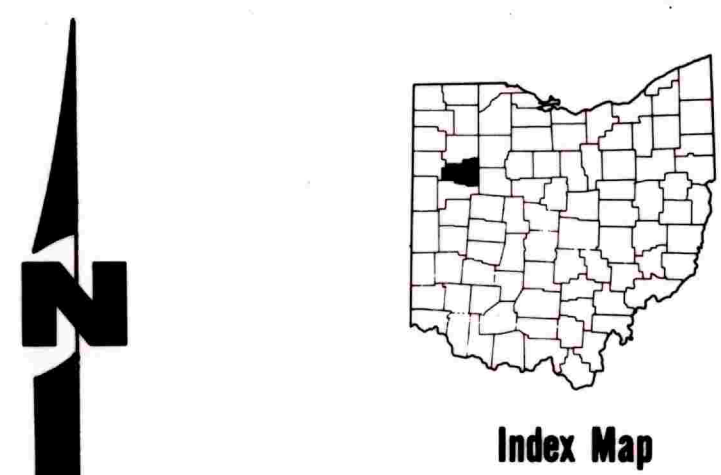


Ground-Water Resources of ALLEN COUNTY

by
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Scale in miles



1:62,500

LEGEND

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

Principal aquifer is the limestone and dolomite of the Bass Island and Lockport groups. Yields in excess of 300 gallons per minute may be developed from various solution cavities in the bedrock. Farm and domestic supplies of 10 to 20 gallons per minute may be obtained at depths of less than 100 feet.

Bedrock is covered with 10 to 70 feet of glacial till consisting of clay, sandy-clay and lenses of sand and gravel. Hydrogen sulfide (H₂S) is often encountered in the bedrock.

Deep sand and gravel lenses in ancestral Teays Valley overlap by glacial till and moraine. Sand and gravel deposits between thick clay layers may yield 10 to 20 gallons per minute to screened wells. If permeable material is not encountered, wells should be drilled deeper into the underlying bedrock.

TEST WELL	A	B	C	D	E
DEPTH (Feet)	260	300	360	360	370
AQUIFER	LS	LS	LS	LS	LS
CALCIUM (Ca)	156	136	109	139	108
MAGNESIUM (Mg)	66	60	50	59	47
BICARBONATE (HCO ₃)	333	394	354	415	350
HARDNESS AS (CaCO ₃)	661	587	478	590	463
PH	7.2	7.3	7.6	7.2	7.4
CHLORIDE (Cl)	32	28	44	28	30
NITRATE (NO ₃)	0.1	0.2	0.1	0.2	0.2
SULFATE (SO ₄)	404	295	197	256	197
SULFIDE (H ₂ S)	22	17	1.0	7.0	2.9
FLUORIDE (F)	1.6	1.6	1.0	1.4	1.4
DISSOLVED SOLIDS	899	765	629	734	604
PUMPING RATE (GPM)	75	600	150	300	175

SYMBOLS

Depth (ft) - Water Bearing Formations - Yield (gpm)
Depth to Bedrock (ft)

