

# **Some lesser-known hurricane events which impacted society**

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“In 1814, I took a little trip.....”

But it should have happened in 1812.  
What happened? The “British” hurricane



# Hurricane of 1812

- On August 19, 1812, a Katrina-like hurricane hit just west of New Orleans
  - It resulted in severe flooding, damaged 53 boats, and 100 deaths.
- The *Orleans Gazette*, under the heading **Awful and Distressing**, stated “We have never witnessed anything to equal it, neither do we believe the imagination Can picture...a scene more...awful and distressing.”
- There was severe property damage, including knocking down America’s oldest city market, the French Market, killing several people. The rebuilt buildings have survived to this day. Roofs off buildings, trees uprooted,
  - *Orleans Gazette*
    - i. “Many brick houses severely demolished or severely damaged.”
    - ii. “Levee almost entirely destroyed.”
    - iii. “Small river craft...crushed to atoms.”
    - iv. “Never has any section of the Union felt such a serious loss.”
  - Fort St. Phillip and the local American navy was severely damaged, with fatalities to soldiers and their families.

# Implications of the 1812 Hurricane



- However, the nearby British Fleet at Northeast Pass at the mouth of the Mississippi River and Mississippi islands also were damaged.
- Recovery issues, and fear of hurricanes made the British focus on East Coast attacks instead
- The British were also leery of summertime assaults on the Gulf Coast
- Therefore, the British assault on New Orleans didn't occur until January 1814.
- Summary of battle:
  - i. A conscript of amateur soldiers and pirates killed, wounded, or captured 2000 soldiers of the most powerful navy of that time. This was about half of the British losses for the whole war. Only 13 Americans killed, 56 wounded/missing. It legitimized America as a military power. Europe now also knew they could no longer try to break up America.
  - ii. Circumstances (Battle of Lake Borgne, Jackson's assignment) allowed Andrew Jackson time to reach New Orleans and organize the defense
  - iii. Andrew Jackson became a war hero, eventually President. He also helped found the Democrat Party. During the election, Jackson's opponents referred to him as a "Jackass." Jackson liked the name and used it. It later became the symbol for the Democratic Party when cartoonist Thomas Nast popularized it (although Nast claims it was a coincidence).

What a domino effect from the 1812 Hurricane!!!

October 5, 1954 photo composite of two 16 mm motion picture cameras mounted on a V-2 rocket, 100 miles in space, captures an unknown tropical system

