

Description of Map Units

- QUATERNARY SYSTEM**
HOLOCENE
 Ha **Holocene undifferentiated alluvium**—undifferentiated deposits of small upland streams; unconsolidated alluvial deposits of minor streams and creeks filling valleys incised into older deposits, with textures varying from gravelly sand to sandy mud.
- PLEISTOCENE**
PRAIRIE ALLOGROUP
 Pp **Prairie Allogroup, undifferentiated**—diverse depositional sequence of deposits of the Mississippi River, its tributaries, and coastal plain streams; includes terraced fluvial (meander belt, backswamp, and braided stream), colluvial, estuarine, deltaic, and marine units deposited during the Wisconsin to Sangamon interval of the late Pleistocene. Multiple levels along alluvial valleys and coast-parallel trends are grouped into two principal temporal phases. The Prairie Allogroup is undifferentiated where fluvial terrace remnants flank headward portions of stream courses.
 Ppl **Upper Prairie Allogroup**—younger of Prairie Allogroup temporal phases, consisting of alluvial deposits of ancestral late Pleistocene streams. Grayish-white to reddish-white and light red very fine to medium sand to silt, with clay, to sandy mud. In places including beds of gravelly sand and sandy gravel of chert and vein quartz. Weathers to yellow, orange, and/or brownish-tan hues.
- TERTIARY SYSTEM**
PLIOCENE
UPLAND ALLOGROUP
 Puw **Willis Formation, undifferentiated**—deeply dissected alluvial sediments deposited by Pliocene streams in west-central Louisiana. The unit is unconformably underlain by Tertiary formations of Miocene to Eocene age, and is bounded downward by the Liasse surface.
- MIOCENE**
FLEMING GROUP
 Mfcb **Carnahan Bayou Formation**—texturally heterogeneous suite of generally poorly sorted sediments comprising varying admixtures of sand/sandstone, with granules in places; silt/siltstone, and clay/mud. Primarily clayey very fine to fine sand containing some coarse and very coarse sand with some granules. Granules and pebbles include both quartz and rock fragments, with granules comprising predominantly quartz, and pebbles and cobbles consisting mostly of rock fragments; the rock fragments comprise both light-colored clay/mud rip-up clasts, and in places, dark or black chert. Includes petrified wood and thin tuffaceous beds locally.
 Mfl **Lena Formation**—texturally heterogeneous suite of generally poorly sorted sediments comprising clay, with and without admixed sand and silt; silt/siltstone, mostly without substantial admixed clay, and sand/sandstone, with and without admixed clay. Includes calcareous clay, containing characteristic calcareous nodules, and tuffaceous clays in places. Weathers locally to produce a brownish gray to lightish surface sand, and may weather to black soil.
- MIOCENE-OLIGOCENE**
 OMc **Catahoula Formation**—texturally heterogeneous suite of generally poorly sorted sediments comprising primarily silt/siltstone to very fine quartzose sand/sandstone, with and without admixtures of clay. Overall or predominant grain size of sand/sandstone tends to average very fine to fine sand. Coarser grains may comprise quartz, chert, and/or mud clasts. Contains petrified wood and tuffaceous sandstone locally. Weathers locally to produce a thick (up to 2 meters) gray/tan loamy surface unit. Characteristics of the surface Catahoula accord generally with continental, fluvial-dominated deposition, with the large proportion of silt observed in places suggestive of the onset of transition to deltaic facies. Recent work indicates a paleogeological age of early late Miocene for the Catahoula in its type area in eastern north Louisiana, in contrast to the Oligocene age suggested by subsurface-to-surface correlation in the Texas Gulf Coast.
- OLIGOCENE**
VICKSBURG GROUP
 Ov **Vicksburg Group, undifferentiated**—thin-bedded to laminated grayish-whitish, clayey very fine to medium sand to fine sandy clay, medium-scale cross-bedded in places, weathering reddish-orange, with zones of clasts of light grayish clayey sand; and thick-bedded maroonish-grayish silty clay. The Vicksburg is divided into two members of formation rank in Sabine Parish (Andersen, 1960)—the Sandel and Nash Creek formations—plus a third in Natchitoches Parish, the overlying Rosefield Formation (Andersen, 1993). The lowermost formation, the Sandel, comprises sand with interbedded conglomerate containing cobbles and slabs of carbonaceous bentonitic clay like that of the overlying Nash Creek. Based on the investigation of Rukas and Gooch (1939), Andersen (1993) portrayed the Rosefield as comprising lenses of marly clay that form a marine tongue extending into Natchitoches Parish from the east and pinching out westward.
- Eocene**
JACKSON GROUP
 Ej **Jackson Group, undifferentiated**—light brownish gray and gray, silty and sandy clay, and clayey very fine sand, with red mottles. According to Andersen (1960) it comprises primarily clay, fossiliferous in its lower portions (Moody's Branch and Yazoo formations and Daniels Landing beds), with varying admixtures of sand, glauconitic, and volcanoclastic material. Locally contains petrified wood, and cobble- and boulder-sized, light greenish gray carbonate nodules (Moody's Branch Formation). Fine-grained overall texture and the presence of glauconite is suggestive of deposition on a shallow, muddy shelf.
- CLAIBORNE GROUP**
 Ecc **Cockfield Formation**—generally very fine to fine sand of grayish to grayish brown coloration weathering to brownish orange-red hues. Ranges from sandy clay to medium sand, in places containing grayish clayey laminae that may become broken into rip-up clasts. Ironstone beds and nodules are common. Weathers locally to produce a thick (1 to 2.5 m) loamy sand surface mantle. Above its basal sand unit the Cockfield comprises "interbedded clays, silts, and muds" (Andersen, 1960, p. 92) and is "predominantly composed of very fine sand and silt" (Andersen, 1993, p. 87), with scattered occurrences of petrified wood, leaf fossils, lignite, and glauconite (Andersen, 1960). These characteristics are suggestive of deltaic deposition on a shallow shelf.
- Open Water, Inundated Area, Wetland**
 Normal Fault—ball and bar on downthrown side
 Concealed Fault—ball and bar on downthrown side
 Inferred Fault—ball and bar on downthrown side
 Streams
 Contact—includes inferred contacts.
 Topographic Contours

