## Waterlines Express - News from DNR Division of Water

Indiana Department of Natural Resources sent this bulletin at 10/03/2024 07:45 AM EDT



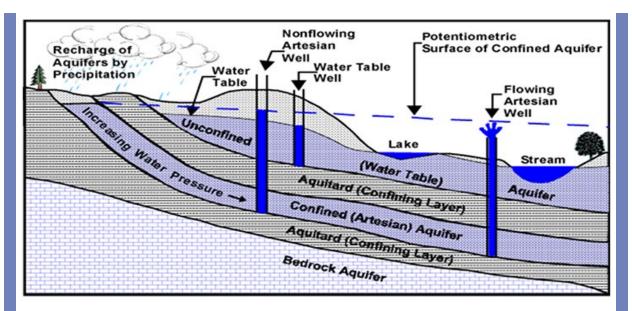
Thank you for subscribing to the Indiana DNR Division of Water's (DOW) email newsletter and your interest in the division's mission to protect, enhance, preserve, and wisely use water resources for the benefit of Indiana's citizens through professional leadership, management, and education.

## **Aquifer Systems Mapping**

Indiana's aquifer systems play a crucial role in providing water for various uses, including drinking, agriculture, and industry. Understanding the aquifer systems' distribution, characteristics, and potential contamination risks is essential for responsible water management.

The DNR Division of Water Resource Assessment section has mapped the groundwater resources of Indiana based on aquifer type and characterized them into individual aquifer systems based on uniform characteristics. Every county in Indiana has two maps representing each aquifer type: unconsolidated aquifers and bedrock aquifers. Unconsolidated aquifers consist of loose sediment, such as sand, gravel, and silt deposited by past glacial periods and rivers. Bedrock aquifers exist in solid rock units, usually carbonates or sandstones, underlying the unconsolidated material at the surface. In some areas of the state, the bedrock is near the surface with or without overlying unconsolidated aquifers. Figure 1 illustrates the different types of aquifers.

## **Groundwater diagram**

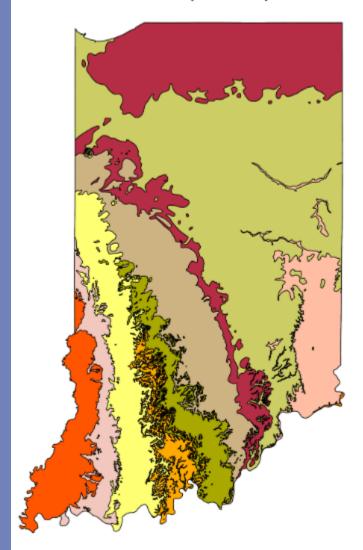


Characterizing and mapping these aquifer systems involved coordination of information from geological surveys and groundwater well records, along with other available hydrogeological data. The final maps include a description of aquifer thickness, depth, potential yield, static water levels, contamination potential, and registered significant water withdrawal facilities. From 2002 to 2011, each county in Indiana was mapped individually. See our website for more information and the individual county maps.

More recently, digital statewide GIS mapping coverages were created from the published county maps for each aquifer type (graphics below). The statewide coverages for the bedrock and unconsolidated aquifer systems can be viewed on our DNR DOW web applications. The Aquifer Systems maps serve as an important tool for understanding water availability across the state and aids water resource management.

# Unconsolidated Aquifer Systems

# Bedrock Aquifer Systems



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