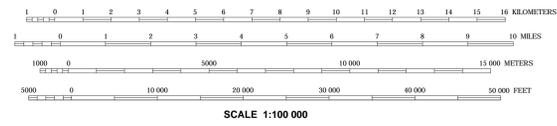


**MAPPED KARST GROUND-WATER BASINS IN THE LEXINGTON 30 X 60 MINUTE QUADRANGLE**

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**LEGEND**

- Dye-trace vector or inferred ground-water flow route
- High-flow (flood) overflow route
- Dye recovery point (typically a spring)
- Dye injection point
- Ground-water basin catchment boundary
- Data-source reference
- Kentucky Division of Water AKCWA (Assembled Kentucky Ground Water database) spring identification number
- Spring name

**EXPLANATION**

Ground-water dye-trace experiments conducted by numerous researchers over the past 50 years were used to construct this map. The authors have interpreted ground-water flow paths and basin boundaries from the dye traces and additional data from both the cited publications and personal knowledge. The dye input locations (places where dye can be poured into the ground) may represent sinking streams, swallow holes, caves, or manmade injection points such as wells. Dye recovery points, while normally springs, may also be karst windows (sinkholes with a spring and swallow hole) and wells. The position of ground-water basin boundaries should be considered approximate because of the map scale and because ground-water basin boundaries in karst settings can shift, depending upon flow conditions. Also, as indicated on the map for several basins, during flooding excess flow may leave the basin via overflow routes, either underground or on the surface. Overflow routes in addition to those shown probably exist.

This map should be used for regional and initial investigations. Springs and swallow holes are much too small to precisely locate on a map area large enough to reveal the regional relationship of their ground-water basins. The map can be used to quickly identify the ground-water basins and springs to which a site may drain. Also, major springs and the relative size of their catchment areas can be evaluated for potential as water supplies. The map is also a geographic index to karst ground-water-related literature for the area.

**DISCLAIMER:** All ground-water flow routes and basin boundaries are inferred and subject to revision upon receipt of new data. Furthermore, areas on the map with no karst features may not actually be devoid of karst; there may simply have been no dye traces performed in these areas as yet. The user should consult the cited reference for more detailed information.

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