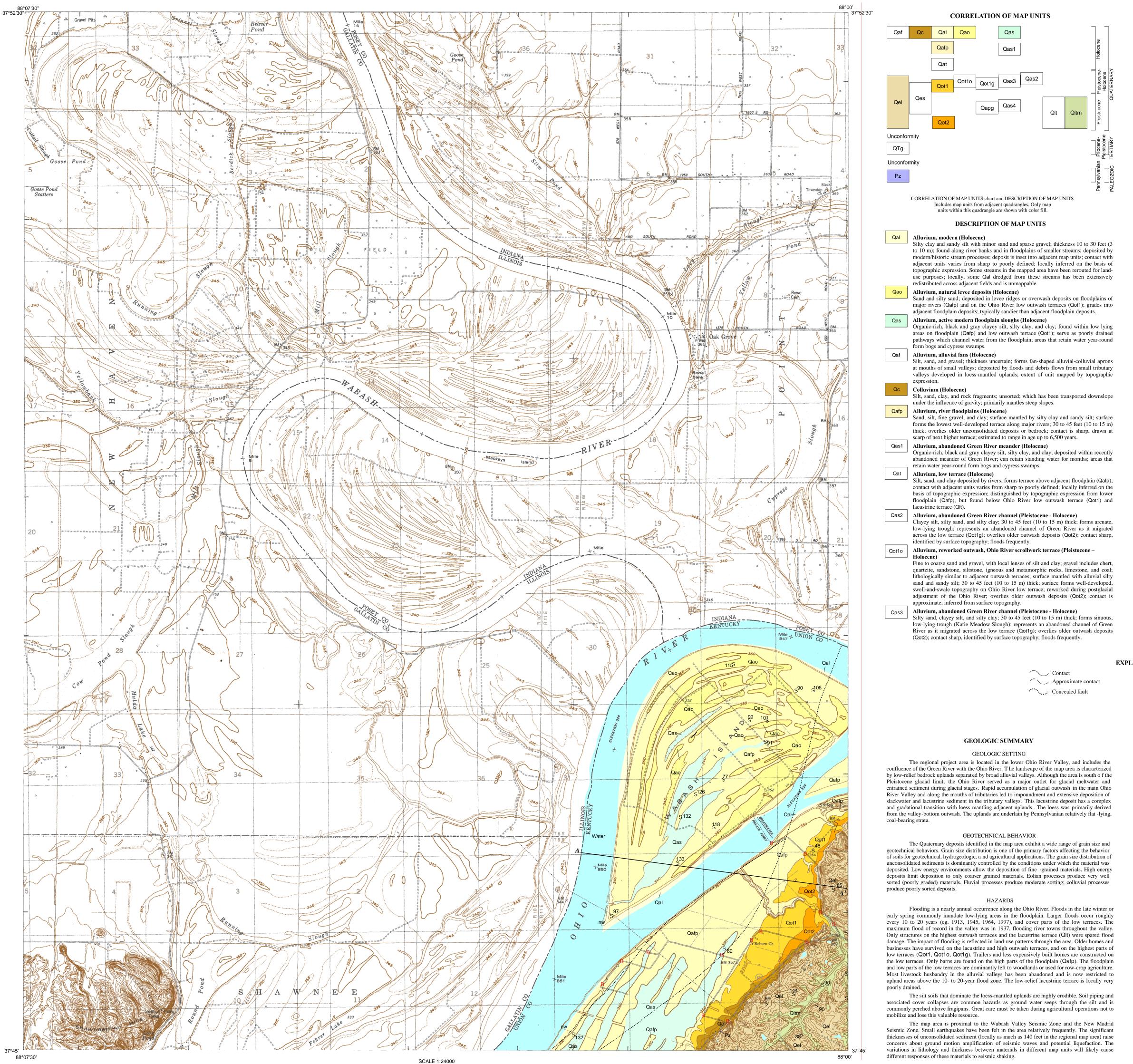
Universal Transverse Mercator projection, zone 16, North American Datum of 1927

