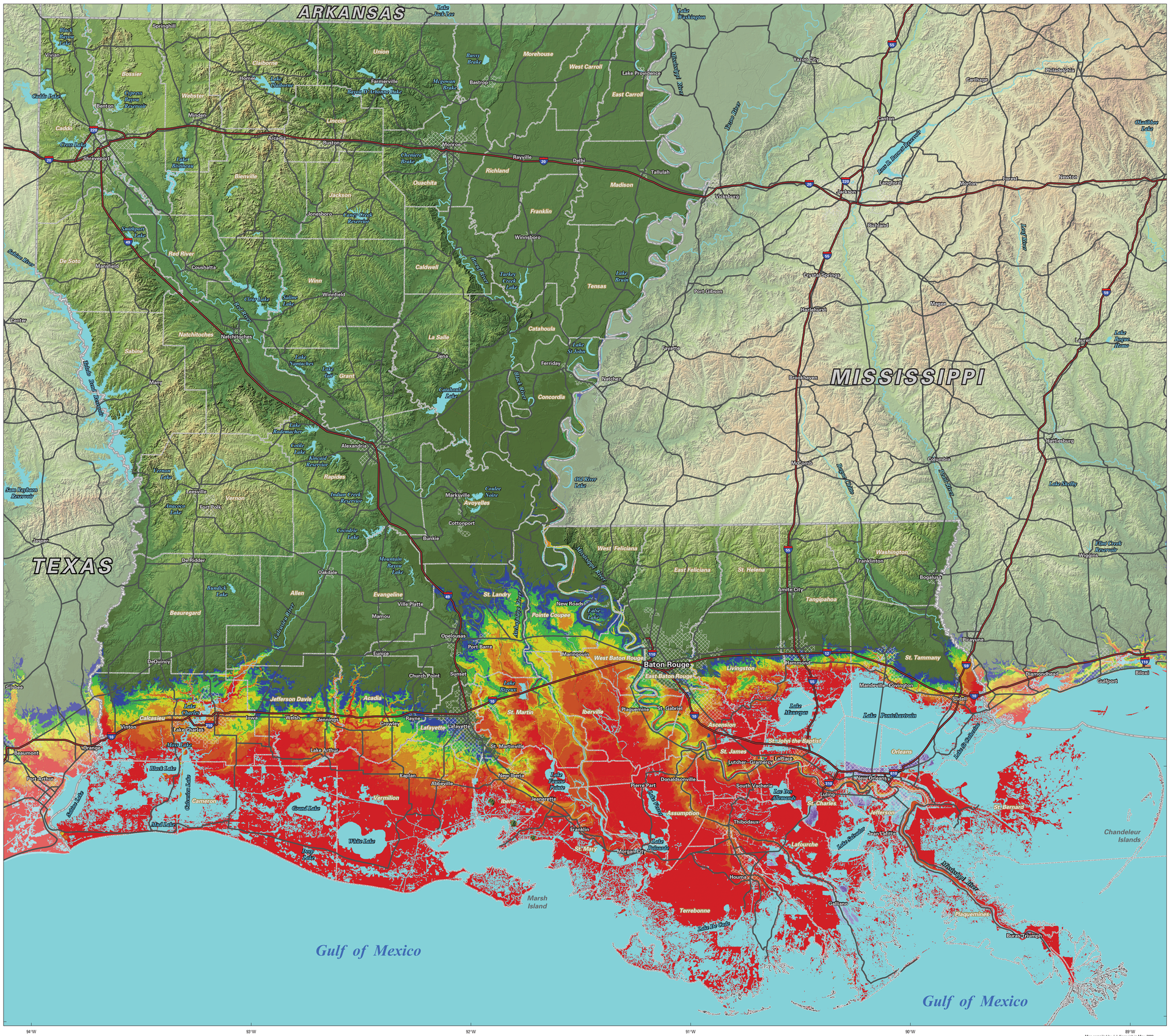
State of Louisiana—Highlighting Low-Lying Areas Derived from USGS Digital Elevation Data

