Ground-Water Resources of GEAUGA COUNTY

by
Alfred C. Walker

1 0 1 2 Miles

1 0 1 2 Kilometers

CONTOUR INTERVAL 10 TO 20 FEET

County Line

Township Line

Incorporated City Limit

Well Yields

AREAS IN WHICH YIELDS OF MORE THAN 500 GALLONS PER MINUTE CAN BE DEVELOPED.
(Suitable for municipal and large industrial well field development.)

Best ground-water areas in Geauga County. Permeable sand and gravel deposits within a buried valley. Wells may yield as much as 1,000 gallons per minute.

AREAS IN WHICH YIELDS OF 100 TO 300 GALLONS PER MINUTE CAN BE DEVELOPED.
(Suitable for central supplies for large subdivision developments, regional water systems, and moderate-sized industrial well fields.)

Interbedded and interlensing sand, gravel, silt and clay within a buried valley. Yields of as much as 300 gallons per minute are available where sufficient coarse material is found. Exploratory drilling may be required to locate such deposits.

AREAS IN WHICH YIELDS OF 25 TO 100 GALLONS PER MINUTE CAN BE DEVELOPED.
(Suitable for central supplies for small to moderate-sized subdivision development.)

Ground water obtained from sandstones of the Pottsville Group. Principal aquifer is the Sharon Conglomerate. Wells will produce sustained yields of as much as 50 gallons per minute. Greater yields, 100 or more gallons per minute, may be available for short periods of intermittent pumping. Generally, the bedrock is covered with 15 to 75 feet of glacial material.

Valley fill contains thick local deposits of sand and gravel. Wells encountering permeable deposits may yield as much as 100 gallons per minute.

AREAS IN WHICH LESS THAN 25 GALLONS PER MINUTE CAN BE DEVELOPED.
(Suitable for individual wells on moderate-sized lots. Central water supplies not recommended.)

Valley fill containing sand and gravel deposits of limited thickness and extent. Wells encountering permeable deposits may yield 10 to 25 gallons per minute. Wells that do not encounter sand and gravel must be drilled into the bedrock (see below) to obtain water.

Locally, thick deposits of glacial drift cover the bedrock. Although coarse sands and gravels which occur within the drift may supply larger yields, most wells are developed in the underlying sandstones and shales which yield 5 to 15 gallons per minute.

AREAS IN WHICH YIELDS OF 3 TO 10 GALLONS PER MINUTE CAN BE DEVELOPED.
(Suitable for individual wells only, on large lots.)

Ground water is obtained from discontinuous sand and gravel lenses that occur locally in the predominantly fine grained glacial drift filling buried valleys. Unconsolidated material may be more than 200 feet thick. Exceptional yields of as much as 200 gallons per minute have been reported from isolated deposits of coarse gravel. Generally, only small yields with large drawdowns are available.

AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE.
(Suitable for limited domestic development only.)

Buried valleys contain 200 to 300 feet or more of fine sand, silt and some gravel deposits. Drilled wells usually yield meager supplies and additional storage may be necessary for domestic needs.

Impermeable deposits, basically clay overlying shale or shaly sandstones. Very poor area for even minimal domestic supplies. Dry wells are not uncommon.

Well Site Symbols

WELL INFORMATION
(SEE NOTE)

AQUIFER TYPE
Water bearing formation.

DEPTH (ft.)
Total depth of well in feet.

YIELD (gpm)
Amount of water a well produces in gallons per minute.

WELL SITE
Approximate location of a well.

