

WFO Lake Charles Decision Support Services



Roger Erickson



National Weather Service



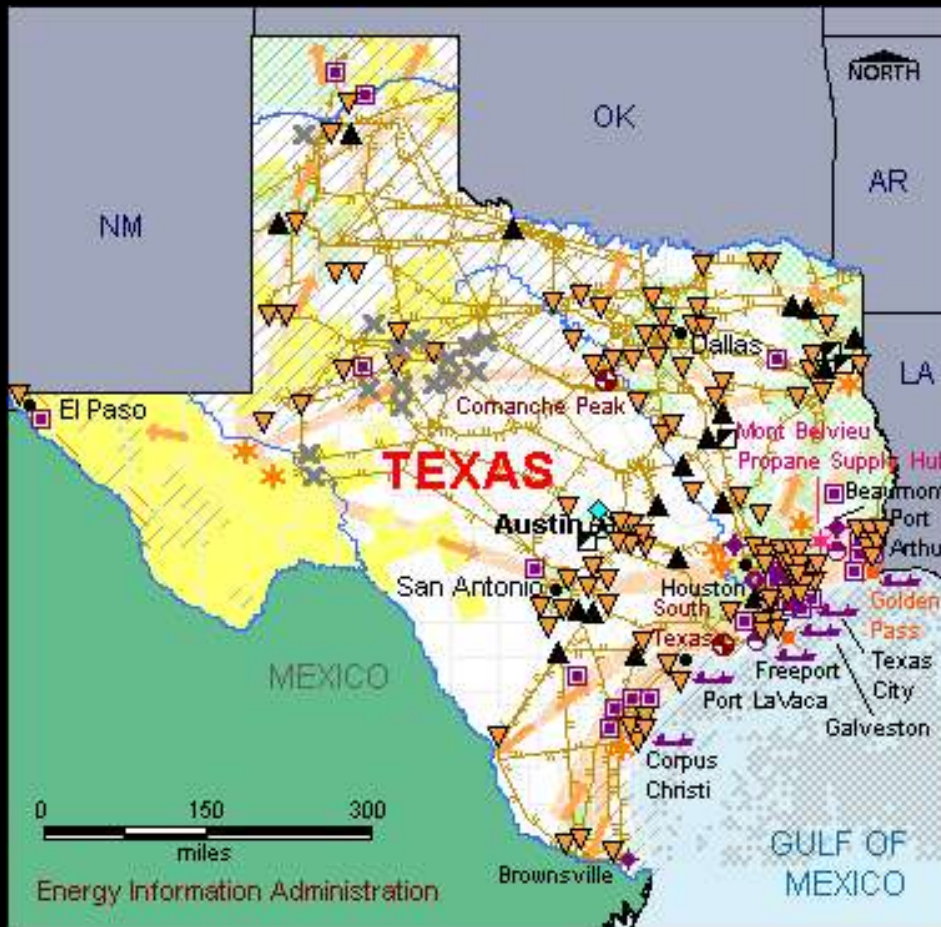
WFO Lake Charles

Louisiana National Economic Statistics



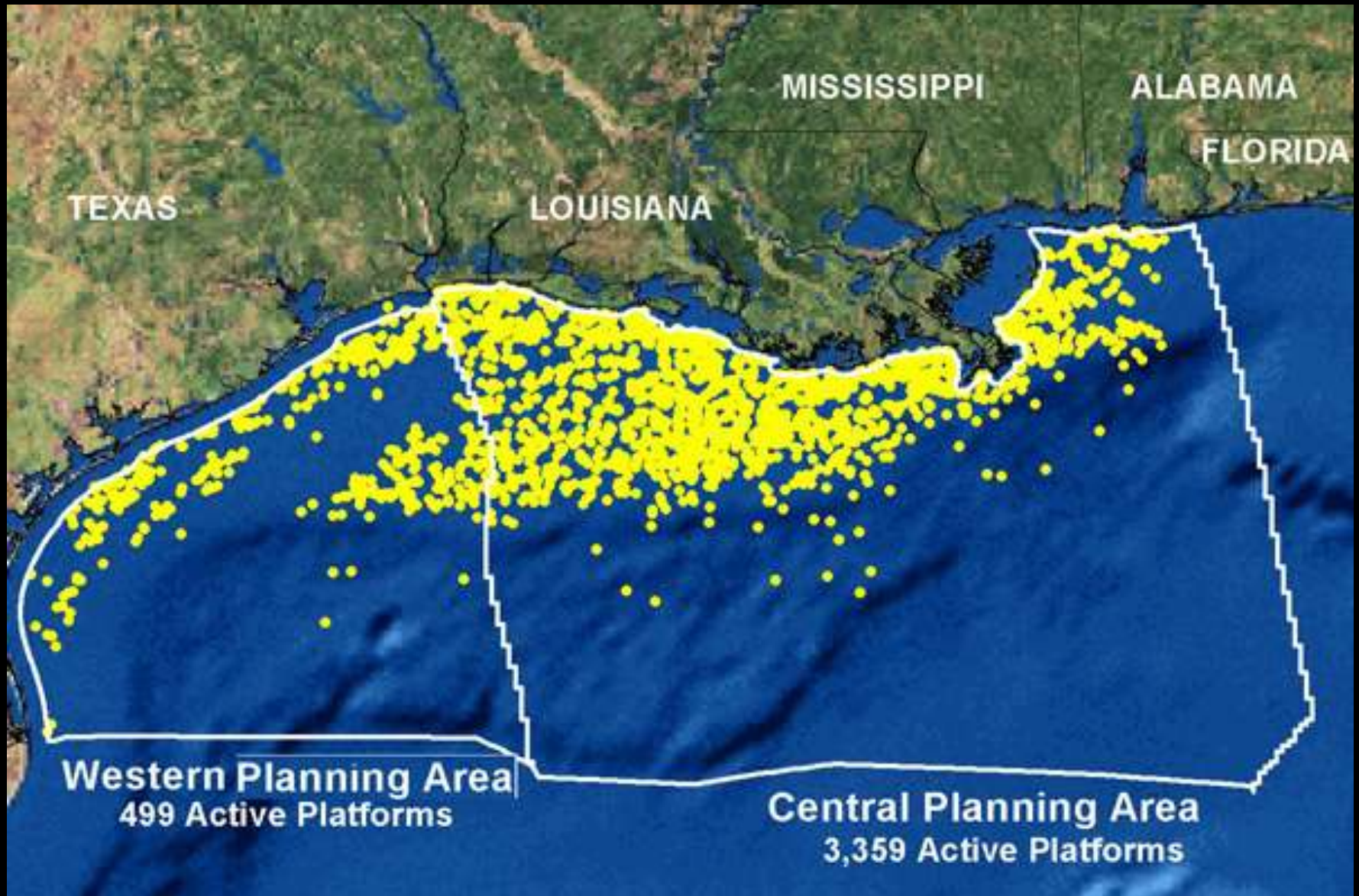
- Fourth largest crude oil production
- LOOP is the only port in US capable of accommodating deepdraft tankers
- 2 of 4 US strategic petroleum reserves
- Henry Hub is largest centralized point for natural gas spot and futures trading in the US
- LNG Sabine is the largest import LNG in US

