

Ground-Water Resources of JEFFERSON COUNTY

by Alfred C. Walker



CONTOUR INTERVAL 20 FEET

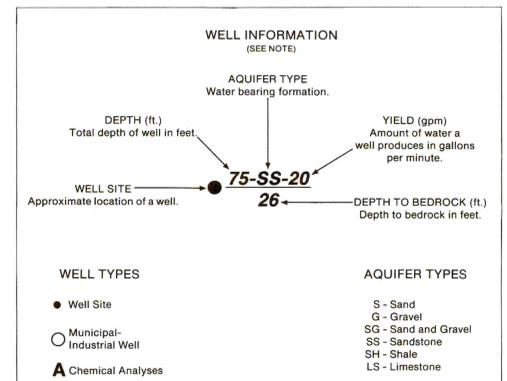
- County Line
- Township Line
- Incorporated City Limit



Well Yields

- AREAS IN WHICH SEVERAL HUNDRED GALLONS PER MINUTE MAY BE DEVELOPED**
 Large industrial and municipal supplies are available from thick, permeable sand and gravel deposits. This valley fill material ranges from 65 to 90 feet thick and is hydraulically connected to the Ohio River. Yields in excess of 1000 gallons per minute may be developed from horizontal collector wells. Wells in this area supply much of the county through regional water systems.
- AREAS IN WHICH YIELDS OF 25 TO 100 GALLONS PER MINUTE MAY BE DEVELOPED**
 Smaller industrial supplies may be available from sand and gravel deposits in areas which are not immediately adjacent to the Ohio River.
- AREAS IN WHICH YIELDS OF 5 TO 25 GALLONS PER MINUTE MAY BE DEVELOPED**
 Fill, as much as 50 feet thick, along portions of stream valleys contains lenses of sand and gravel which may yield domestic water supplies. Otherwise, very limited quantities are available from the underlying bedrock formations.
- AREAS IN WHICH YIELDS OF 3 TO 5 GALLONS PER MINUTE MAY BE DEVELOPED**
 Locally, deposits of silt and clay interbedded with thin lenses of sand and gravel may supply limited domestic needs. If not, wells must be drilled into the underlying bedrock which is described below.
- AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE**
 Very limited, and often inadequate, supplies are obtained from thin beds of sandstone, shale and limestone. Yields average less than two gallons per minute.
- Yields similar to the above may be available from alluvium in shallow stream valleys.

Well Site Symbols



Chemical Analysis Table

Well Site	A	B	C
Aquifer	SS/SH	S	SG
Calcium (Ca)	101	203	94
Chloride (Cl)	45	130	24
Fluoride (F)	.12	.06	.22
Iron (Fe)	.18	.080	.00
Magnesium (Mg)	47	25	14
Manganese (Mn)	.18	.03	.26
Sulfate (SO ₄)	177	461	166
Total Hardness	370	--	244

Chemical constituents as milligrams per liter (mg/l)

Note

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