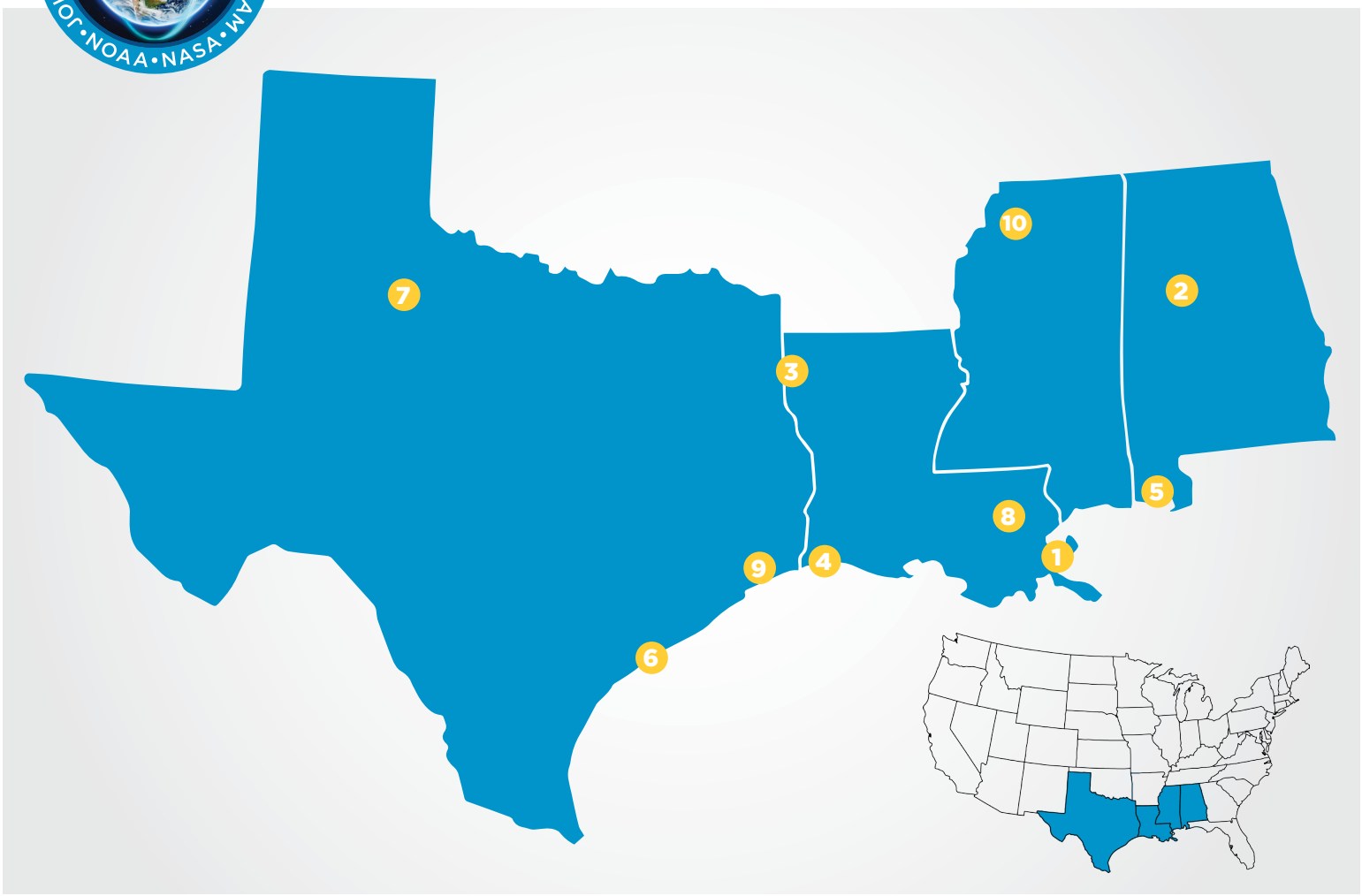
GULF OF MEXICO
REGION



SUPPORTING WEATHER FORECASTING IN YOUR REGION

In the Gulf of Mexico region, 17 Weather Forecast Offices receive direct data from JPSS to help monitor the 17.2 million acres of marsh and nearly 30,000 miles of coastal tidal shoreline in this area. This abundance of water brings certain challenges, from hurricanes to harmful algal blooms which can both be threats to the local economy. This region experiences plenty of severe weather—major hurricanes, tornadoes, thunderstorms and costly coastal flooding.

These events have a significant negative impact on the growing recreation and tourism industries, which bring in millions of visitors yearly. Advanced warning of these dangerous events is made possible through JPSS satellite data, increasing the lead time for local managers and emergency personnel.

BILLION DOLLAR DISASTERS

		$ (in billions)	(casualties)
1	Hurricane Katrina (2005)	153.8	1,833
2	AL Tornadoes (2011)	10.5	321
3	Southern Plains Drought (2011)	12.8	95
4	Hurricane Rita (2005)	22.8	119
5	Hurricane Ivan (2004)	26.2	57
6	Hurricane Ike (2008)	33.6	112
7	U.S. Drought (2012)	31.9	123
8	LA Flooding (2016)	10.0	13
9	Tropical Storm Allison (2001)	11.6	43
10	Southern Heat Wave (1998)	5.2	200

Sampling of natural disasters costing over a billion dollars to the economy in the last 20 years in the Gulf of Mexico region. Data credit: NCEI

SUPPORTING A "WEATHER-READY NATION"

The Joint Polar Satellite System (JPSS) is the Nation's advanced series of polar-orbiting environmental satellites. JPSS satellites provide sophisticated meteorological data and observations of atmosphere, ocean and land for short-term, seasonal and long-term monitoring and forecasting.

Specifically, data from the infrared and microwave sounding instruments is assimilated into numerical weather prediction models which forecast the path and intensity of severe weather events such as the damaging hurricanes and tornadoes that threaten this region. The visible and infrared imaging capabilities of the satellite provide comprehensive Earth observation for mitigating hazardous events by monitoring the impacts and spread of regional droughts, floods and oil spills.