References:
 Callahan, T. A., 1969. Contributions to the geology of Washington and St. Tammany parishes, Louisiana. U.S. Army Corps of Engineers, New Orleans District, 287 p., plus plates.
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 Heinrich, P. V., 2006. Pleistocene and Holocene fluvial systems of the lower Pearl River, Mississippi and Louisiana, USA. Gulf Coast Association of Geological Societies Transactions, v. 56, p. 267-278.
 McCulloch, R. P., P. V. Heinrich, and J. Sneed (compilers), 2003. Pontchartrain 30 x 60 minute geologic quadrangle: Baton Rouge, Louisiana Geological Survey, scale 1:100,000.

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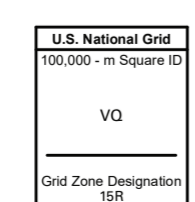
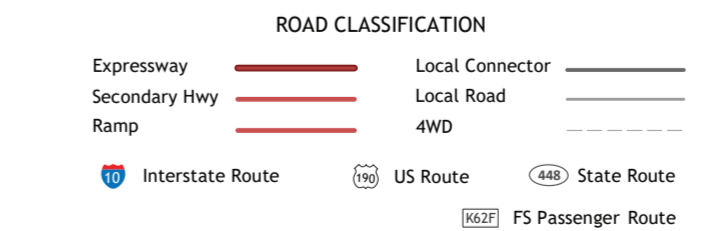
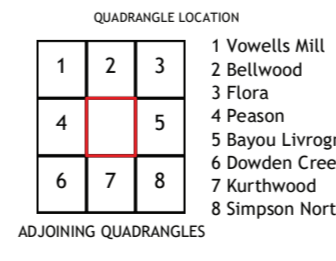
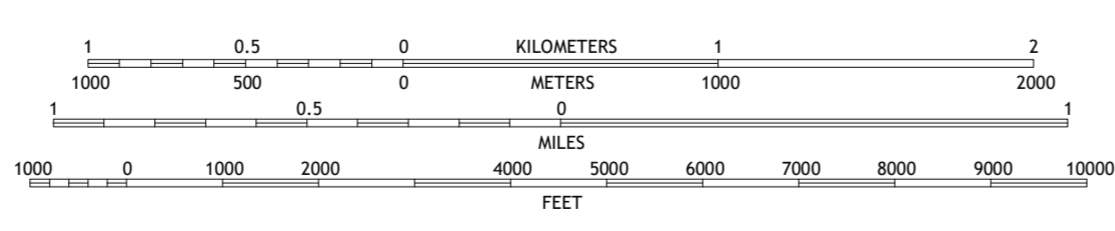
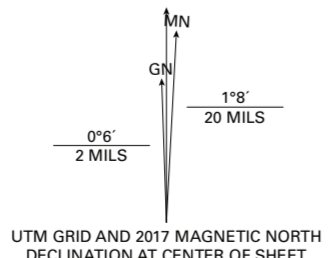
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SCALE 1:24,000
 CONTOUR INTERVAL 10 FEET
 NORTH AMERICAN DATUM OF 1983 (NAD 83)
 WORLD GEODETIC SYSTEM 1984 (WGS 84)
 UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 15
 NORTH AMERICAN VERTICAL DATUM OF 1988

Geologic Map of the Kisatchie 7.5 minute quadrangle Natchitoches and Sabine Parishes, Louisiana

Base Map.....United States Geological Survey, 2020
 Roads.....U.S. Census Bureau, 2017
 Roads within US Forest Service Lands.....FSTopo Data
 Names.....GNIS, 1980 - 2017
 Hydrography.....National Hydrography Dataset, 2002 - 2017
 Contours.....National Elevation Dataset, 2008 - 2011
 Boundaries.....Multiple sources, see metadata file 2017
 Wetlands.....FWS National Wetlands Inventory 2021

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