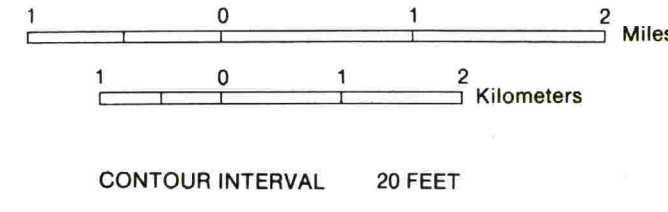


# Ground Water Resources of HOCKING COUNTY

by  
Alfred C. Walker



County Line  
Township Line  
Incorporated City Limit



**Chemical Analysis Table**

Well Site	A	B	C	D
Calcium (Ca)	84.7	80.0	90.0	69.0
Chloride (Cl)	11.0	32.0	88.0	3.0
Fluoride (F)	-	0.20	-	0.10
Hardness [CaCO <sub>3</sub> ]	-	300.0	-	275.0
Iron (Fe)	0.25	2.8	2.5	12.0
Magnesium (Mg)	26.5	24.0	28.0	25.0
Manganese (Mn)	-	0.49	0.27	0.61
Sodium (Na)	10.0	13.0	69.0	2.3
Sulfate (SO <sub>4</sub> )	15.0	29.0	80.0	160.0
Dissolved Solids	346.0	346.0	554.0	346.0
Aquifer	SG	SG	SG	SS

Chemical constituents as milligrams per liter (mg/l)

**Well Site Symbols**

**WELL INFORMATION**  
(SEE NOTE)

AQUIFER TYPE  
Water bearing formation.

DEPTH (ft.)  
Total depth of well in feet

YIELD (gpm)  
Amount of water a well produces in gallons per minute.

WELL SITE  
Approximate location of a well.

**75-SS-20**  
**26**

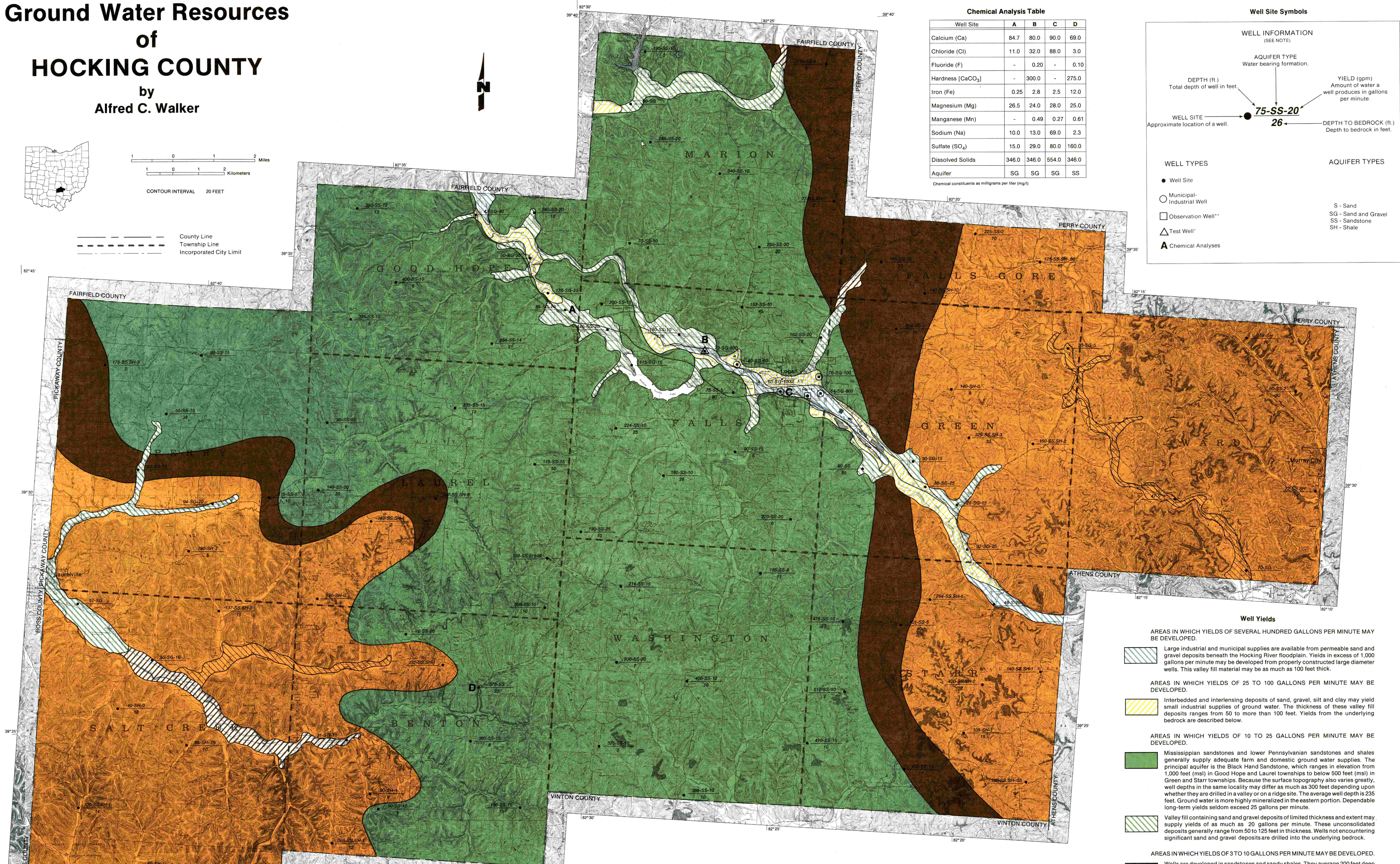
DEPTH TO BEDROCK (ft.)  
Depth to bedrock in feet.