Texas National Economic Statistics

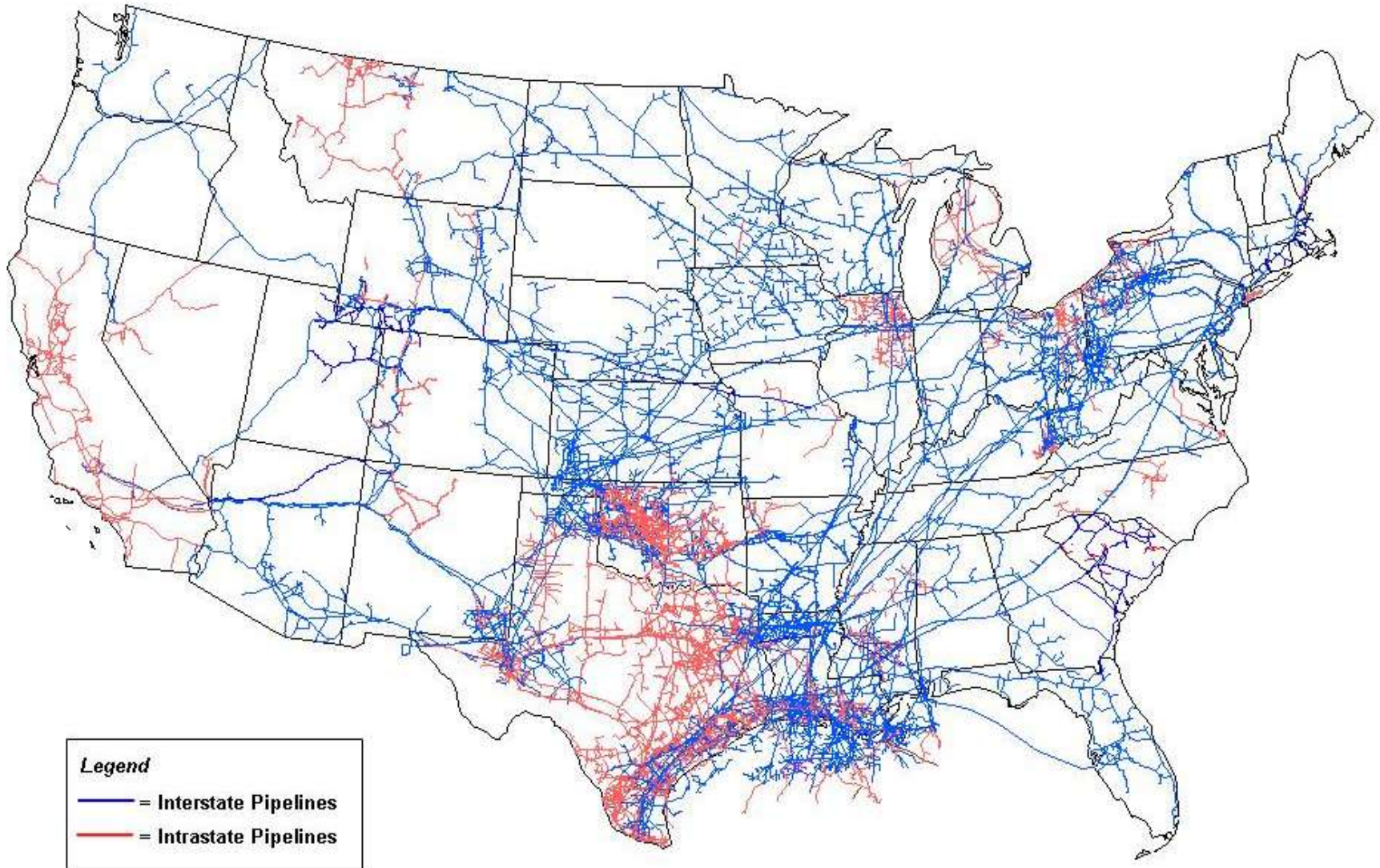


- Number 1 in crude oil production in US
- 27 refineries produce 4.7 million barrels of crude oil a day
- Refineries produce more than $\frac{1}{4}$ of US total crude oil refining
- Number 1 in natural gas production in US

