Ground Water Resources of TRUMBULL COUNTY

by
William C. Haiker
(after Crowell, 1979)

1 0 1 2 Miles

1 0 1 2 Kilometers

CONTOUR INTERVAL 10 FEET

County Line

Township Line

Incorporated City Limit

Well Yields

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

Sandstone bedrock aquifer capable of producing over 100 gallons per minute from properly drilled and completed wells. Test drilling would probably locate additional areas of similar yield.

Sand and gravel deposits up to 160 feet deep within a buried valley may yield up to 300 gallons per minute. Highest yields are obtained from large diameter, properly screened and developed wells.

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

Ground water is obtained from sandstone bedrock. Principle aquifers are the Massillon sandstone and the Sharon conglomerate. Sustained yields of 50 gallons per minute are reported with intermittent yields of up to 100 gallons per minute possible. The bedrock is generally covered by less than 85 feet of glacial material.

Valley fill containing thick local deposits of sand and gravel. Wells encountering coarse gravel may yield up to 100 gallons per minute from properly drilled and screened wells. Exploratory drilling may be necessary to locate such deposits.

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

Ground water is obtained from Mississippian and Pennsylvanian sandstone and sandy shale bedrock. Although occasional yields of up to 75 gallons per minute are possible, maximum sustained yields are closer to 25 gallons per minute.

Valley fill containing sand and gravel zones of limited thickness and areal extent at depths of less than 150 feet may yield up to 25 gallons per minute.

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

Shale and sandy shale bedrock wells report yields of 3 to 20 gallons per minute with sustained yields of less than 10 gallons per minute. Flowing wells are occasionally reported in Mesopotamia Township. Up to 85 feet of unconsolidated material may cover the bedrock.

Unconsolidated deposits from 50 to 200 feet thick containing clay and silt with lenses of sand and gravel. Wells drilled into the underlying shale yield little or no water.

Ground water is obtained from discontinuous lenses of silt and very fine sand interbedded in clay. Wells should be completed with a properly sized, commercially manufactured well screen to develop even minimal to moderate domestic or farm supplies. Wells drilled into the underlying shale yield little or no water.

AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE

Shale bedrock overlain by less than 85 feet of clay yields 0 to 3 gallons per minute. Dry holes are possible. Alternate storage devices such as cisterns may be necessary to provide water during times of peak daily use.

Areas in which many wells have encountered brackish or salt water and/or oil and gas residues. Ground water may be unsuitable for consumptive purposes.

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
- A Chemical Analyses

AQUIFER TYPES
- G – Gravel
- SG – Sand & Gravel
- SS – Sandstone
- SH – Shale

Chemical Analysis Table

Well Site	A	B	C	D	E
Depth (Feet)	416	129	115	67	134
Iron (Fe)	6.6	1.9	0.65	1.3	4.2
Hardness as CaCO3	65	162	82	288	216
Dissolved Solids	196	208	1100	418	554
Sulfate (SO)	7.3	27	158	15	2.0
Sodium (Na)	48	9.5	384	52	137
Chloride (Cl)	63	6.0	420	16	47
Fluoride (F)	0.1	0.2	0.3	0.3	0
pH	6.5	7.7	8.1	7.7	8.0
Aquifer	Sand-stone	Sand& gravel	Shale	Shale	Sand& Gravel

Chemical constituents listed as milligrams per liter

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 ODNR–Division of Water.

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Water Resources Section
1939 Fountain Square
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J. Gerrie McCall, Cartographer

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George V. Voinovich
Governor
Donald C. Anderson
Director