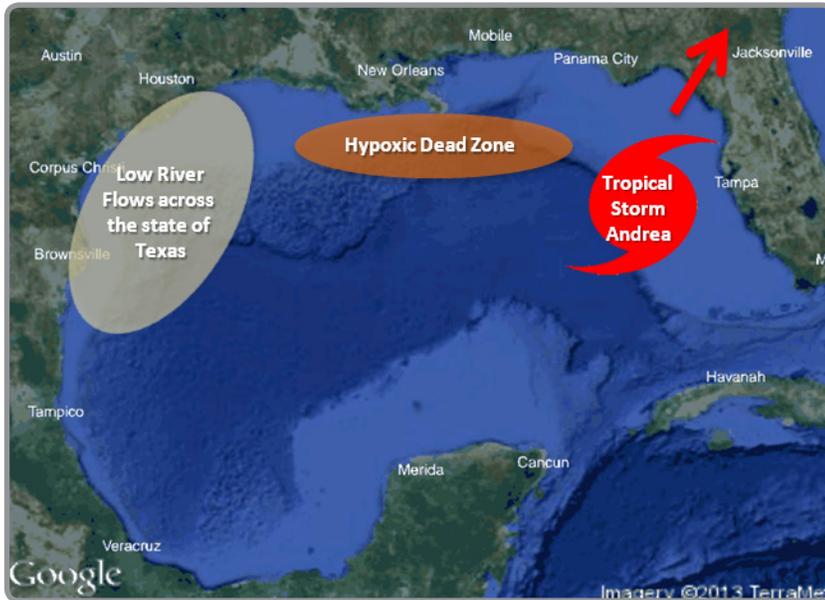


Significant Gulf Coast Events for June 2013–August 2013



Highlights

Florida

Tropical Storm Andrea makes landfall along the Florida Gulf coast, just six days into the hurricane season, causing localized flooding and spawning five tornadoes.

Texas

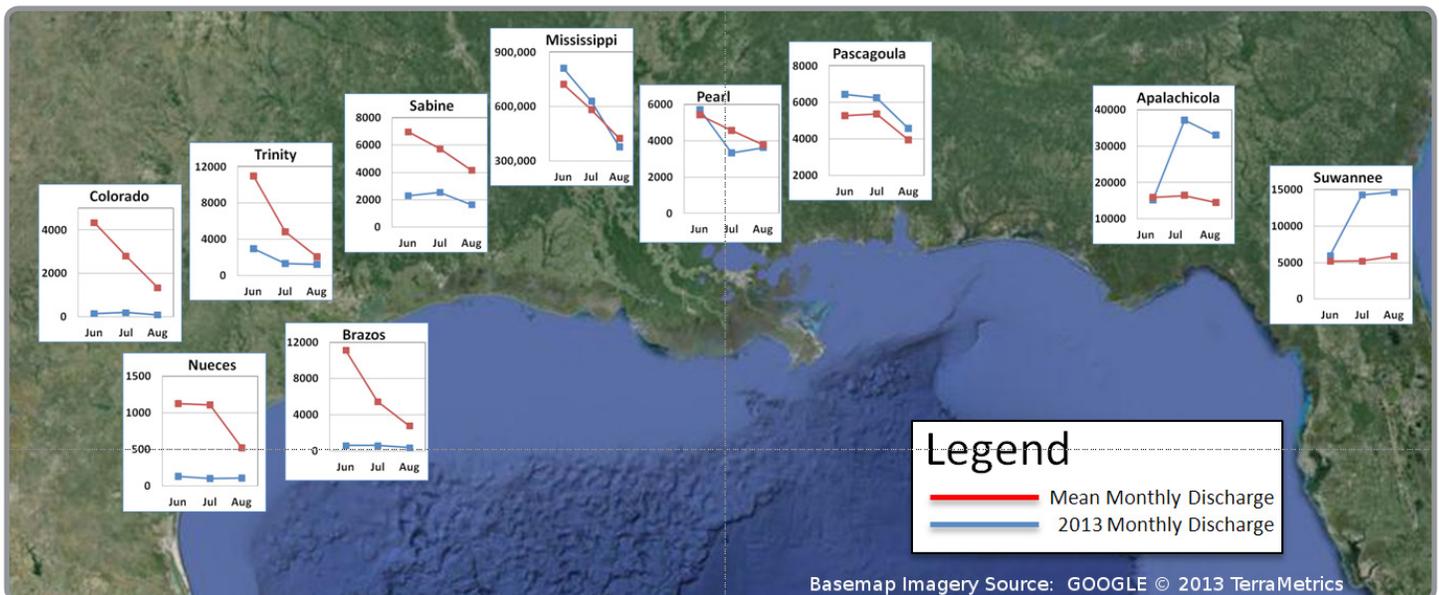
Low river flows across the Texas coast are indicative of the prolonged drought throughout the state.