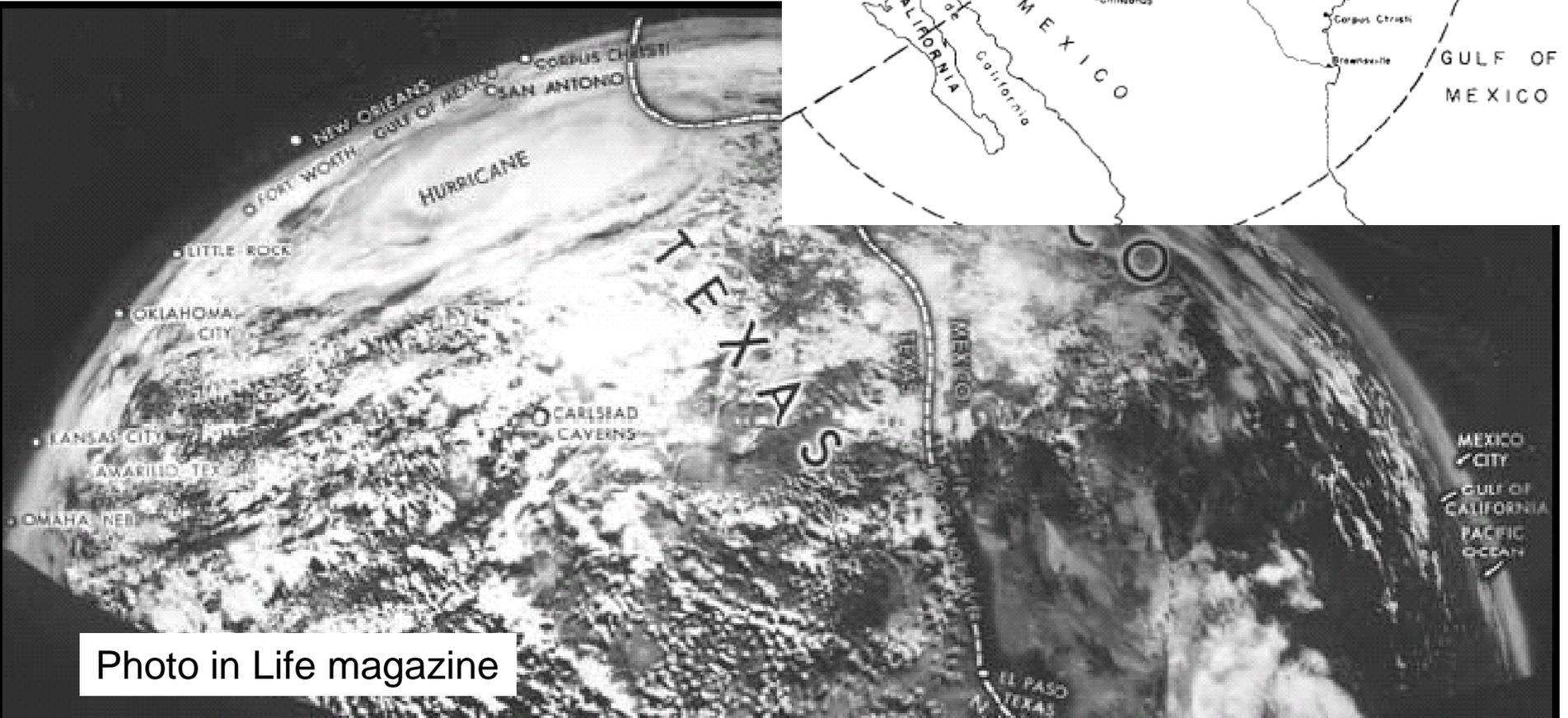


Photo in Life magazine

# Implications of the “Rocket” tropical system

- This storm had not been detected by the weather observing network
- It explained why rainfall occurred in south Texas
- It demonstrated the usefulness of a “high altitude monitoring network.”
- Soon, scientists realized that a more powerful rocket with upper stages could launch a satellite.
- This led to the Vanguard satellite program in 1955 and, after a few setbacks, the first radiation measurements/ crude photos in 1959 (Explorer VI and VII), and the first “operational” satellite TIROS-1 (1960).

**Satellites represent the single greatest advancement in observing weather over the tropics!**

*Still not in best track dataset (the hurricane reanalysis project has not found the “smoking gun.”)*

## The 1943 "Surprise" hurricane in Galveston



Front page of local newspaper