Topographic base and cultural features are Kentucky Raster Graphics (KRG) from

Kymartian.ky.gov/krgmaps/KRG of WABASH ISLAND

GQ-1088 Version 1.0



Contract Report 21 Alluvium, reworked outwash, Green River scrollwork terrace (Pleistocene -Holocene) Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, siltstone, limestone, and coal; lithologically similar to adjacent outwash terraces; surface mantled with alluvial silty sand and sandy silt; 30 to 45 feet (10 to 15 m) thick; surface forms well-developed, swell-and-swale topography on Ohio River low terrace; deposited as point bar deposits by meandering postglacial Green River; overlies older outwash deposits (Qot2); contact is approximate, inferred from surface topography. Alluvium, outwash, low terrace (Pleistocene - Holocene) Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, siltstone, igneous and metamorphic rocks, limestone, and coal; lithologically similar to high outwash terrace (Qot2); surface mantled with alluvial silty sand and sandy silt; 30 to 45 feet (10 to 15 m) thick; surface forms well-developed, low-relief terrace along Ohio River valley; deposited as glacial outwash reworked by late glacial or post-glacial Ohio River; overlies older outwash deposits (Qot2); contact is sharp, drawn at scarp of next higher terrace or upland; floods occasionally. Alluvium, outwash, high terrace (Pleistocene) Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert. quartzite, sandstone, siltstone, igneous and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces; surface mantled with eolian and

alluvial silty sand and sandy silt; up to 170 feet (52 m) thick; surface forms welldeveloped, dissected terrace along Ohio River valley; deposited as glacial outwash; represents maximum valley filling by glacial outwash valley train deposits; overlies bedrock (Pz) or older alluvial deposits (not differentiated); contact is sharp, drawn at scarp of adjacent terrace or upland; age estimated to be 120,000 to 22,000 years old; most of terrace surface is above historic flood zone. Loess (Pleistocene-Holocene)

- Qel Silt, clayey silt, and fine sand deposited by wind; typically massive; unit thickest (up to 60 feet) near Ohio River valley and thins gradually to the south; mantles bedrock upland; mapped as bedrock where less than 3 to 5 ft (1 to 1.6 m) thick in uplands; not mapped where locally found on lacustrine terrace (Qlt) and high outwash terraces (Qot2); estimated to range in age from 22,500 to 10,000 years old; locally includes thin layers of loess inferred to be older than 30,000 years.
- Sand dunes (Pleistocene Holocene) Qes

Qot1g

Qot1

Qot2

- Very fine to fine sand; locally contains lenses of clayey silt; thickness uncertain, base not observed; deposited by wind in long, linear ridges; mantled by loess up to 15 ft (5 m) thick.
- Alluvium, abandoned Green River channel (Pleistocene) Qas4 Clayey silt, silty clay, and silty sand; 30 to 45 feet (10 to 15 m) thick; forms sinuous, low-lying trough inset into Green River paleovalley (Qapg); represents an abandoned channel of Green River as it migrated across the high terrace (Qot2); overlies older
- outwash (Qot2); contact sharp, identified by surface topography; floods occasionally. Qapg Alluvium, Green River paleovalley (Pleistocene) Silty sand, clayey silt and silty clay with minor chert gravel; 30 to 45 feet (10 to 15 m) thick; includes Beds at Hubert Court of Ray (1965); forms broad, linear trough inset into and overlying deposits of adjacent high outwash terrace (Qot2) and lacustrine
 - terrace (Qlt); represents abandoned Pleistocene paleovalley of the Green River; contact is sharp, drawn at scarp of adjacent high outwash or lacustrine terrace; wood from about 40 feet deep has been radiocarbon dated to $23,150 \pm 500$ ypb (Ray, 1965).
- Upland marginal lacustrine deposits (Pleistocene) Qltm Clayey silt, silt, and fine sand; thickness uncertain; surface forms moderate slope and benched upland areas bordering lacustrine deposits (Qlt); represents complex transition between lacustrine deposits and loess mantling upland; deposits include loess, loessderived slopewash, colluvium, lacustrine silt and clay, and lacustrine shoreline deposits; contacts gradational and approximate, mapped on the basis of topographic expression.
- Qlt Slackwater deposits, lacustrine terrace (Pleistocene) Clayey silt and silty clay; 30 to 45 feet (10 to 15 m) thick, thicker in tributary valleys; overlying complex deposits of sand, silt, clay and minor gravel; locally mantled by loess (similar to Qel, not mapped); forms prominent low-relief terrace in tributary valleys and sheltered portions of Ohio River valley; unit deposited in lacustrine and slackwater environments associated with alluviation of the Ohio River valley by glacial outwash and resulting impoundment of tributary valleys; underlying material is of apparent mixed fluvial and fluvio-lacustrine origin; contact with fluvial units is sharp, and drawn on scarps separating adjacent terraces; contact with eolian and upland units (Qel, Qes, Qltm) is gradational and approximate, inferred by surface topography; estimated to range in age from 23,000 to 18,000 years old.
- QTg Upland gravel (Pliocene-Pleistocene)
 - Gravel and medium to coarse sand; pebbles include brown, patina chert, quartz, and silicified fossils; locally cemented by iron oxide; thickness uncertain; unit found on uplands, covered by loess and poorly exposed; comparable to the Luce Gravel of Ray (1965).
- Ρz Bedrock and residuum (Paleozoic) Consolidated shale, sandstone, coal, and overlying poorly sorted regolith, comprising the core of the uplands in the study area; includes areas of loess thinner than 3 to 5 ft (1