By John J. Kosovich

2008

Scientific Investigations Map 3049
Version 1.0



Explanation

- Limited access highway
- U.S. or State highway
- State boundary
- Parish boundary
- Parish name
- City or urban area
- River
- Water body

Elevation (feet)

- Above 1,000
- 900–1,000
- 800–900
- 700–800
- 600–700
- 500–600
- 450–500
- 400–450
- 350–400
- 300–350
- 250–300
- 200–250
- 150–200
- 100–150
- 50–100
- 30–50
- 25–30
- 20–25
- 15–20
- 10–15
- 5–10
- 0–5
- Sea Level
- Sea level to -2
- -2 to -4
- -4 to -6
- -6 to -8
- Below -8

Summary

In support of U.S. Geological Survey (USGS) disaster preparedness efforts, this map depicts a color shaded relief representation highlighting the State of Louisiana and depicts the surrounding areas using muted elevation colors. The first 30 feet of relief above mean sea level are displayed as brightly colored 5-foot elevation bands, which highlight low-elevation areas at a coarse spatial resolution. Areas below sea level typically are surrounded by levees or some other type of flood-control structures. Standard USGS National Elevation Dataset (NED) 1 arc-second (nominally 30-meter) digital elevation model (DEM) data are the basis for the map, which is designed to be used *at a broad scale and for informational purposes only.*

The NED data are a mixture of data derived from the original 1:24,000-scale USGS topographic map bare-earth contours, which were converted into gridded quadrangle-based DEM tiles at a constant post spacing (grid cell size) of either 30 meters (data before the mid-1990s) or 10 meters (mid-1990s and later data). These individual-quadrangle DEMs were then converted to spherical coordinates (latitude/longitude decimal degrees) and edge-matched to ensure seamlessness. Approximately one-half of the area shown on this map has DEM source data at a 30-meter resolution, with the remaining half consisting of mostly 10-meter contour-derived DEM data and some small areas of higher-resolution LIght Detection And Ranging (LIDAR) data along parts of the coastline.

Areas below sea level typically are surrounded by levees or some other type of flood-control structures.

State and parish boundary, hydrography, city, and road layers were modified from USGS National Atlas data downloaded in 2003. The NED data were downloaded in 2007.

Data Sources

National Elevation Dataset (NED), 2007, USGS National Elevation Dataset: U.S. Geological Survey, *http://seamless.usgs.gov/*. (Last accessed Sept. 4, 2008).

The USGS National Atlas of the United States of America, 2003, National Atlas of the United States of America: U.S. Department of the Interior, *http://nationalatlas.gov/*. (Last accessed Sept. 5, 2008).

Base derived from U.S. Geological Survey National Elevation Dataset (NED), 2007

Projection: Albers Conic Equal Area
on North American Datum of 1983 (NAD83)

SCALE 1:700 000

10 0 10 20 30 40 MILES

10 0 10 20 30 40 50 60 KILOMETERS

Publishing support provided by:
Denver Publishing Service Center
Manuscript approved for publication October 2, 2008.

For more information concerning this publication, contact:
USGS Central Region Geospatial Information Office
Federal Center
Box 25286
Denver, CO 80225
1-888-ASK-USGS

MAP LOCATION

89°W

Map compiled by J.J. Kosovich in May, 2008

Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Although this information product, for the most part, is in the public domain, it also contains copyrighted materials as noted in the text. Permission to reproduce copyrighted items for other than personal use must be secured from the copyright owner.

For sale by U.S. Geological Survey Information Services
Box 25286, Federal Center, Denver, CO 80225
1-888-ASK-USGS

This and other USGS products are available on the World Wide Web at:
http://store.usgs.gov/

This report is available at:
http://pubs.usgs.gov/sim/3049

U.S. Department of the Interior
U.S. Geological Survey

Suggested Citation:
Kosovich, J.J., 2008. State of Louisiana—Highlighting low-lying areas derived from USGS digital elevation data: U.S. Geological Survey Scientific Investigations Map 3049, scale 1:700,000.