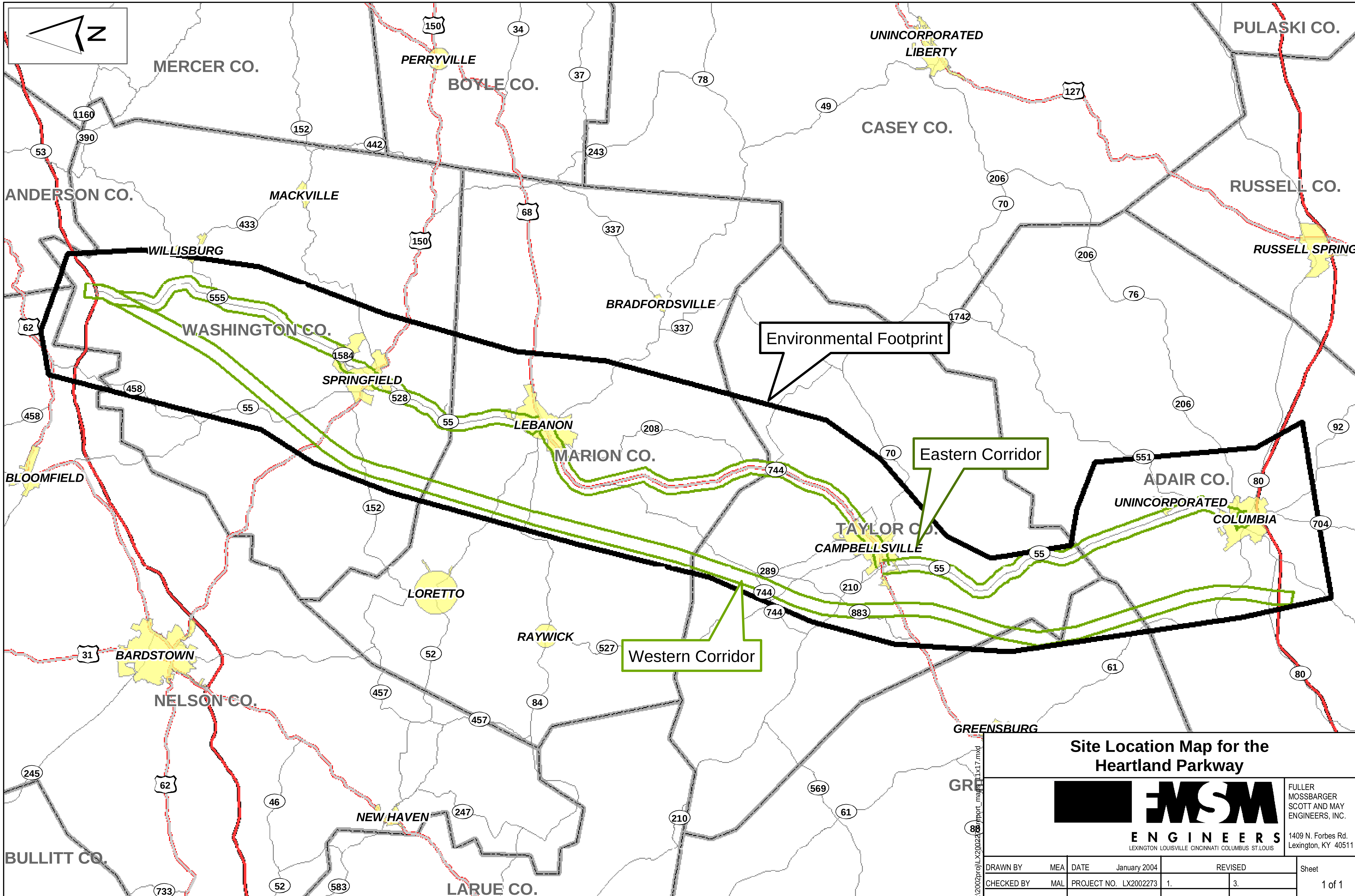
APPENDIX E.
GEOTECHNICAL OVERVIEW

Appendix I

Site Location Map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PERRYVILLE
BOYLE CO.
UNINCORPORATED
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PULASKI CO.
CASEY CO.
RUSSELL CO.
ANDERSON CO.
MACKVILLE
WILLISBURG
RUSSELL SPRINGS
BRADFORDSVILLE
WASHINGTON CO.
Environmental Footprint
SPRINGFIELD
LEBANON
MARION CO.
Eastern Corridor
ADAIR CO.
UNINCORPORATED
COLUMBIA
BLOOMFIELD
TAYLOR CO.
CAMPBELLSVILLE
LORETTO
RAYWICK
Western Corridor
BARDSTOWN
NELSON CO.
GREENSBURG
GRE
NEW HAVEN
BULLITT CO.
LARUE CO.
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127
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Site Location Map for the Heartland Parkway