Gulf Coast Oil Platforms



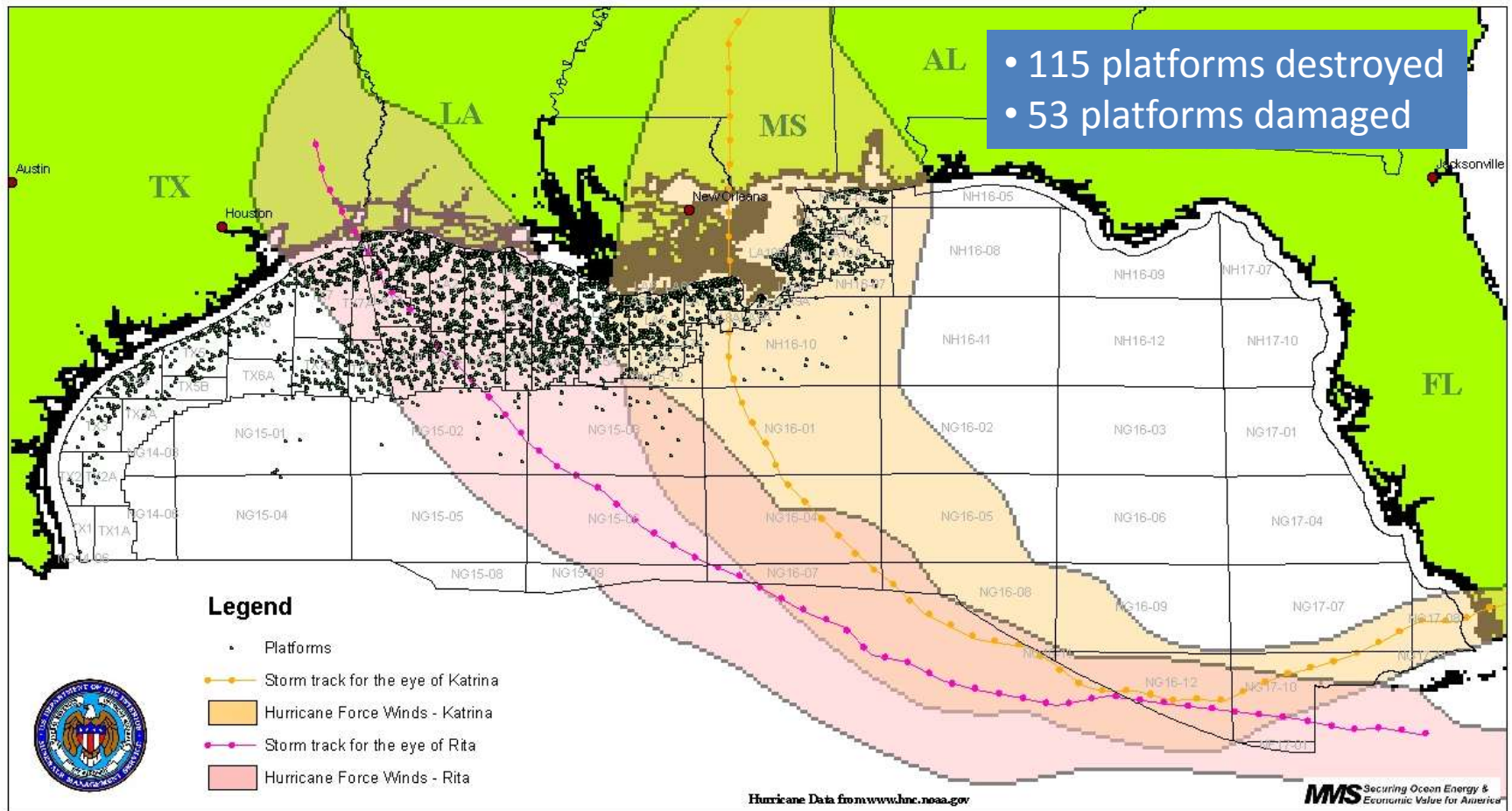
U.S. Natural Gas Pipeline Network 2009



Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

Aftermath of 2005 Hurricane Season

Hurricanes Rita and Katrina, August - September 2005



3,050 of the Gulf's 4,000 platforms were in the path of Katrina or Rita

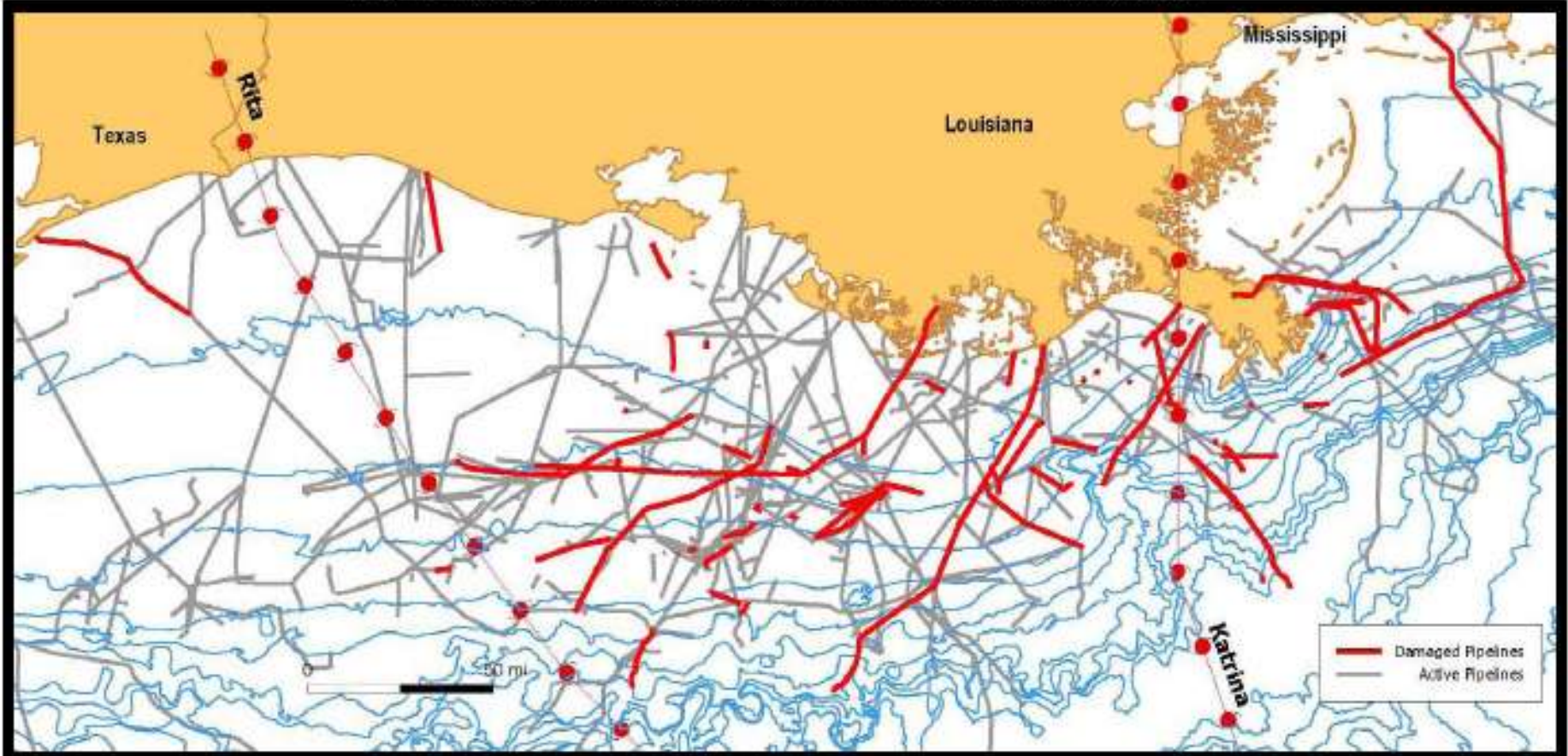
Aftermath of 2005 Hurricane Season



BP Thunderhorse - \$1 billion oil platform
150 mi SE New Orleans

Aftermath of 2005 Hurricane Season

Map 1 – All Pipeline Damages Reported for Hurricanes Katrina and Rita



All pipeline damages reported for both Hurricanes Katrina and Rita are mapped over the hurricane routes and seafloor contours. Damaged pipelines are in red and the undamaged active pipeline network is shown in gray. This map represents 542 damage reports; 299 reports for Hurricane Katrina and 243 for Hurricane Rita.

Aftermath of 2005 Hurricane Season

- Major spills: 6
 - GT 100,000 gallons
- Medium spills: 4
 - 10,000 – 99,999 gallons
- Minor spills: 207
 - 100 – 9,999 gallons
- Total spilled: 8 million gallons
- Recovered: 3.9 million
- Evaporated: 2 million
- Naturally Dispersed: 2 million



WFO Lake Charles HAZMAT Support

- November 30, 2005
- Barge filled with 5 million gallons heavy fuel oil
- Struck submerged platform
- 29 miles south of Calcasieu Pass, LA
- 100 spot forecasts



U.S. Coast Guard photograph

WFO Lake Charles HAZMAT Support

- La Marie tugboat struck unknown object
 - 20 miles south of Cameron, LA
 - Sank to ocean floor
 - 125,000 gallons of fuel
-
- 4x day spot forecasts – USCG
 - 2x day conference calls - USCG



USCG Capt. Tom Sparks and Security Specialist Robert W. Stegall

“Thank you very much to you and all the NOAA staff that have been providing us with up to the minute weather conditions during this period.”

“As so often is the case with our crisis responses, weather is an absolutely critical factor, & it's reassuring to know that we've got a super resource in you & your folks.”

Hurricane Rita Debris Cleanup – June 3, 2006



- 2x day HAZMAT Spot Forecasts
- Coastal communities debris landed in national wildlife refuges
- Cleanup crews working in open concerned with thunderstorms and lightning