**Because of the fear of U-boats in the Gulf of Mexico, all radio traffic from ships was silenced, including storm reports. Barometer readings also were not made available to the public.**

**Advisories had to also be cleared through the Weather Bureau office in New Orleans, causing them to be hours late, and the forecasters didn't know it was a hurricane.**

**Because of the distraction of the World War 2, the censorship of data, delayed forecasts, warnings were few, and residents were caught off-guard.**

# Implications of the “Surprise” hurricane.....

- The hurricane killed 19, injured hundreds, and causing significant property damage. Only the seawall, a landfall east of Galveston, and its small size kept the storm from being even worse.
- This hurricane also damaged Texas refineries, the primary producer of wartime aviation fuel. Furthermore, because they didn't want our enemies to know about the fuel supply problem, news of this hurricane was also restricted outside Texas and Louisiana!
- After the loss of life in this storm, U.S. hurricane advisories have never been censored again.

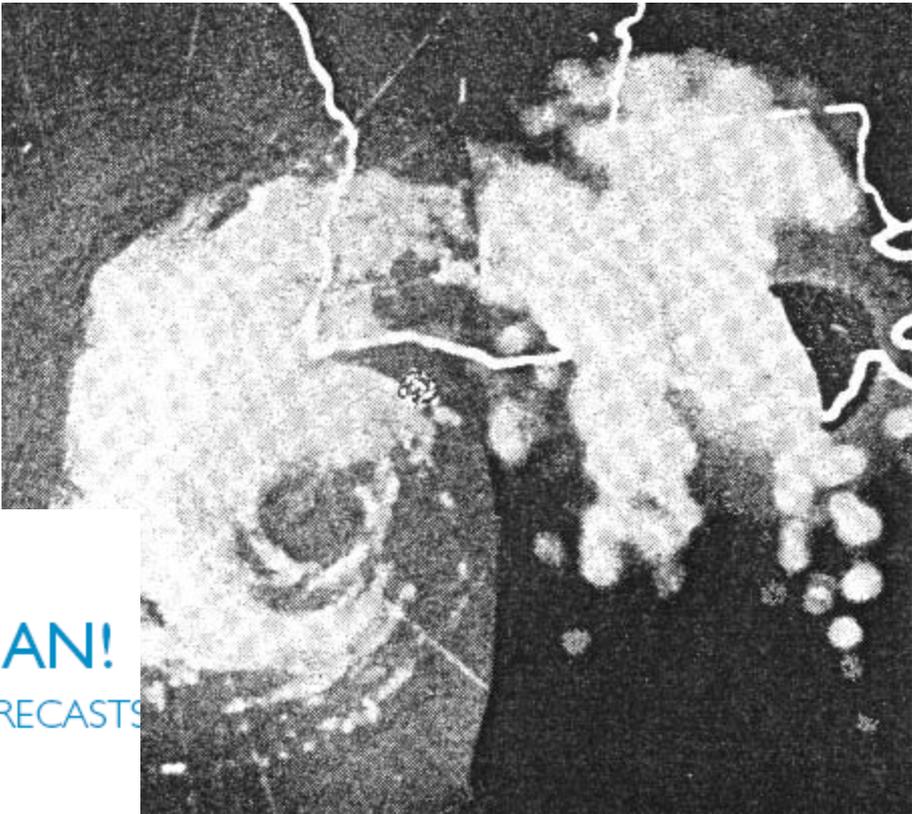
## But at least one pilot knew about it!

