater recharge and discharge, which is important for the management of groundwater resources. The potentiometric surface can also be used to identify areas where groundwater levels are particularly sensitive to changes in precipitation or other factors that affect groundwater flow.

Digital Elevation Map of Sullivan, Indiana

EXPLANATION

- 600 ft above mean sea level (msl)
- Contour Interval: 15 feet

- State Boundary
- County Boundary
- State Road
- City Road
- 3.5 Highway
- Suburban Boundary
- State Managed Property
- Lake & River
- The Aquifer Material at Groundline