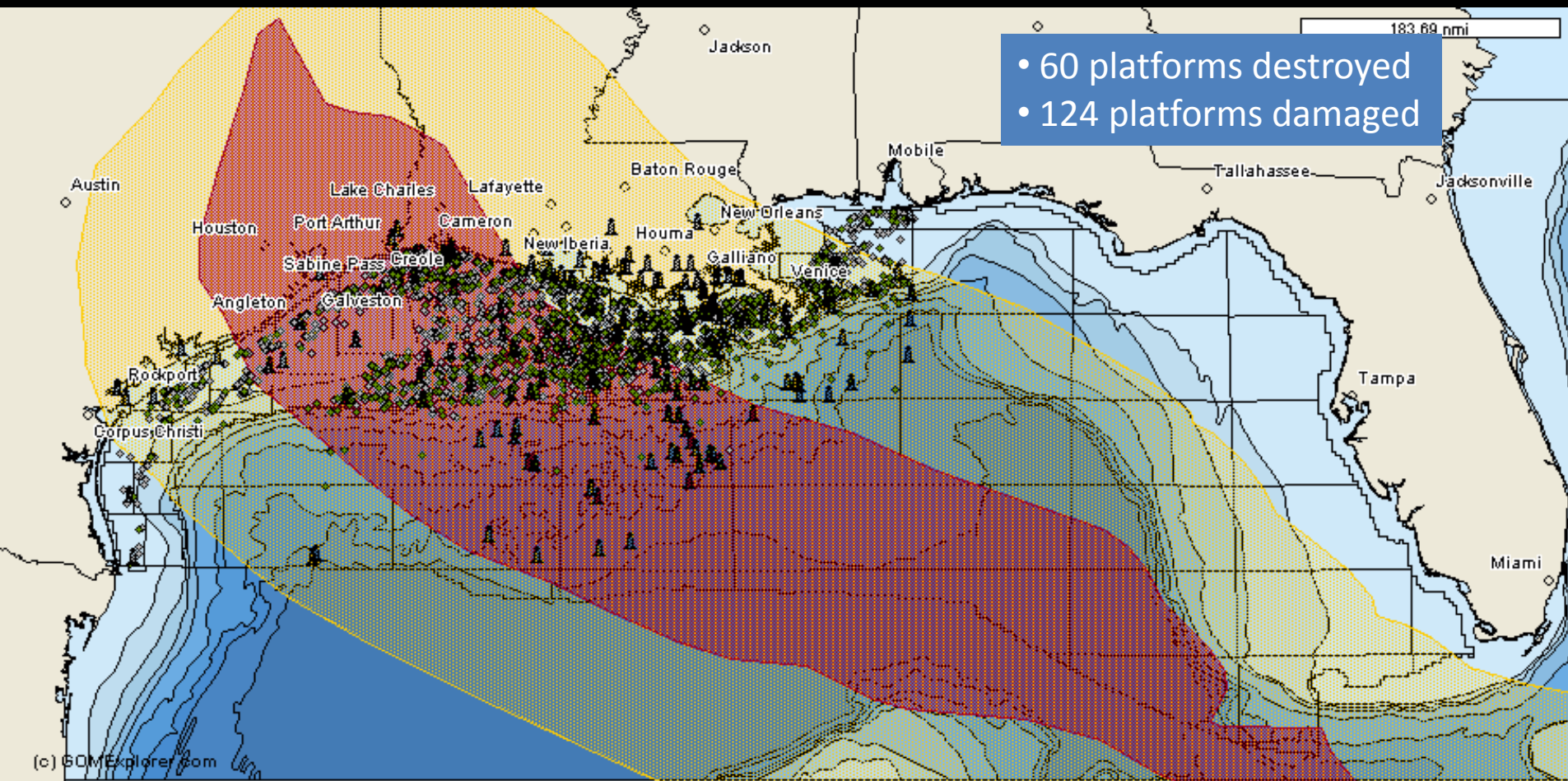
Monica Allison of the USCG...

"The recent reports that I have receiving from NOAA in Lake Charles have been outstanding.

Your continued support of our operation, while it may seem trivial, is vital to our success and the health and safety of the crew working out of Gibbstown.

In short, it is greatly appreciated."

Aftermath of 2008 Hurricane Season



2,127 of the Gulf's 3,800 platforms were in the path of Gustav or Ike

March 1 – 12 2009

- Dry bulk vessel Eltanin
- Filled with prilled sulphur (44,000 m tons)
- Extremely low tides
- Ran on a sandbar
- 16 miles south of Sabine Pass, TX





- Offshore lightering April 7 – May 12 2009
- Debris analysis from 2008 hurricane season

April 17-20 2009



- Barge Kirby 29703 - split in half - 50 miles south of Cameron, LA

September 8 – October 21 2009

- 6 miles south of Sabine Pass
- Liberty ship
- Sunk in 1971
- Now leaking oil
- 42 spot forecasts



September 15 – 18 2009



- Sugar Babe shrimp vessel
- 800 gallons of diesel fuel
- Sunk 10 miles southwest of Atchafalaya Bay
- 8 spot forecasts