*This storm also marked the first intentional (but unauthorized) meteorological flight into a hurricane. On a bet with British pilots in Bryan Field, flight instructor Colonel Joseph Duckworth flew directly into the storm with a navigator. He then made a second flight, carrying the base weather officer as a passenger.*

*Motivated by this flight, the threat to navy ships, and wartime production, hurricane reconnaissance was approved in the Atlantic using Air Force and Navy planes.*

*Success quickly follows one year later with good warnings of an east coast hurricane (The Great American Hurricane)*

# Hurricane Audrey (19)- The "Lawsuit" hurricane



## BAD WEATHER? THEN SUE THE WEATHERMAN! PART I: LEGAL LIABILITY FOR PUBLIC SECTOR FORECASTS

By ROBERTA KLEIN AND ROGER A. PIELKE JR.

How liable is the federal or state government for inaccurate or inadequate weather forecasts?

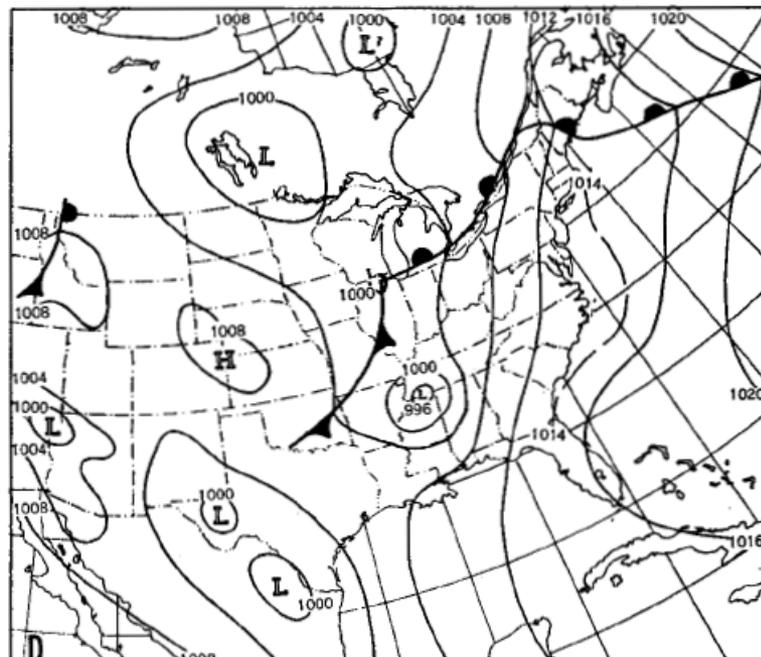
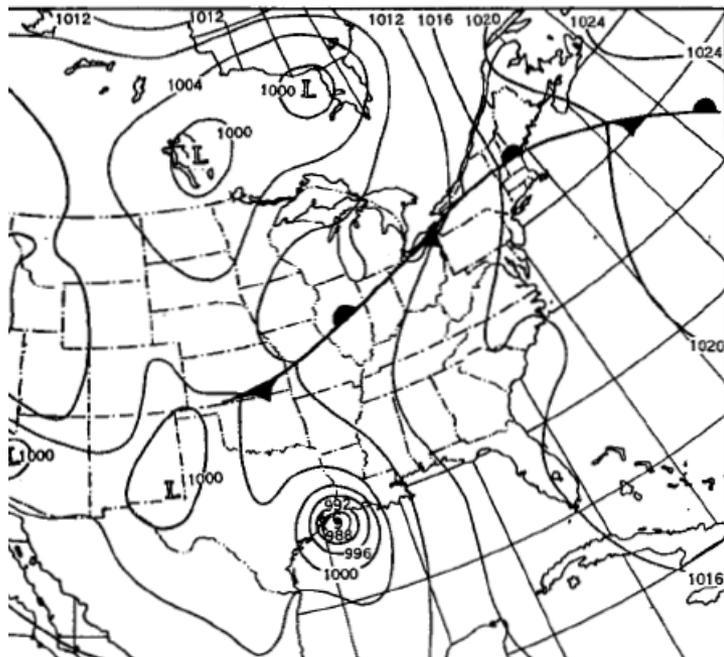
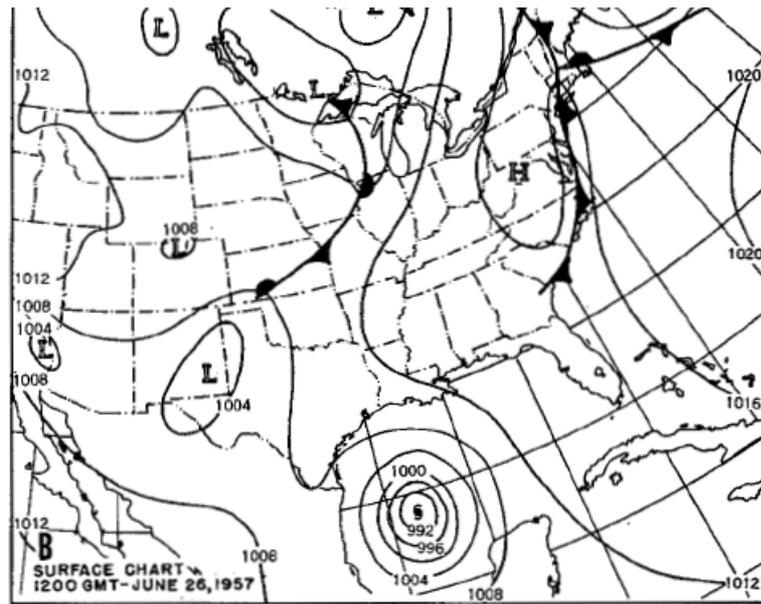
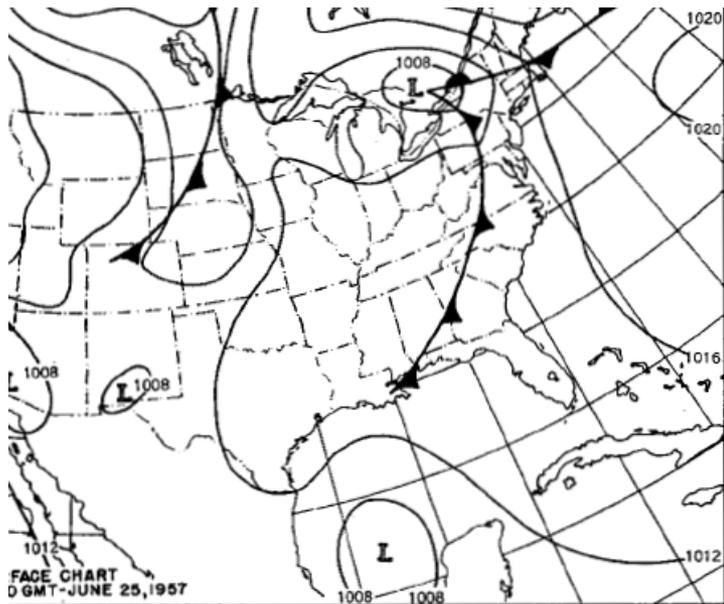
The processes of science and decision making share an important characteristic: success in each depends upon researchers or decision makers having some ability to anticipate the consequences of their actions. It is no surprise, then, that predictions and forecasts are widely viewed as essential to decision making in contexts ranging from the individual