75-SS-20
26

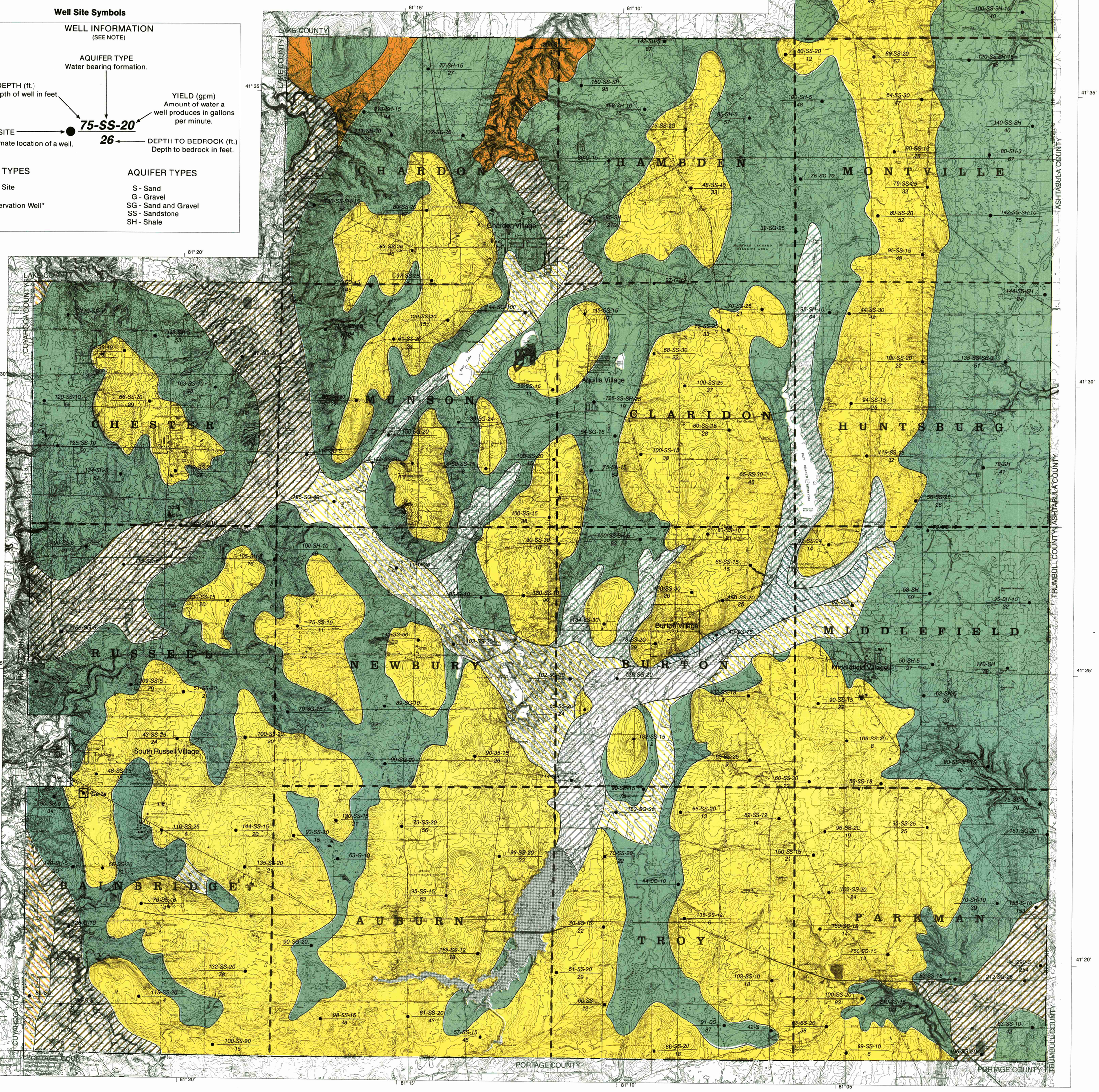
DEPTH TO BEDROCK (ft.)
Depth to bedrock in feet.

WELL TYPES

- ● Well Site
- □ Observation Well*

AQUIFER TYPES

S - Sand
G - Gravel
SG - Sand and Gravel
SS - Sandstone
SH - Shale



Note

The ground-water characteristics have been mapped regionally, based upon interpretations 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 the Division of Water.

* 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.

Published 1978
Reprinted 1990
Ohio Department of Natural Resources
Division of Water
Ground-Water Resources Section
1939 Fountain Square
Columbus, Ohio 43224

Diane Hamilton, Cartographer

Total copies printed: 500
Unit cost: $2.18
Publication date: 7/90

ODNR OHIO DEPARTMENT OF NATURAL RESOURCES
Richard F. Celeste Governor
Joseph J. Sommer Director
Naturally OHIO the heart of it all!