Groundwater

Groundwater is the water in pores and voids between rock and soil materials. It can be active or standing. Active groundwater can be found in open or closed aquifers, while standing groundwater is found in standing water bodies such as lakes and ponds.

Sinkholes

Sinkholes are depressions on the land surface where groundwater has drained underground. They are usually circular and often form in karst areas, where soluble rocks such as limestone, dolomite, and gypsum are present.

Water Quality

Water in alluvium may contain salt or hydrogen sulfide, especially at depths greater than 100 feet. Water is hard or very hard but otherwise of good quality. Groundwater in upland areas may contain iron, manganese, and sulfur; some wells may be subject to arsenic contamination. Water in the karst aquifers may contain iron, manganese, and hydrogen sulfide.

Urban Water Supply

The Louisville Water Company's concrete reservoir is located on the Falls of the Ohio, and the water is supplied to Louisville through the Falls of the Ohio Water Treatment Plant. The reservoir and plant are located in the Louisville-West quadrangle, Jefferson County, Kentucky. Photograph by Barret Davis, Kentucky Geological Survey.

Highway Culverts

Highway culverts should be designed to pass flood waters without restriction. Culverts should be constructed to pass flood waters of at least the 100-year flood stage.

Sinkhole Protection Areas

Sinkhole protection areas are identified on the Generalized Geologic Map of the Louisville West and Lanesville quadrangles, Jefferson County, Kentucky. These areas are primarily located in the central and eastern parts of the county, where sinkholes are common. The map indicates the areas affected by sinkholes and provides guidance on how to avoid or mitigate the effects of sinkholes in the area.

Additional Planning Resources

Additional planning resources are available at the Kentucky Geological Survey's website. These resources include geologic maps, geologic reports, and other information related to the geology of Jefferson County, Kentucky.