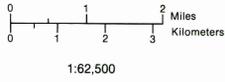
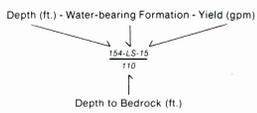


Ground-Water Resources of CLERMONT COUNTY

by Alfred C. Walker



Well Site Symbols



- S - Sand
- G - Gravel
- SG - Sand & Gravel
- LS - Limestone
- SH - Shale

- Well Site
- Municipal-Industrial Well
- ▲ Chemical Analyses

Chemical Analysis Table

Well Site	A	B	C	D	E
Depth of well (ft.)	58	78	80	89	105
Aquifer	S-G	S-G	S-G	S-G	S-G
Hardness as CaCO ₃	—	—	—	260	204
pH	7.2	7.4	7.2	7.6	7.6
Nitrate (N)	3.95	1.72	1.2	2.1	0.0
Sulfate (SO ₄)	41.0	46.0	98.0	41.0	87.0
Chloride (Cl)	59.0	37.0	28.0	8.0	26.0
Fluoride (F)	0.14	0.18	0.1	0.3	0.25
Iron (Fe)	0.03	0.03	0.45	0.33	0.20
Manganese (Mn)	0.03	0.03	0.26	0.12	0.44

Chemical constituents as milligrams per liter (mg/l).

Well Yields

AREAS IN WHICH YIELDS OF SEVERAL HUNDRED GALLONS PER MINUTE CAN BE DEVELOPED

Permeable sand and gravel deposits adjacent to the Little Miami and Ohio Rivers constitute the best ground-water areas in Clermont County. Yields of as much as 800 gallons per minute have been reported where recharge is available from the river.

AREAS IN WHICH YIELDS OF AS MUCH AS 100 GALLONS PER MINUTE CAN BE DEVELOPED

Valley fill contains thick local deposits of sand and gravel. Wells encountering permeable deposits may yield as much as 100 gallons per minute. Small diameter domestic wells may only produce 15 to 25 gallons per minute. Shale bedrock will yield very limited supplies.

AREAS IN WHICH YIELDS OF MORE THAN 10 GALLONS PER MINUTE CAN BE DEVELOPED

Valley fill containing sand and gravel deposits of limited thickness and extent. Thicker sand and gravel zones may yield as much as 15 to 20 gallons per minute to properly screened wells. Wells drilled into the underlying bedrock generally yield less than 3 gallons per minute.

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

Variable thicknesses of clay with thin lenses of sand and gravel yield less than 10 gallons per minute to screened wells. Wells not encountering sand and gravel produce less than 3 gallons per minute from the underlying limy shale.

AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE

Poor source of ground water. Bedrock consists of interbedded plastic shales and thin limestone layers. If water is present in the rock, it usually occurs in the upper few feet where the strata have been somewhat weathered and broken. Wells seldom produce more than 3 gallons per minute. Many are inadequate. Overlying glacial cover generally ranges from 20 to 50 feet thick and consists largely of clay. Occasional lenses of sand and gravel will supply limited yields. Larger domestic yields (as much as 10 gallons per minute) may be available from locally thick deposits of sand and gravel along portions of stream valleys in the northeastern quarter of the county.

Note: Because water supplies in much of Clermont County are limited, a large part of the county is served by regional water systems.

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.