Ground-Water Resources of ERIE COUNTY

by

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Location

0 1 2 3 4

Scale in miles 1:62,500

Contour Interval: 10 feet

LEGEND

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

Yields of more than 500 gallons per minute have been developed at depths of less than 200 feet in cavernous limestone and dolomite. Domestic supplies are generally obtained at depths of around 100 feet.

Hydrogen sulfide, in varying amounts, may be encountered in the bedrock.

Areas in which there is a potential concentration of contamination due to the underground disposal of storm wastes from Bellevue.

Municipal and industrial water supplies are available from wells drilled into permeable sand and gravel deposits in ancient buried valley.

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

Buried valley containing more than 150 feet of unconsolidated deposits. Much of the valley fill consists of clay and fine sand. Extensive test drilling may be needed to locate coarse materials capable of supplying larger yields to drilled wells.

AREAS IN WHICH YIELDS OF 5 TO 25 GALLONS PER MINUTE MAY BE DEVELOPED.

Yields of 15, or less, gallons per minute are developed from wells drilled into the limestone. Hydrogen sulfide may be present in varying amounts.

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

Ground water obtained from the Berea sandstone. Although this formation covers a larger area than shown, its thickness and recharge potential limit productivity to isolated zones.

AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE

Limited quantities of ground water are obtained from thin, discontinuous sand and gravel deposits interbedded in fine, sandy clay or from the underlying shale. Drilling deeper than 30 feet into the shale is not recommended. Occasional gas or salt noted in the eastern half of the county.

Larger yields may be obtained in western Huron and Oxford townships and southeastern Perkins Township. Wells may encounter water-bearing limestone beneath as much as 60 feet of impervious shale.

Thick deposits (as much as 90 feet) of clay, sand and gravel cover the shale bedrock. Where permeable sands and gravels are present, adequate domestic supplies are obtained.

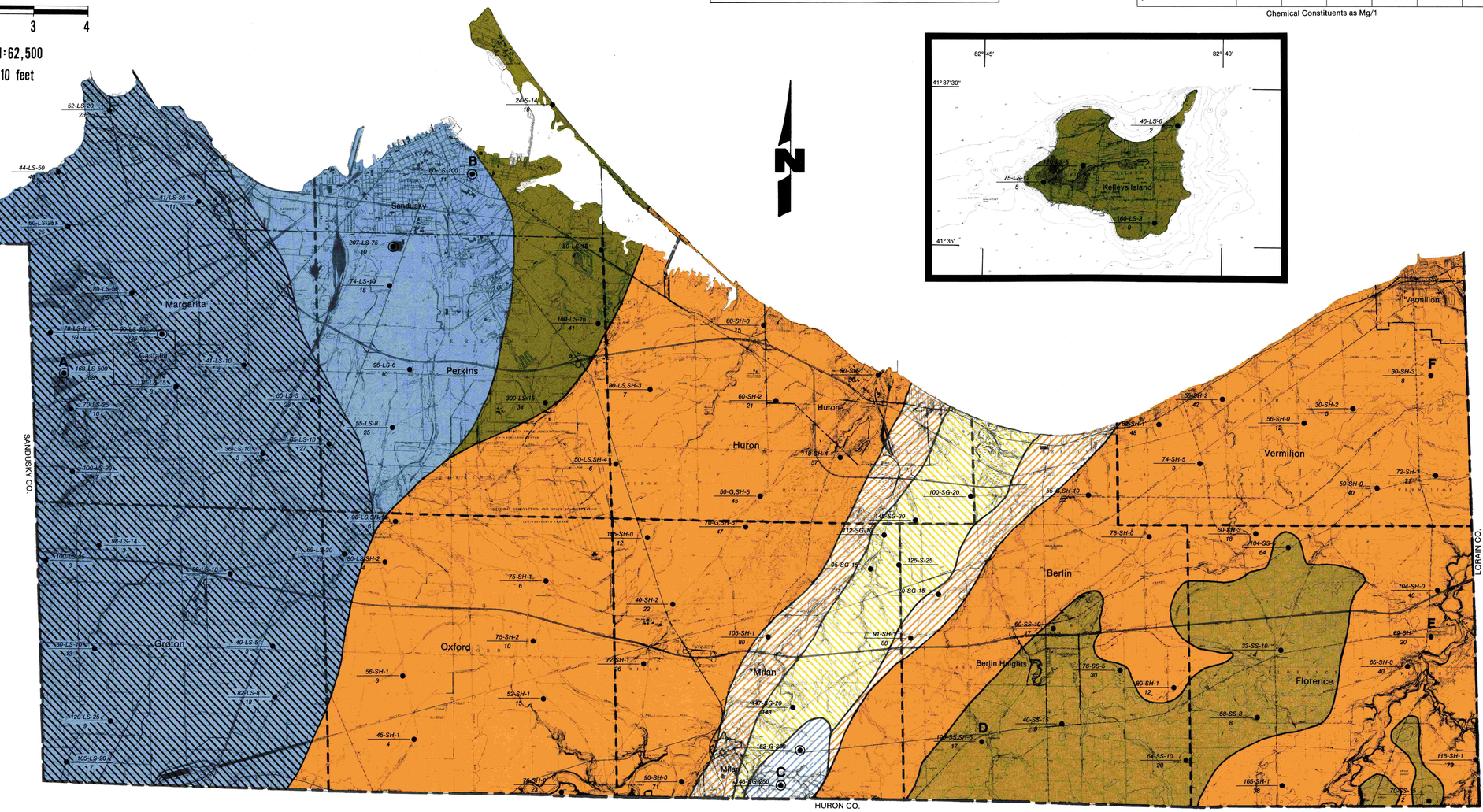
The ground-water characteristics of Erie County have been mapped regionally, based upon interpretations of 2100 water well records and the area's geology and hydrology. Well log data on the map were selected as typical for the areas shown.

Information regarding specific sites may be obtained from the Division of Water.

Chemical Analysis Table

Well site	A	B	C	D	E	F
Depth (ft.)	168	60	146	100	69	30
Aquifer	LS	LS	SG	SS	Sh	Sh
Iron (Fe)	0.33	0.02	1.3	0.92	1.1	0.39
Calcium (Ca)	536.	130.	82.	86.	8.2	4.0
Sodium (Na)	6.5	29.	30.	21.	479.	100.
Chloride (Cl)	12.0	49.	0.6	10.	134.	10.
Fluoride (F)	1.0	0.3	0.43	0.2	0.8	0.2
Sulfate (SO_4)	1224.	232.	68.	72.	188.	16.0
Hydrogen Sulfide (H_2S)	0.5	—	—	—	Trace	Trace
Hardness as $CaCO_3$	1537.	472.	282.	301.	32.0	14.0
Dissolved Solids	2150.	630.	—	328.	1230.	267.
pH	7.3	6.9	7.5	6.8	8.0	6.7

Chemical Constituents as Mg/1



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