**WELL TYPES**

- Well Site
- Municipal-Industrial Well
- Observation Well
- Test Well
- Chemical Analyses

**AQUIFER TYPES**

- S - Sand
- SG - Sand and Gravel
- SS - Sandstone
- SH - Shale



**Well Yields**

**AREAS IN WHICH YIELDS OF SEVERAL HUNDRED GALLONS PER MINUTE MAY BE DEVELOPED.**

- Large industrial and municipal supplies are available from permeable sand and gravel deposits beneath the Hocking River floodplain. Yields in excess of 1,000 gallons per minute may be developed from properly constructed large diameter wells. This valley fill material may be as much as 100 feet thick.

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

- Interbedded and interlensing deposits of sand, gravel, silt and clay may yield small industrial supplies of ground water. The thickness of these valley fill deposits ranges from 50 to more than 100 feet. Yields from the underlying bedrock are described below.

**AREAS IN WHICH YIELDS OF 10 TO 25 GALLONS PER MINUTE MAY BE DEVELOPED.**

- Mississippian sandstones and lower Pennsylvanian sandstones and shales generally supply adequate farm and domestic ground water supplies. The principal aquifer is the Black Hand Sandstone, which ranges in elevation from 1,000 feet (msl) in Good Hope and Laurel townships to below 500 feet (msl) in Green and Starr townships. Because the surface topography also varies greatly, well depths in the same locality may differ as much as 300 feet depending upon whether they are drilled in a valley or on a ridge site. The average well depth is 235 feet. Ground water is more highly mineralized in the eastern portion. Dependable long-term yields seldom exceed 25 gallons per minute.
- Valley fill containing sand and gravel deposits of limited thickness and extent may supply yields of as much as 20 gallons per minute. These unconsolidated deposits generally range from 50 to 125 feet in thickness. Wells not encountering significant sand and gravel deposits are drilled into the underlying bedrock.

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

- Wells are developed in sandstones and sandy shales. They average 200 feet deep and are generally adequate for domestic supplies. Salt water is frequently reported in this portion of Starr, Green and Falls Gore townships.
- Fill along stream valleys consists largely of clay with occasional thin lenses of sand and gravel which may yield domestic water supplies. Otherwise, wells must be drilled into the underlying bedrock.

**AREAS IN WHICH YIELDS SELDOM EXCEED 3 GALLONS PER MINUTE MAY BE DEVELOPED.**

- Very limited supplies are available from wells drilled into alternating layers of shale and thin sandstone. The average well depth is 135 feet.
- Well supplies are meager whether they are developed in the shallow fill of stream valleys or in the underlying sandstone and shale bedrock.

**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 the Division of Water.

\*\* Observation well sites indicate the location of wells used to collect ground water level information. These wells are part of the State observation well network. Hydrographs of the water levels recorded in these and other State observation wells can be obtained through ODNR-Division of Water.

\* Test well sites indicate the location of a test well that was part of a regional ground water study. Detailed lithologic logs, water quality analysis and pumping test information for these wells may be available from ODNR-Division of Water.