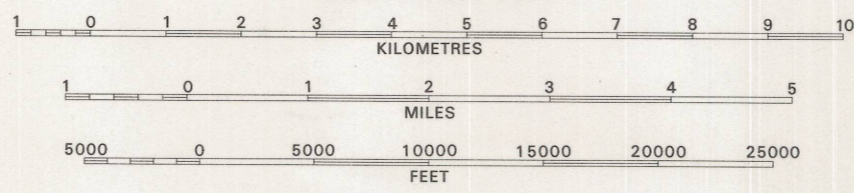


Edited by the Geological Survey

Compiled in 1976 from USGS 1:24 000-scale topographic maps dated 1946-1966

Projection and 10 000-metre grid ticks, zone 16: Universal Transverse Mercator.  
25 000-foot grid ticks based on Tennessee coordinate system  
1927 North American datum

SCALE 1:100 000



NATIONAL GEODETIC VERTICAL DATUM OF 1929

This map complies with national map accuracy standards

EXPLANATION

- Large sinkhole (actual outline shown)
- x Smaller sinkhole

Sinkhole is a general term for a closed depression that is formed either by solution of the surficial limestone or by collapse of underlying caves. Although they can be almost any shape, many sinkholes in this area are linear, indicating solution along joint systems. Topography characterized by many sinkholes, disappearing streams, and caves is termed "karst." Most of the sinkholes in the county are developed in the Stones River Group (eastern one-half of county).

Several environmental problems are related to karst terrain. Among these are collapse potential, flooding, and ground-water pollution.

Cavern collapse is the most serious potential hazard related to karst. Most recently documented collapse events in this region are due to failure of soil "bridges" over limestone caverns rather than collapse of cave roofs in bedrock. Heavy-load structures over limestone can cause collapse, however. Construction planning in a karst area should include consideration of collapse potential in zoning, site investigation, and construction design. Since sinkholes develop along joints, avoidance of construction over zones along lines of sinkholes is one method of dealing with this problem. Structures should be built a reasonable distance from any existing sinkhole, if possible. For larger structures, exploratory foundation drilling is recommended to detect underlying but unseen caverns.

Dwellings or other structures located in sinkholes are subject to damage by flooding. Sinkholes are natural conduits for surface water moving into the subsurface. When sinkhole outlets become clogged with debris, or when precipitation is great over a short-time interval, flooding can occur. Initial planning should include a review of topographic maps for the presence of sinkholes. Since all depressions cannot be shown on map (due to contour interval) accurate surveying should be done to be certain building sites are located outside of sinkholes.

It is unlawful to dispose of any waste in a sinkhole, and sinkholes must never be used for this purpose. Such disposal has been a common practice in the past, however, and has frequently resulted in contamination of ground water. Since so little filtration occurs in water moving into the subsurface through a sinkhole, little attenuation of hazardous or noxious materials occurs.

Data Sources

- Tennessee Valley Authority—U.S. Geological Survey 7.5-minute quadrangle maps (see Index Map):
- |                   |                |              |
|-------------------|----------------|--------------|
| Campbells Station | Lynnville      | Spring Hill  |
| Carters Creek     | Mount Joy      | Summertown   |
| Columbia          | Mount Pleasant | Theta        |
| Glendale          | Primm Springs  | Verona       |
| Godwin            | Rally Hill     | Williamsport |
| Greenfield        | Sandy Hook     |              |

Prepared in cooperation with U.S. Geological Survey

SINKHOLE MAP

Compiled by  
Robert A. Miller  
1983

MAURY CO., TENN.

N3524.5-W8646.5/27 x 35

1966