BUREAU OF ECONOMIC GEOLOGY
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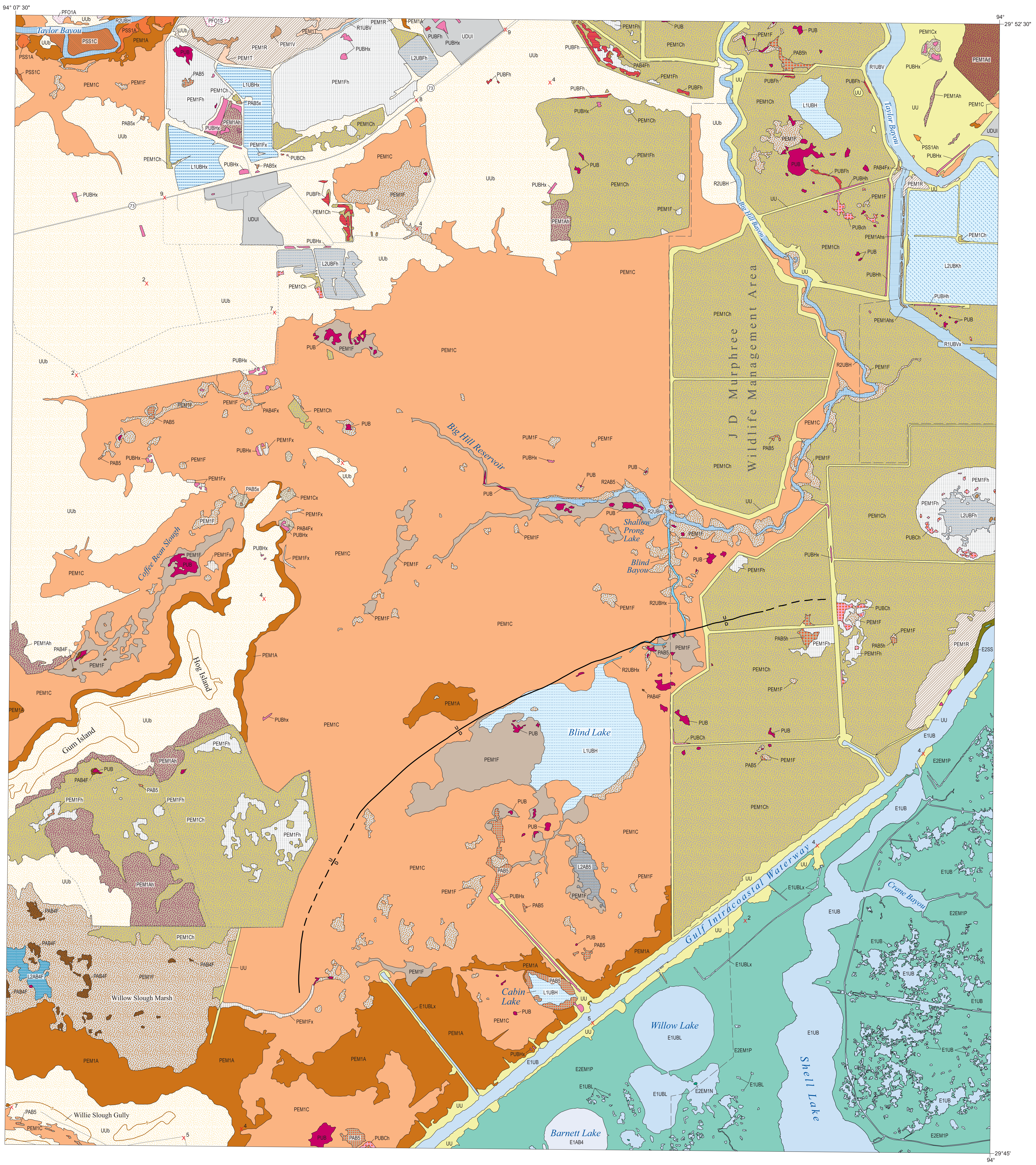
THE UNIVERSITY OF TEXAS AT AUSTIN
In cooperation with the STATEMAP component of the
National Cooperative Geologic Mapping Program,
administered by the U.S. Geological Survey

Geoenvironmental Map of Big Hill Bayou Quadrangle
Texas Gulf of Mexico Coast
Open-File Map

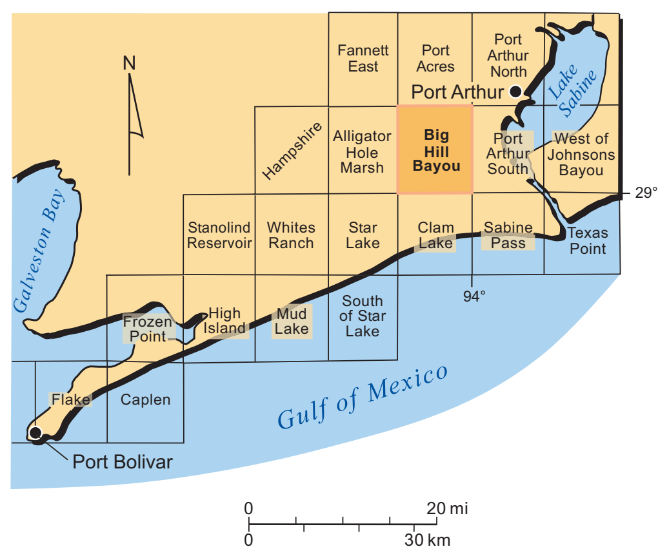


SCALE 1:24,000
0 1 2 MILES
0 1 2 KILOMETERS
UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 15 NAD 83

GEOENVIRONMENTAL MAP OF BIG HILL BAYOU QUADRANGLE
TEXAS GULF OF MEXICO COAST

Thomas A. Tremblay, Tiffany L. Caudle, and William A. White

2009



Marsh and Fluvial-Deltaic Settings

(Wetland classification of coastal geologic environments)
(Wetland terminology in *italics*)

MODERN TO HOLOCENE

Estuarine Environment

E2EM1N—Low marsh; *intertidal, emergent, persistent, regularly flooded.*
E2EM1P—High marsh; *intertidal, emergent, persistent, irregularly flooded.*
E2USP—High flat; *intertidal, unconsolidated shore, irregularly flooded.*
E2SS—Scrub shrub area; *intertidal, scrub shrub.*
E1AB4—Aquatic bed; *subtidal, floating vascular.*
E1UB—Water; *subtidal, unconsolidated bottom.* Gulf Intracoastal Waterway excavated.