850

Bedrock Surface Contour

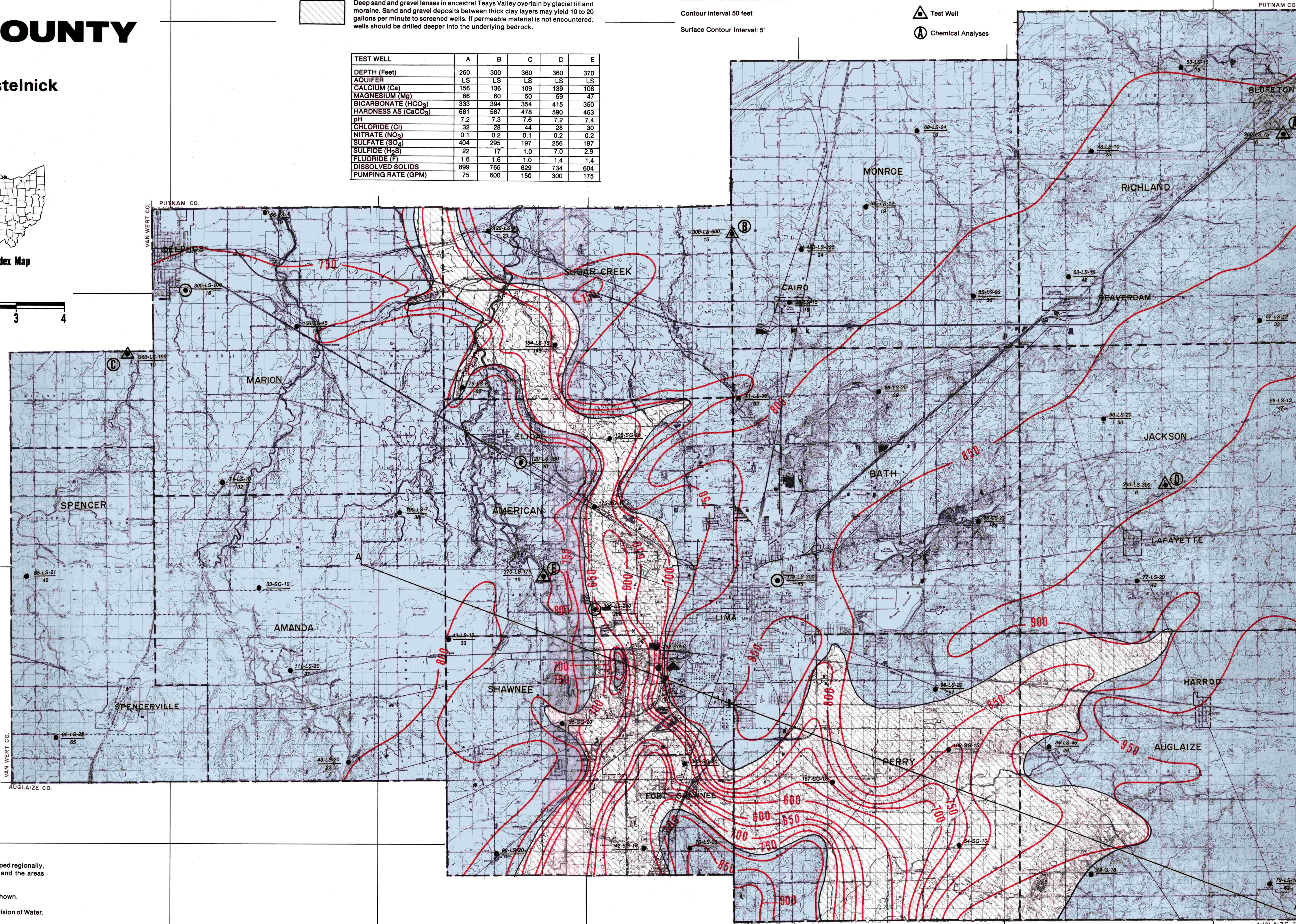
Altitude in Feet above mean sea level

Contour interval 50 feet

Surface Contour Interval: 5'

LS - Limestone
G - Gravel
SG - Sand and Gravel

● Domestic Well
○ Industrial-Municipal Well
△ Test Well
Ⓐ Chemical Analyses



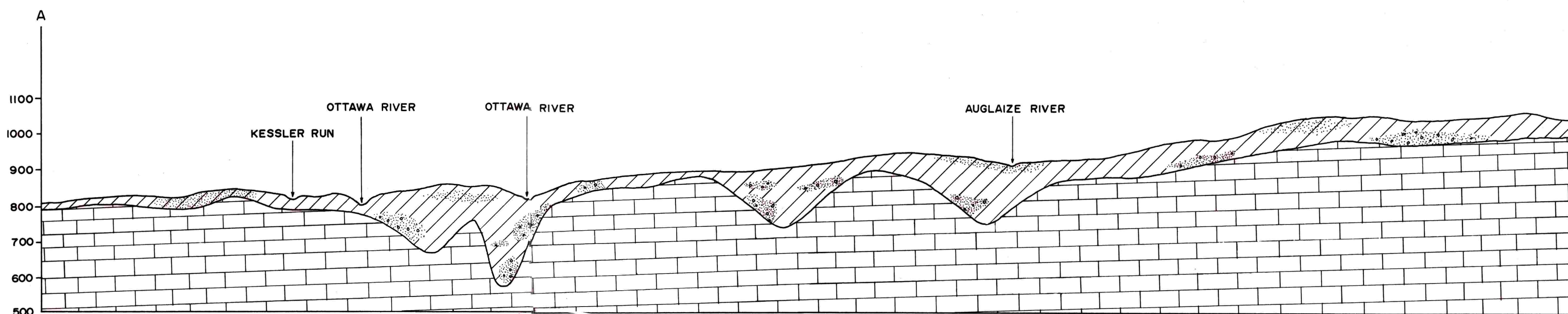
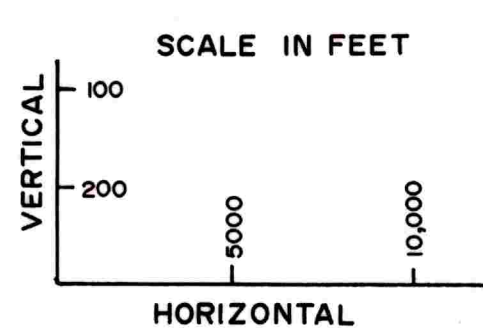
The ground-water characteristics of Allen County have been mapped regionally, based on the interpretations of over 2,000 water well records and the area geology and hydrology.

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.

"This map was made possible in part by a grant from the U.S. Water Resources Council".

- CLAY
- SANDY CLAY
- SAND & GRAVEL
- LIMESTONE & DOLOMITE



CROSS SECTION FROM A TO A' SHOWING THICKNESS OF MATERIAL IN BURIED VALLEYS