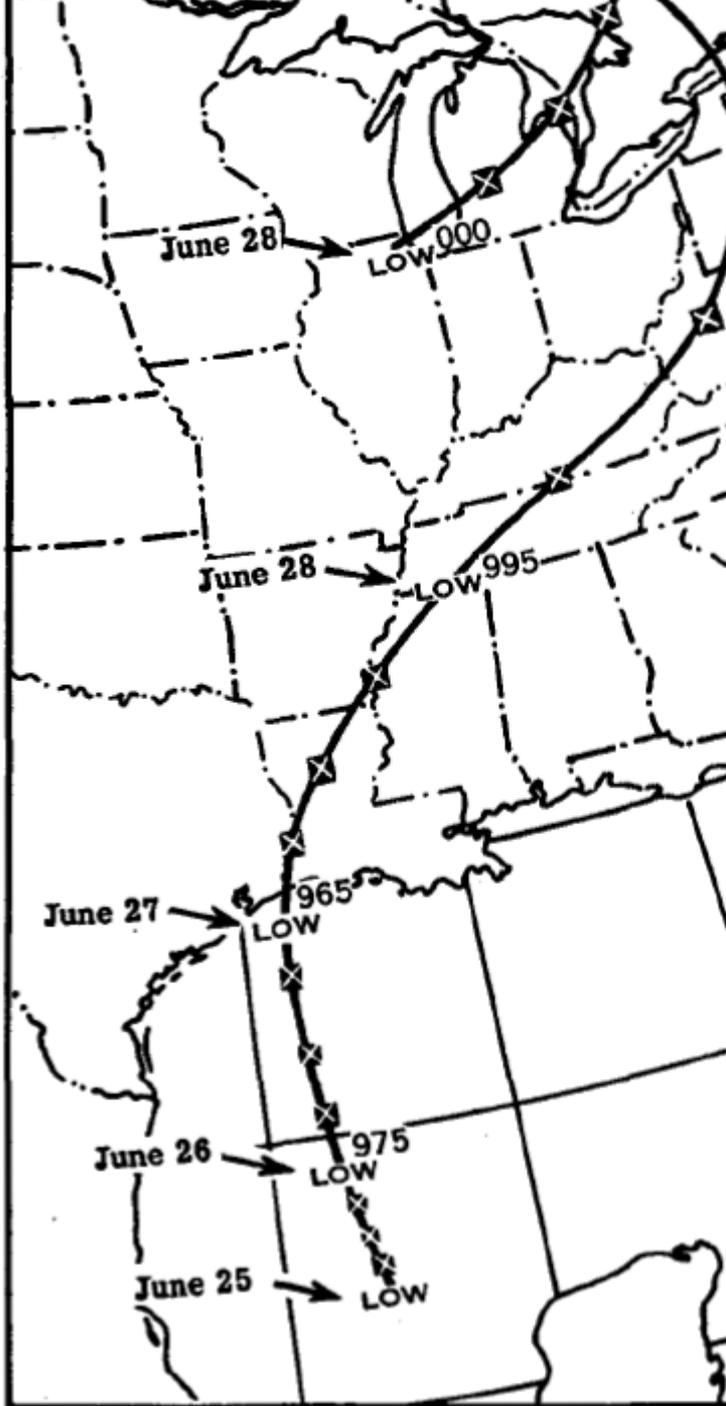
casts were 1°F more accurate (Jones 2001). In such situations, what liability, if any, arises under the U.S. legal system?

This article, the first part of a two-part review,<sup>1</sup> discusses several court decisions resolving lawsuits against the federal and state governments for inaccurate or inadequate weather forecasts or failure to is-

loss.<sup>2</sup> In  
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Bulletin of the American Meteorological Society, December 2002





- Storm rapidly intensified 5 h before landfall
- Category 4 hurricane in June!
- Forward motion increased before landfall
- Surge of 12 feet, which inundates flat coast many miles inland, arrives at night, trapping residents
- Communication on hurricane not clear
  - i. Evacuation of “low and exposed areas” recommended, but many residents at 6-7 feet didn’t consider themselves on low land.
  - ii. Messages lacked a compelling sense of urgency
  - iii. City officials edited advisory text before dissemination
- Many residents caught off-guard; 526 killed

**Whitney Bartie and hundreds of others sued the government, claiming the Weather Bureau gave inadequate warnings**

**This tested a legal doctrine known as *sovereign immunity* (“The King can do no wrong.”) It states the government cannot be sued without its consent when exercising discretion or for misrepresentation.**

# Implications of the “Lawsuit” hurricane

- The court essentially upheld *sovereign immunity* and dismissed the case.
- *It was discretionary* – weather forecasting is a subjective process requiring discretion, as are means of communicating with the public
- *It was misrepresentation* – because a bad forecast is essentially viewed in this manner
- Even today, it’s difficult to win a lawsuit based on a bad forecast

## Other influential but obscure hurricanes

- Benjamin Franklin's "eclipse" hurricane (1743)
- The "golf" hurricane (1935) : *"Forecaster on golf course – unable to contact"*
- The "Samoa" hurricane (1889)
- The Indianola hurricane (1875) : Founded the U.S Weather Bureau
- Racer's hurricane (1837) : The "lifejacket" hurricane
- The "Privy" Hurricane (1898)