Pre Hurricane Season Preparedness

- 40-80 hurricane preparedness meetings
- Total participation: 5,000 to 10,000
- State and local exercises and drills



E-Mail Alerts

- 300+ person mailing list
 - Emergency management
 - Federal, state, local
 - Media
 - News, mets
- Non-routine
- Short
- Sweet
- To the point



Multi-Media Briefings

- Available on internet and email (400+)
- Less than 5 minutes
- Updated every 6-8 hours
- After NHC advisories
- 3-5 main talking points
 - Storm surge
 - Winds
 - Rainfall
 - Tornadoes



Go To Webinars & Conference Calls

- 60-80 per tropical event
- 5-15 per day
- NOAA/COE/USCG/Ports
- LA GOHSEP
 - Unified Command
 - SW LA
 - Shelter
- LA Region 5
- Southeast Texas



Go To Webinars & Conference Calls

- GoTo Webinars
 - 10-75 connections
- Conference Calls
 - SW LA
 - 125-250 participants
 - SE TX
 - 250-500 participants
 - NOAA/USCG/COE
 - 100-200 participants



Live TV Briefings



AS SCHOOL THURSDAY, BUT WILL CLOSE FRIDAY.

NWS Chat

- Solely media
- Emergency management wants more privacy...
- ...but also wants to provide official decisions to media



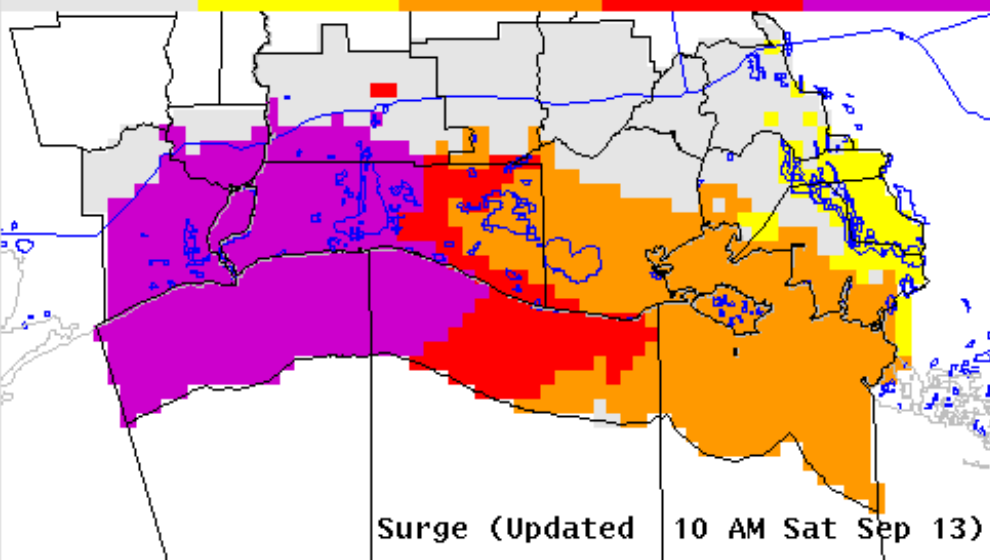
Evolving Changes to Decision Support

Coastal Flooding Impacts Definitions

Read this office's detailed [Hurricane Local Statement](#)

Low	<p>Minor flooding of low lying areas, with little or no damage.</p> <p>High waves may cause water to reach the dunes and immediate waterfront roads to close. Minor erosion possible.</p>
Moderate	<p>Some coastal flooding of immediate beachfront property and structures.</p> <p>Significant erosion, high waves, and inundation may cause waterfront and coastal access roads to close.</p> <p>Moderate inundation of coastal, and bayside tributaries is possible.</p>
High	<p>Significant, possibly life-threatening storm surge.</p> <p>Widespread inundation and damage to roads, infrastructure, and buildings is possible. Surge flooding will also affect bays and rivers.</p> <p>Many waterfront and coastal access roads will be closed, some potentially for an extended period of time.</p> <p>Significant inundation of coastal, and bayside tributaries is likely.</p>
Extreme	<p>Severe, life-threatening storm surge.</p> <p>Complete coastal inundation and severe damage to roads, infrastructure, and buildings is likely.</p> <p>Nearly all waterfront and coastal access roads will be closed. Many coastal road closures will last days or weeks.</p> <p>Severe, possibly unprecedented inundation of coastal and bayside tributaries is likely.</p>

None Low Mod High Extreme



Surge (Updated 10 AM Sat Sep 13)

