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MAPPED KARST GROUND-WATER BASINS IN THE CAMPBELLSVILLE 30 x 60 MINUTE QUADRANGLE

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LEGEND

- Area of potential karst ground-water basin development
- Area of limited karst ground-water basin development
- Inferred perennial ground-water flow route
- Subsurface overflow (high-flow) route
- Surface overflow (high-flow) route
- Ground-water basin catchment boundary
- Intermittent lake
- Stream sink or swallet
- Underflow spring (perennial)
- Overflow spring (high flow)
- Karst window or sinking spring
- Cave stream
- Other tracer-injection point
- Water well
- (0793) Kentucky Division of Water AKGWA spring identification number
- *GORIN MILL* Spring name

EXPLANATION

This map shows karst ground-water basins in the Campbellsville quadrangle, determined primarily by ground-water tracer studies. It can be used to quickly identify the ground-water basins and springs to which a site may drain. Major springs and the relative size of their catchment areas can be evaluated for potential as water supplies. The map also serves as a geographic index to literature on karst ground water in the area.

This map is designed for regional and preliminary hydrologic investigations. Features such as springs and swallets are much too small to precisely locate on this map with a scale small enough to show regional relationships. The user is referred to the literature for detailed site descriptions. The data used to compile this map were obtained by numerous investigators over the last 25 years. The underflow spring draining a ground-water basin is assigned a unique identification number, referred to as the AKGWA number (Assembled Kentucky Ground Water Database). Individual basins are identified by the underflow spring name and AKGWA number. The authors of tracer data are identified by number in the "Data Source" column of the key, and are listed in "References Cited" in order of publication or research date.

Although ground-water flow routes shown here have been established by tracer studies, with the exception of mapped cave streams, the precise flow paths are unknown and are inferred or interpreted using water-level data, geologic structure, or surface features. Arrows show the direction of ground-water flow and tracer recovery locations. Conduit flow is illustrated as either thick trunk-flow lines or thin tributary-flow lines. The locations of some ground-water basins are inferred, based on the existence of a significant spring system and the delineation of adjacent basins. The position of ground-water basin boundaries should be considered approximate because of the map's scale and because boundaries can shift during high-water conditions. Also, excess flow may exit or enter a basin via surface or subsurface overflow routes. Additional overflow routes probably exist. Although most of the results of ground-water tracing shown on this map were obtained during moderate- or high-flow conditions, the ground-water basins are illustrated in base flow because base flow is the most common flow condition. The main spring draining the basin is assumed to be an underflow spring that preferentially drains base flow. Overflow springs discharge during high flow.[1] Generally, names of ground-water basins are derived from these main springs. Not all additional springs are shown because of the small map scale.

DISCLAIMER: This map is subject to revision upon receipt of new hydrologic data. The unshaded area (shown in white on the map) is karst. The shaded area (shown in light brown) is largely underlain by noncarbonate rocks and has minimal development of karst. Karst features are only shown in those areas where tracer tests have been conducted. The user should consult the "References Cited" for additional information.

[1]Worthington, S.R.H., 1991, Karst hydrogeology of the Canadian Rocky Mountains: Hamilton, Ontario, McMaster University, Ph.D. dissertation, 380 p.

N

1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 KILOMETERS
1 0 1 2 3 4 5 6 7 8 9 10 MILES
1000 0 5000 10 000 15 000 METERS
5000 0 10 000 20 000 30 000 40 000 50 000 FEET

SCALE 1:100 000
UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 16
Contour interval 20 meters

KEY

AKGWA No.	*Spring Name*	*Data Source*
0082	Pike	1, 7, 8, 10
0083	Turnhole	2, 4, 7, 8, 10, 14
0096	Mill	7, 8, 10
0110	Lawler Bluehole	7, 8, 10
0115	Rio	13
0137	Garvin	7, 8, 10, 11
0138	Boyd	7, 8, 10, 12
0155	Grady	3, 7, 8, 10
0156	300	7, 8, 10
0225	Webb Cave/Bacon Creek	8, 9, 10
0226	Roundstone	9, 15
0228	Bell	9
0230	Goodman	9
0231	Your Guess	9, 15
0232	McCorkle	9, 15
0233	Munfordville West	9, 15
0234	X	9, 15
0240	Boiling	9, 15
0243	Rumble	9, 15
0244	Head of Barren Fork	8, 10
0246	Simmons Mill	8, 10
0247	Seven	8, 10
0248	Moonshine	8, 10
0251	Suds	8, 10
0255	Bush Island	8, 10
0462	Marcum Mill	7, 8, 10
0792	McCoy Blue Hole	7, 8, 10
0793	Gorin Mill	6, 7, 8, 10, 11, 12
0794	Buckner	5, 13, 15
0795	Log	9, 15
0796	Jones School	13, 15
0797	Cottrell	9, 13, 15
0798	Johnson	9, 13, 15
0799	Roaring	9, 13, 15
0800	Bailey Falls	9, 13, 15
0801	Powder Mill	9, 15
0802	Lanes Mill	9, 13, 15
1191	Wilkerson Bluehole	7, 8, 10, 11

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CAUTION: Prolonged exposure to sunlight or contact with water will damage this map.

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Base map compiled from U.S. Geological Survey digital line graphs.

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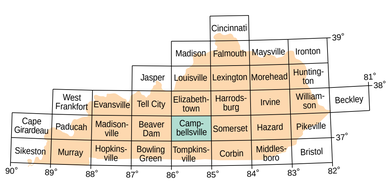

Locations of the 1:100,000-scale quadrangle maps covering Kentucky. This map, the Campbellsville quadrangle, is highlighted in green.

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Cartography by Terry Hounshell

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