FMSM ENGINEERS
LEXINGTON LOUISVILLE CINCINNATI COLUMBUS ST.LOUIS

FULLER MOSSBARGER SCOTT AND MAY ENGINEERS, INC.
1409 N. Forbes Rd.
Lexington, KY 40511

DRAWN BY MEA	DATE January 2004	REVISED		Sheet
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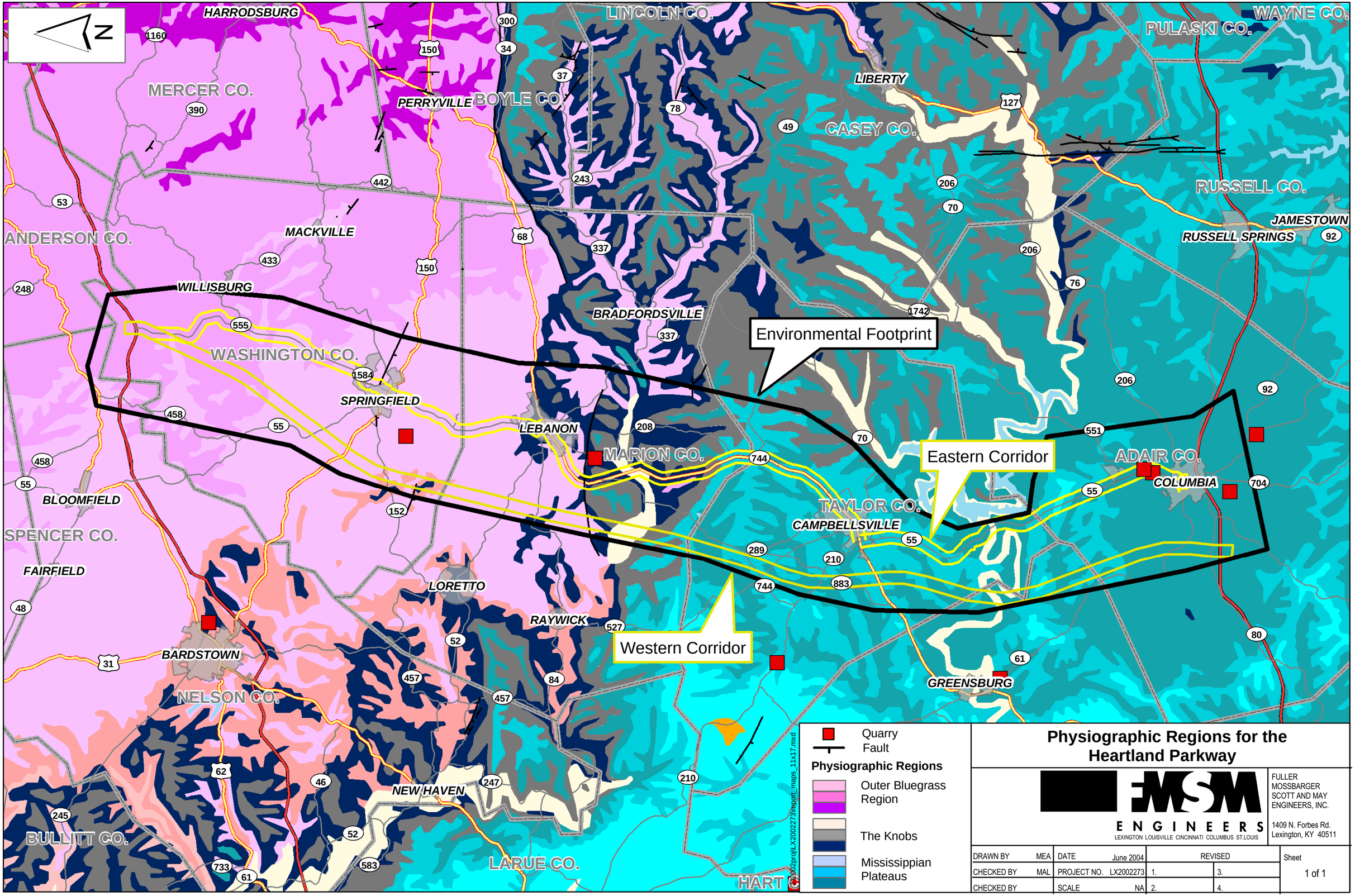
Appendix II

