Ground Water Resources of DARKE COUNTY

by

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1 0 1 2 Miles

1 0 1 2 Kilometers

CONTOUR INTERVAL 5 FEET

BEDROCK CONTOUR INTERVAL 50 FEET

N

County Line

Township Line

Incorporated City Limit

Well Yields

AREAS IN WHICH YIELDS OF 100 TO 500 GALLONS PER MINUTE MAY BE DEVELOPED.

Principal aquifer is the limestone and dolomite bedrock. Yields of 100 gallons per minute or more can be obtained from wells that penetrate the entire thickness of carbonate rocks.

Principal aquifer is the interbedded sand and gravel deposits in the major buried valley present within Darke County. Yields from properly screened wells have been as great as 500 gallons per minute. The underlying bedrock is the relatively non-water-bearing shales and thin limestones of the Lower Silurian and Upper Ordovician.

AREAS IN WHICH YIELDS OF 25 TO 100 GALLONS PER MINUTE MAY BE DEVELOPED.

Principal aquifer is the limestone and dolomite bedrock. Yields are lower than in the northern portion of the county because of the thinning of the more productive water bearing units in a southerly direction. Long term yields rarely exceed 100 gallons per minute.

Permeable deposits of sand and gravel within the buried valleys are the principal aquifers. Yields ranging from 25 to 100 gallons per minute can be obtained. In the northern half of the county, wells developed in the underlying carbonate bedrock can yield similar amounts of water. However, in the southern half of the county the thin nature of water bearing carbonate rocks prohibit yields greater than 25 gallons per minute.

AREAS IN WHICH YIELDS OF 10 TO 25 GALLONS PER MINUTE MAY BE DEVELOPED.

Adequate domestic yields can be obtained from the interbedded deposits of sand and gravel. Yields rarely exceed 25 gallons per minute due to the extensive deposits of clay within the valley. Drilling into the underlying bedrock is not recommended due to the non-water-bearing nature of the shaley formations.

AREAS IN WHICH YIELDS OF 3 TO 10 GALLONS PER MINUTE MAY BE DEVELOPED.

Meager domestic yields can be obtained from the discontinuous layers of sand and gravel. Typical yields range up to 10 gallons per minute. Drilling into the underlying bedrock is not recommended due to the non-water-bearing nature of the shaley formations.

Adequate domestic yields can be obtained from sand and gravel deposits that overlie the limestone bedrock. These sand and gravel deposits are interbedded within glacial material and yield upwards of 25 gallons per minute. Greater yields can be obtained from the underlying bedrock.

Well Site Symbols

WELL INFORMATION
(SEE NOTE)

DEPTH (ft.) Total depth of well in feet.
AQUIFER TYPE Water–bearing formation
YIELD (gpm) Amount of water a well produces in gallons per minute.
WELL SITE Approximate well location
75-SS-20
26
DEPTH TO BEDROCK (ft.) Depth to bedrock in feet.

WELL TYPES

- Well Site
- Municipal-Industrial Well
- Observation Well Site *
- Test Well**

AQUIFER TYPES

G – Gravel
SG – Sand & Gravel
LS – Limestone

*Observation well sites indicate the location of wells used to collect ground water level information. These wells are part of the state observation well network. Hydrographs of the water levels recorded in these and other State observation wells can be obtained through ODNR–Division of Water.

**Test well sites indicate the location of a test well that was part of a regioinal ground water study. Detailed lithologic logs, water quality analysis and pumping test information for these wells may be available from ODNR–Division of Water.

NOTE

The ground water characteristics have been mapped regionally, based upon interpertations of water well records and the area's geology and hydrology. Mapped well sites were selected as typical for the areas shown.
Information regarding specific sites may be obtained from ODNR–Division of Water.

Bedrock contours modified from Bedrock topography of Darke County, Ohio Geological Survey Open File Map 266, Jack Leow, 1988.

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