Palustrine Environment

PEM1A—Marsh; *emergent, persistent, temporarily flooded.*
PEM1Ad—Marsh; *emergent, persistent, temporarily flooded, partly drained/ditched.*
PEM1Ah—Marsh; *emergent, persistent, temporarily flooded, diked/impounded.*
PEM1Ahs—Marsh; *emergent, persistent, temporarily flooded, diked/impounded, spoil.*
PEM1C—Marsh; *emergent, persistent, seasonally flooded.*
PEM1Ch—Marsh; *emergent, persistent, seasonally flooded, diked/impounded.*
PEM1Cx—Marsh; *emergent, persistent, seasonally flooded, excavated.*
PEM1F—Marsh; *emergent, persistent, semipermanently flooded.*
PEM1Fh—Marsh; *emergent, persistent, semipermanently flooded, diked/impounded.*
PEM1Fx—Marsh; *emergent, persistent, semipermanently flooded, excavated.*
PEM1R—Marsh; *emergent, persistent, seasonally tidal.*
PEM1T—Marsh; *emergent, persistent, semipermanently tidal.*
PEM1V—Marsh; *emergent, persistent, permanently tidal.*
PSS1A—Scrub shrub area; *broad-leaved deciduous, temporarily flooded.*
PSS1Ah—Scrub shrub area; *broad-leaved deciduous, temporarily flooded, diked/impounded.*
PSS1C—Scrub shrub area; *broad-leaved deciduous, seasonally flooded.*
PAB4F—Aquatic bed; *floating vascular, semipermanently flooded.*
PAB4Fh—Aquatic bed; *floating vascular, semipermanently flooded, diked/impounded.*
PAB4Fx—Aquatic bed; *floating vascular, semipermanently flooded, excavated.*
PAB5—Aquatic bed; *unknown submergent.*
PAB5h—Aquatic bed; *unknown submergent, diked/impounded.*
PAB5x—Aquatic bed; *unknown submergent, excavated.*
PFO1A—Forested area; *broad-leaved deciduous, temporarily flooded.*
PFO1S—Forested area; *broad-leaved deciduous, temporarily tidal.*
PUB—Water; *unconsolidated bottom.*
PUBCh—Water; *unconsolidated bottom, seasonally flooded,diked/impounded.*
PUBFh—Water; *unconsolidated bottom, semipermanently flooded, diked/impounded.*
PUBHx—Water; *unconsolidated bottom, permanently flooded, excavated.*

Lacustrine Environment

L1UBH—Water; *limnetic, unconsolidated bottom, permanently flooded.*
L1UBHx—Water; *limnetic, unconsolidated bottom, permanently flooded, excavated.*
L2UBKh—Water, *littoral, unconsolidated bottom, artificially flooded, diked.*
L2UBFh—Water; *unconsolidated bottom, semipermanently flooded, diked/impounded.*
L2AB5—Aquatic bed; *littoral, floating vascular, semipermanenty flooded.*
L2AB4F—Aquatic bed; *littoral, floating vascular, semipermanently flooded.*

Riverine Environment

R1UBV—Water; *tidal, unconsolidated bottom, permanently tidal.*
R2UBH—Water; *lower perennial, permanently flooded.*
R2UBHx—Water; *lower perennial, permanently flooded, excavated.*
R1UBVx—Water; *tidal, unconsolidated bottom, permanently tidal, excavated.*
R2AB5—Aquatic bed; *lower perennial, unknown submergent.*

Uplands Environment

UU—Undeveloped upland area, mostly clay and silt, lesser sand; includes human-made levees and some drained marsh.
UDUI—Developed upland area within rural and suburban settings.

PLEISTOCENE

UUb—Beaumont Formation undeveloped uplands; *mostly clay, silt, and sand of fluvial-deltaic deposition.*

$\frac{U}{D}$ Fault. Dashed where approximate. U = upthrown block, D = downthrown block
—5— Contour line and elevation (ft)
x² Elevation (ft)
Road
Unimproved road

N
MN
7°
1974 magnetic declination (MN)

Edward W. Collins, Project Coordinator
GIS data set coordinated by Thomas A. Tremblay
Graphics by John T. Ames

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Photography used for base and mapping is 0.5-m pixel, color infrared digital imagery photographed in 2004. Previous regional maps that cover this map area include the 1:125,000-scale *Environmental Geology, Beaumont-Port Arthur Sheet* (Fisher and others, 1973), the 1:125,000-scale map of *Distribution of Wetlands and Benthic Macroinvertebrates, Beaumont-Port Arthur Area* (White and others, 1987), and the 1:250,000-scale *Geologic Atlas of Texas Houston Sheet* (Aronow and Barnes, 1968). Fault data from White and Morton (1997) and unpublished Bureau of Economic Geology coastal faults data set. Terminology related to the wetlands classification of the geologic environments mapped follows Cowardin and others (1979). Jeffery S. Vincent contributed map data linked to active processes such as erosion, deposition, and flooding. Boundaries of wildlife management areas approximate.

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