Louisiana

Hypoxic dead zone off the Louisiana coast was measured to be approximately 5800 square miles in area. Though this value is smaller than had originally been predicted, it is slightly higher than the five year average.

River Discharge Data For Select Rivers That Flow Into The Gulf Of Mexico

Seasonal Discharges Indicate Below-normal Flow in Texas and Above-normal Flow in Florida

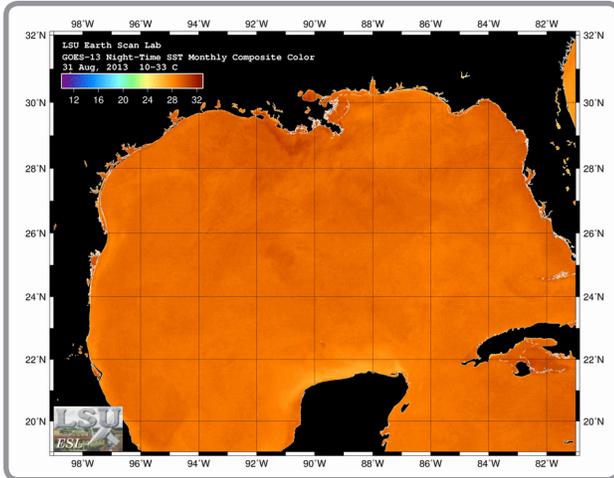


June to August monthly discharge values for select rivers that flow into the Gulf of Mexico.

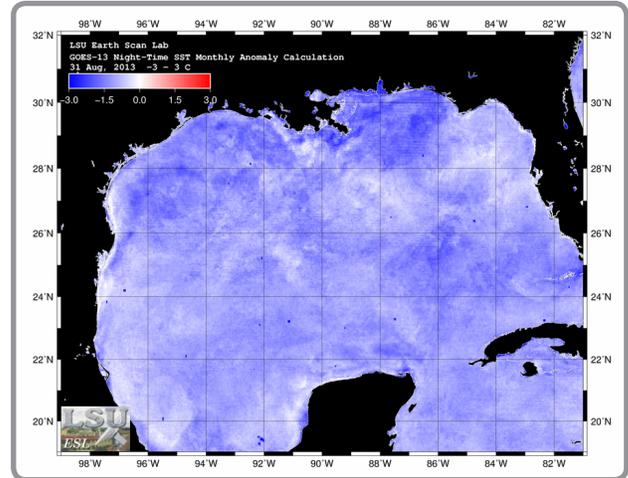
The figure above illustrates extremely low river flows in the state of Texas, which has been under the grip of drought for over two years. Along the Louisiana and Mississippi coast, discharge values are much closer to expected values. In Florida, an abundance of spring and summer precipitation has allowed for above-average stream flow into coastal estuaries. Data Source: waterdata.usgs.gov

Gulf Sea Surface Temperatures and Temperature Anomalies

Gulf Waters are Cooler than Normal but Still Warm Enough to Support Tropical Lows



August 2013 Geostationary Operational Environmental Satellite
Monthly Gulf of Mexico Standard Sea Surface Temperature
(Image courtesy of LSU Earth Scan Lab <http://www.esl.lsu.edu>)