NWS Lake Charles LA



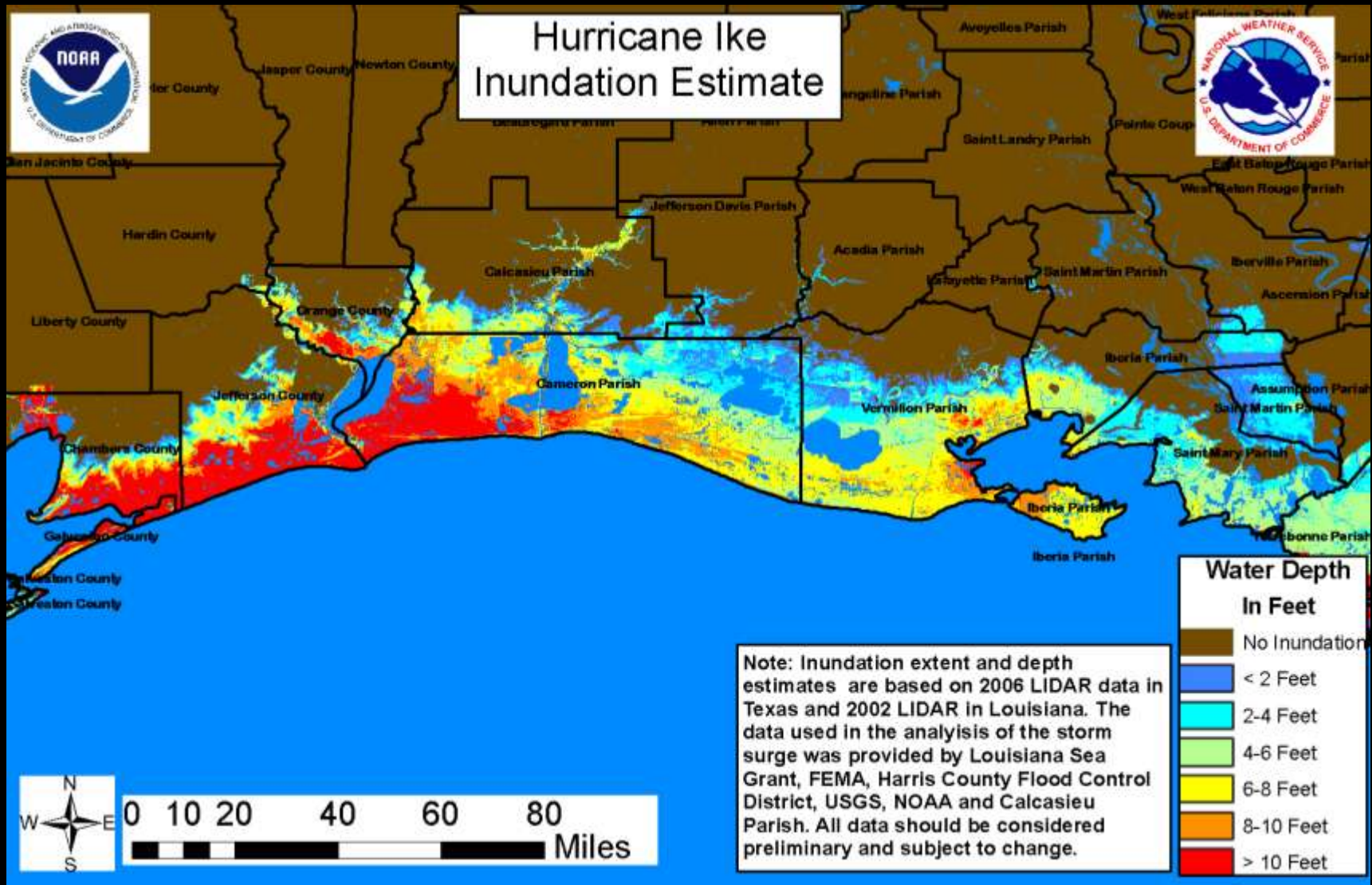
Evolving Changes to Decision Support

The background features a large, faint watermark of the National Weather Service logo. The logo is circular with a blue and green color scheme, containing a white lightning bolt and a white sun. The text "NATIONAL WEATHER SERVICE" is arched across the top, and "U.S. DEPARTMENT OF COMMERCE" is arched across the bottom.

National Weather Service
Lake Charles, LA
Tropical Weather Update

Tuesday August 4 2009

Evolving Changes to Decision Support



For More Information



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