to 1.6 m). Artificial fill, engineered fill (Modern) af1

Compacted material used as fill for the construction of roads, railroads, buildings, floodwalls, and other engineered structures. Present in all areas of development: mapped only where fill significantly changes the elevation. Artificial fill, mine spoil (Modern) af2

- Disturbed bedrock and regolith produced from mining operations.
- Artificial fill, other (Modern) af3
- Chaotic, unconsolidated fill material; includes material dredged from creeks to form artificial levees. Mapped only where fill is distinct. New water (Modern) nw
 - Areas of former land which have been removed by active erosion or dredging since the completion of original topographic mapping.

EXPLANATION

 s^{23} KGS database, number indicate depth to bedrock in feet \$ Landform observation and soil probe ^B Landform observation

DISCLAIMER

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Field mapping was completed by Ronald C. Counts between February 2003 and December 2006, with assistance from Wayne Newell (USGS) Scott Aldridge (USDA-NRCS), and Scott Waninger (KGS).

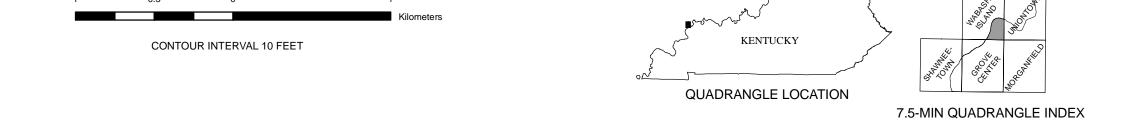
Subsurface information was compiled from data on file at the Kentucky Geological Survey as well as data contributed by the Kentucky Transportation Cabinet and the U.S. Geological Survey.

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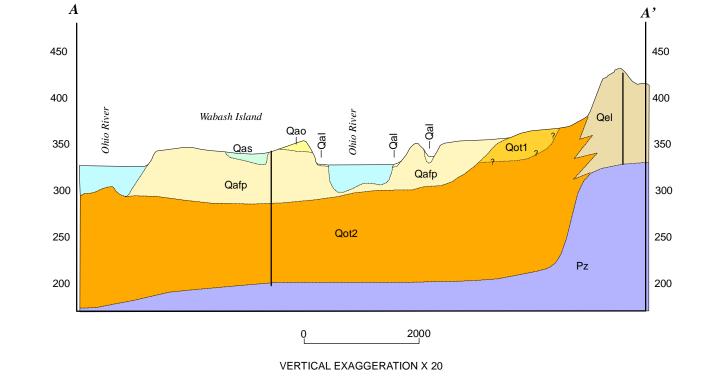
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