August 2013 Geostationary Operational Environmental Satellite
Monthly Gulf of Mexico Sea Surface Temperature Anomaly
(Image courtesy of LSU Earth Scan Lab <http://www.esl.lsu.edu>)

2013 Hurricane Season Statistics through September 16

	NOAA Predicted	Koltzbach-Gray CSU Predicted	Seasonal Average	To Date
Named Storms	13 to 20	18	12	9
Hurricanes	7 to 11	9	6	2
Major Hurricanes (category 3 or higher)	4	4	3	0

Outlooks

El Niño/Southern Oscillation (ENSO):

El Niño/Southern Oscillation (ENSO) neutral conditions are expected to persist through the fall months. The ENSO neutral condition (neither El Niño nor La Niña) is the normal state of the Equatorial Pacific sea surface temperatures. The neutral phase of ENSO typically provides less forecasting skill for the winter seasons than El Niño or La Niña.

Drought:

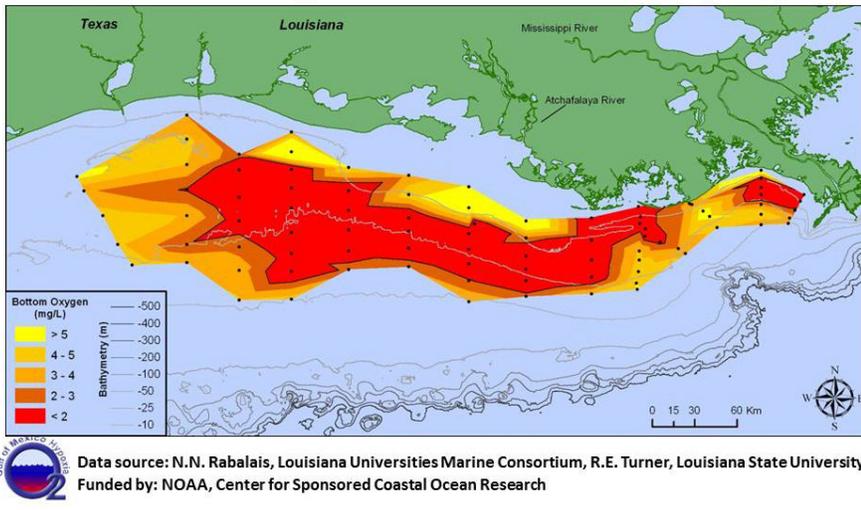
Over the fall months, drought is expected to persist in southern Texas. In northern Texas, the seasonal outlook is for drought to remain, however, some improvement is expected.

Temperature & Precipitation:

The three-month (Sept-Nov) temperature and precipitation outlook both indicate an equal chance of above- or below-normal values.

Coastal Impacts—Hypoxia (Dead Zone)

Bottom-water dissolved oxygen across the Louisiana shelf from July 22-28, 2013



Scientists at the NOAA-Supported Louisiana Universities Marine Consortium (LUMCON) recently released findings that measure the Gulf Hypoxic Dead Zone to be approximately 5840 square miles in area. <http://www.noaanews.noaa.gov/stories2013/images/2013hypoxiagraph2.png> (Image courtesy of LUMCON).

Gulf Hypoxia Statistics

2013: 5840 sq. mi.
Last Year: 2889 sq. mi.
5-Year Average: 5176 sq. mi.
Maximum Value (2002): 8481 sq. mi.
Minimum Value (1988): 15 sq. mi.

Gulf Region Partners

Earth Scan Lab at Louisiana State University
www.esl.lsu.edu

NOAA/NWS Climate Prediction Center
www.cpc.noaa.gov

NOAA/NOS Gulf of Mexico Coastal Services Center
www.csc.noaa.gov

NOAA Gulf of Mexico Collaboration Team
www.regions.noaa.gov

NOAA/NESDIS National Climatic Data Center
www.ncdc.noaa.gov

NOAA/NWS Southern Region
www.srh.noaa.gov

Southern Climate Impacts Planning Program
www.southernclimate.org

Southern Regional Climate Center
www.srcc.lsu.edu