JPSS satellites increase the timeliness and accuracy of forecasts three to seven days in advance of a severe weather event. NOAA's National Weather Service uses JPSS data as critical input for numerical forecast models, providing the basis for these mid-range forecasts. These forecasts allow for early warnings and enable emergency managers to make timely decisions to protect American lives and property, including ordering effective evacuations.

JPSS satellites circle the Earth from pole-to-pole and cross the equator 14 times daily in the afternoon orbit—providing full global coverage twice a day. Polar satellites are considered the backbone of the global observing system.

Information from JPSS supports NOAA's mission to ensure a more "Weather-Ready Nation."

Which industries benefit from JPSS data?

- Emergency management
- Agriculture
- Transportation
- Commercial aviation
- Regional general aviation
- Maritime transportation
- Commercial fishing industry
- Transoceanic container shipping industry
- Recreational boating
- Land transportation
- Defense
- Coastal community preparedness
- Tourism (land and ocean)
- Energy
- Construction
- Insurance
- Conservation
- Oil spill trajectories (ocean)
- Vegetation health

PARTNERS IN YOUR REGION

JPSS commits to continually improving forecasting capabilities by leveraging its relationships with academic institutions, government agencies, ongoing research and development, and working closely with industry contractors.

ACADEMIC AND INDUSTRY PARTNERS

- NOAA, National Centers for Environmental Information, Stennis, MS
- Texas A&M (Austin)
- University of Southern Mississippi

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To learn more about the science behind JPSS, visit **www.jpss.noaa.gov**

To view an interactive tool that allows users to explore NOAA data, visit: **www.nnvl.noaa.gov/view**