

Description of Map Units

QUATERNARY SYSTEM

HOLOCENE

- Ha** Alluvium — Nonconsolidated mud in floors of ravines and bayous in the north half of the map. Dark brown and black clay from Mississippi River flood episodes, brown mud and fine sand from local Pleistocene terrace sediments, and reworked distributary deposits of New River.
- Hmd<sub>1</sub>** Distributary channel deposit of the Mississippi River meander belt 1 — Levee and crevasse deposits of New River, a stranded distributary channel of Mississippi River. Brown silt and fine sandy mud, coarse fraction dominated by quartz and feldspar, <5% dark and light mica, trace amounts magnetite, dark silicates, and lithic fragments. Thickness < 3 m.
- Hmc<sub>1</sub>** Crevasse complex of Mississippi River meander belt 1 — Lobate and flame-shaped deposit funneled by one or more incised channels radiating from the main river channel. A single crevasse deposit is interpreted in Gonzales sheet originating at a meander cut at south end of map. Brown silty and fine sandy mud, coarse fraction of quartz and feldspar with < 5% mica, dark silicates, rock fragments, and magnetite. Thickness < 2m.
- Hml<sub>1</sub>** Natural levee complex of Mississippi River meander belt 1 — Sediment apron that parallels and thins away from the Mississippi River channel and lacks distinct feeder channels. Brown-gray fine sandy and silty clay. Coarse fraction of quartz with lesser feldspar, and <5% mica, dark silicates, rock fragments, and magnetite. Thickness < 2m.
- Hmpb<sub>1</sub>** Mississippi River point bar deposits belt 1 — Ridge-and-swale landform, interpreted as point bar suites, with arcuate shape of variable curvature; may be mantled by subsequent flood stage overbank mud. One older, truncated point bar suite in the southwest of the map area consists of brown silty mud with fine sand of quartz and feldspars and trace mica, dark silicates, magnetite, and lithic fragments. Active point bar deposits are light brown sand of ~ 0.2 mm grains of quartz, feldspars, lithic fragments, and lesser mica and magnetite.
- Hcs** Coastal swamp — Mud deposit in parallel setting of seasonally fluctuating fresh and brackish surface water. Dark steel gray, black, and brown-black organic-rich mud with less than 0.1% silt fraction.
- Hb** Backswamp deposits — Mud in topographically low areas situated between inactive and active meander belts, composed of clay settled from slow moving or calm flood stage water. Dark steel gray clay with less than 0.1% silt fraction. Backswamp deposits likely include sediment from multiple meander belts and therefore are not assigned to a specific episode.

PLEISTOCENE

- Plp** Peoria Loess — Upland mantling of light buff to rust-orange and gray silt. Coherent deposit with clay and fine sand lacks discernible bedding structures. Silt and fine sand consists of quartz and feldspar with trace amounts of light mica, dark silicates, and magnetite. Pedogenic goethite occurs as localized concentrations of 2-3 mm soft nodules that harden upon exposure. Contact with underlying Hammond alloformation is marked by thickly laminated silty mud of the latter. Thickness: 4 - 5 m.

PRAIRIE ALLOGROUP

- Pph** Hammond alloformation — Rust-yellow, rust-orange, and reddish brown silty and fine sandy mud. Depositional structures (laminations) and centimeter scale *Scolothos schroeteri* are diagnostic. Clay vs. silt and fine sand fraction varies with location, the latter dominated by quartz with feldspar and light and dark mica. Base not exposed; maximum measured thickness ~ 5 meters near the eastern map margin.

Open Water, Inundated Area, Wetland

- Streams
- Contact
- Topographic Contours

References:  
 McCulloh, Richard P., Paul V. Heinrich, and John Sneed, 2003. "Pontchartrada 30 x 60 Minute Geologic Quadrangle", scale 1:100,000, Map No. 30090-A1-TM-100k, Louisiana Geological Survey, Louisiana State University, Baton Rouge, LA.  
 McGehee, Edward L., 1983. "Oil and Gas Fields and Salt Domes, Including Offshore Areas", Resource Information Series No. 1, Louisiana Geological Survey, Louisiana State University, Baton Rouge, LA, 164 p.

Saucier, Roger T. and John I. Sneed, 1989. "Quaternary Geology of the Lower Mississippi Valley", scale 1:1,100,000, Quaternary Neotectonic Geology, Continental U.S., Geology of North America, vol. K-2, Geological Society of America, Boulder, CO.

Correlation of Map Units

	Mississippi River Valley				Southeast Louisiana Coastal Plain		
Holocene	Hb	Hmc <sub>1</sub>	Hml <sub>1</sub>	Hmpb <sub>1</sub>	Hcs	Hmd <sub>1</sub>	Ha
Pleistocene						Plp	
							Pph

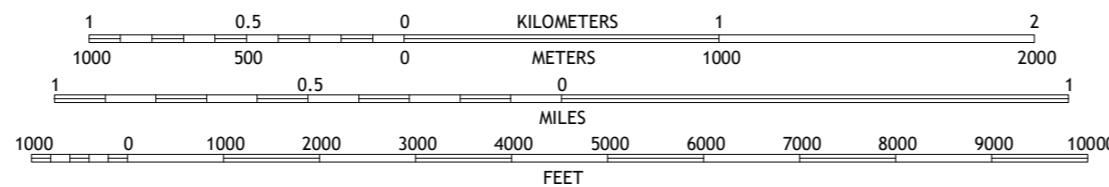
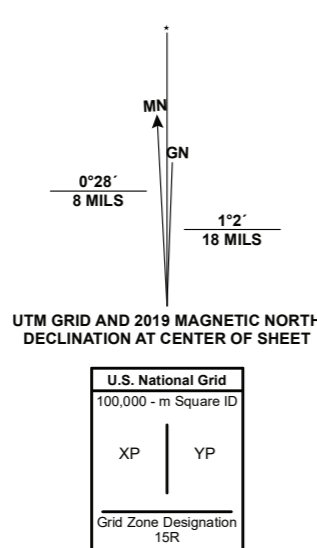
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SCALE 1:24,000  
 CONTOUR INTERVAL 10 FEET  
 NORTH AMERICAN DATUM OF 1983 (NAD 83)  
 WORLD GEODETIC SYSTEM 1984 (WGS 84)  
 UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 15  
 NORTH AMERICAN VERTICAL DATUM OF 1988

1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

- 1 Saint Gabriel
- 2 Prairieville
- 3 French Settlement
- 4 Carville
- 5 Sorrento
- 6 Belle Rose
- 7 Donaldsonville
- 8 Convent



ROAD CLASSIFICATION	
Expressway	Local Connector
Secondary Hwy	Local Road
Route	40P
Interstate Route	US Route
	State Route

Base Map	United States Geological Survey, 2020
Boundaries	LaDOTD, 2007
Contours	National Elevation Dataset, 2008 - 2011
Hydrography	National Hydrography Dataset, 2002 - 2017
Names	U.S. Census Bureau, 2017
Roads	U.S. Census Bureau, 2017
Wetlands	FWS National Wetlands Inventory 2021

Geologic Map of the Gonzales 7.5' quadrangle, Ascension Parish Louisiana, 2022

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