

Ground-Water Availability

Potential Yield Categories

There are seven ground-water yield categories in Indiana as shown on the Generalized Ground-Water Availability Map. Category 1 shows the poorest water yielding areas with well yields usually less than 10 gpm. Dry holes are common in many of these areas. Category 1a depicts areas of marginal ground-water supplies with well yields generally less than 10 gpm; however, yields of 50 gpm occur in localized areas. Some dry holes may also occur in these areas.

Category 2 represents areas of limited groundwater availability but slightly better than categories 1 and 1a. Wells are expected to produce between 5 to 100 gpm, although yields may be less in some areas. Category 3 includes areas with fairly good ground-water conditions, with yields from 100 to 200 gpm. Category 4 indicates those areas with wells capable of producing yields from 200 to 400 gpm. Category 4a identifies areas with very good ground-water conditions with well yields usually between 400 to 600 gpm. Category 5 delineates those areas where wells may potentially yield 1,000 or more gpm.

The various categories of ground-water yields are only a measure of the relative productivity of the several aquifer systems. These yield potentials do not indicate that an unlimited number of wells of the specified yield can be developed in any given location. Detailed studies, including exploratory drilling and test pumping, should be conducted to adequately evaluate the groundwater resource in any given area and the resultant change in water level as produced by the pumpage.

Regional Ground Water Conditions

Northern Indiana

In general, the ground-water resource of northern Indiana can be classified as being good to excellent. Exclusive of some areas in northwestern Indiana, well yields of from 200 to 2,000 gpm or 0.3 to 2.8 million-gallons-per-day (mgd) can be expected in most areas. Major areas of ground-water availability are found where the productive Silurian-Devonian bedrock aquifer system underlies large areas and where deposits of glacial material up to 500 feet in thickness contain highly productive inter-till sand and gravel aquifers. A number of major outwash plain and "valley train" sand and gravel deposits are associated with the St. Joseph, Elkhart, Pigeon, Fawn, Eel, and Tippecanoe River valleys. These sources are capable of large ground-water production. Wells with capacities greater than 400 gpm, or 0.6 mgd, are quite common.

Central Indiana

In the central portion of the state ground-water conditions range from fair to good. Well yields from 100 to 600 gpm or from 0.15 to 0.9 mgd are typical for many large-diameter wells. Both outwash sand and gravel, limestone, and dolomite bedrock aquifers are tapped to meet the needs of the users of large volumes of water. Major ground-water sources are present in the valleys of the West Fork of the White, Whitewater, Eel, and Wabash Rivers, and in portions of the valleys of Eagle, Fall, and Brandywine Creeks and the Blue River. Bedrock aquifers in the Silurian-Devonian limestone sequence are also frequently utilized, and wells in these deposits are capable of yielding from 100 to 600 gpm or 0.15 to 0.9 mgd. Locally, thicker inter-till sand and gravel aquifers are present that are capable of meeting small municipal and industrial needs. These sources are normally capable of yielding up to 300 gpm.

Southern Indiana

Many areas of the southern part of the state are particularly lacking in ground water, and only limited amounts, generally less than 10 gpm, are available to properly constructed wells. In these areas, the major sources of ground water are present in the sand and gravel deposits of the stream valley aquifers. These sand and gravel aquifers are extensively tapped by a number of municipalities, rural water systems, and irrigation users. The valleys of the Eel, Ohio, Wabash, and Whitewater Rivers as well as the East Fork, West Fork, and main stem of the White River are underlain by thick deposits of outwash sand and gravel capable of supplying over 1,000 gpm or 1.4 mgd to properly constructed, large diameter wells.

Generalized Ground-Water Availability

- 10 gallons per minute
- 50 gallons per minute
- 100 gallons per minute
- 200 gallons per minute
- 400 gallons per minute
- 600 gallons per minute
- > 1000 gallons per minute