Physiographic Regions for Heartland Parkway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PERRYVILLE
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LINCOLN CO.
LIBERTY
CASEY CO.
PULASKI CO.
WAYNE CO.
RUSSELL CO.
JAMESTOWN
RUSSELL SPRINGS
ANDERSON CO.
MACKVILLE
WILLISBURG
WASHINGTON CO.
SPRINGFIELD
BRADFORDSVILLE
LEBANON
MARION CO.
ADAIR CO.
COLUMBIA
TAYLOR CO.
CAMPBELLSVILLE
GREENSBURG
Environmental Footprint
Eastern Corridor
Western Corridor
BLOOMFIELD
SPENCER CO.
FAIRFIELD
BARDSTOWN
NELSON CO.
LORETTO
RAYWICK
NEW HAVEN
BULLITT CO.
LARUE CO.
HART
Quarry
Fault
Physiographic Regions
Outer Bluegrass Region
The Knobs
Mississippian Plateaus
Physiographic Regions for the Heartland Parkway
FULLER MOSSBARGER SCOTT AND MAY ENGINEERS, INC.
ENGINEERS
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Appendix III

Map of Karst Occurrence in Kentucky

KENTUCKY GEOLOGICAL SURVEY
James C. Cobb, State Geologist and Director
UNIVERSITY OF KENTUCKY, LEXINGTON

MAP AND CHART 33
Series XII, 2001

KARST OCCURRENCE IN KENTUCKY

Randall L. Paylor and
James C. Currens

This map was compiled from a digital version of the 1:500,000-scale geologic map of Kentucky (Noger, M.C., comp., 1988, Geologic map of Kentucky: U.S. Geological Survey). The areas of potential karst development were delineated using stratigraphic units mapped on the geologic map. The classification of the potential for karst development was based on the field experience of the authors and other data. A number of isolated carbonate units that would not have otherwise been differentiated on the geologic map were newly digitized for this map.

This karst map should not be used for evaluating karst geologic hazards or hydrogeology at scales larger than 1:500,000. The base geologic map was digitized at 1:500,000 scale and is limited in precision to that scale. Because of the small scale of the original geologic map, lithostratigraphic units were consolidated into thicker chronostratigraphic units to create an area large enough to delineate on the geologic map. In some cases, the consolidation resulted in carbonates (limestone or dolomite) and noncarbonates (sandstone or shale, for example) being grouped; these rocks are not redivided on this map. Although the potential for karst development can be predicted from lithology, other factors such as relief and length of time the rock is exposed are also important and were not considered in the making of this map. Finally, areas where the near-surface bedrock is insoluble and closely underlain by soluble rock are common, particularly in the Eastern Pennyroyal. Conduits that pirate drainage commonly extend through ridges capped with insoluble rocks. Therefore, some areas mapped as having limited potential that are adjacent to areas of higher potential are actually karst, but cannot be differentiated on this map.

Karst is a terrane that is generally underlain by limestone or dolomite, where the topography is formed chiefly by the dissolving of rock. Karst landscapes are commonly characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, large springs, and caves.

Karst regions are susceptible to unique problems such as sinkhole collapse, sinkhole flooding, and rapid groundwater pollution. Springs in karst areas are an important, productive source of groundwater. Rare biologic communities and endangered species can be found in the fragile underground environments developed in karst landscapes.

For information on obtaining copies of this map and other Kentucky Geological Survey maps and publications call:
Publication Sales
859.257.3896
View the KGS World Wide Web site at www.uky.edu/kgs

EXPLANATION

- Areas underlain by bedrock with high potential for karst development
- Areas underlain by bedrock with moderate potential for karst development
- Areas underlain by bedrock with limited or no potential for karst development

Outer Bluegrass Region

Inner Bluegrass Region

Western Pennyroyal Region

Eastern Pennyroyal Region

Pine Mountain Region

Environmental Footprint

OHIO

INDIANA

ILLINOIS

MISSOURI

WEST VIRGINIA

VIRGINIA

TENNESSEE

Cartography by Terry Hounshell