

# US ARMY CORPS OF ENGINEERS ACTIONS DURING 2016 TEXAS SPRING FLOOD

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For Summer Stakeholder Conference  
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*"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."*



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## TALKING POINTS

- USACE Authorities For Flooding
- Spring Flood Event across Texas
- USACE Lakes and Reservoir Operations
- Partnership and Stakeholder Interactions
- Response Actions
- Recovery and Mitigation



Eldridge Rd north of I-10  
8 May 2016

# PL 84-99 – The USACE Emergency Management Authority

## Program Authority

- Public Law 84-99 provides an emergency fund to be expended for:
  - Preparation for emergency responses to any natural disaster
  - Flood fighting
  - Repair & restoration of flood control works and hurricane shore protection (coastal storm damage projects)
- Executed through the Flood Control and Coastal Emergencies (FCCE) appropriation

## Six Program Activities

### Program Activities:

- Preparedness
- Response
- Rehabilitation
- Water Assistance
- Advance Measures
- Hazard Mitigation



# PL 84-99 – The USACE Emergency Management Authority

## Preparedness

- Planning for Quick and Effective Response
- Emergency Management Organization
- Planning
- Training
- Exercises
- Stockpiling Supplies and Critical Flood Fight Materials
- Public Assistance Including Liaison, Coordination, and Inspections



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# PL 84-99 – The USACE Emergency Management Authority

## Response

- Assistance is **Always Supplemental** to state and local efforts
- Field Investigation & Reconnaissance of Flood Potential
- Flood Fighting
- Technical and/or Direct Assistance
- Rescue Operations
- Contracting for Emergency Construction
- Post Flood Response
- Emergency Debris Removal
- After Action Review & Reporting



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# PL 84-99 – The USACE Emergency Management Authority

## Rehabilitation

- Only “Active” flood risk management projects eligible for repair
- Non-structural alternatives can be considered
- Repair any Federally constructed coastal storm damage reduction projects
- Non-Federal Projects repaired at 80% Federal and 20% Non-Federal cost
- Sponsor can provide their cost-share in Cash, Work in Kind, or Combination of Both
- Federal Projects repaired at 100% Federal cost

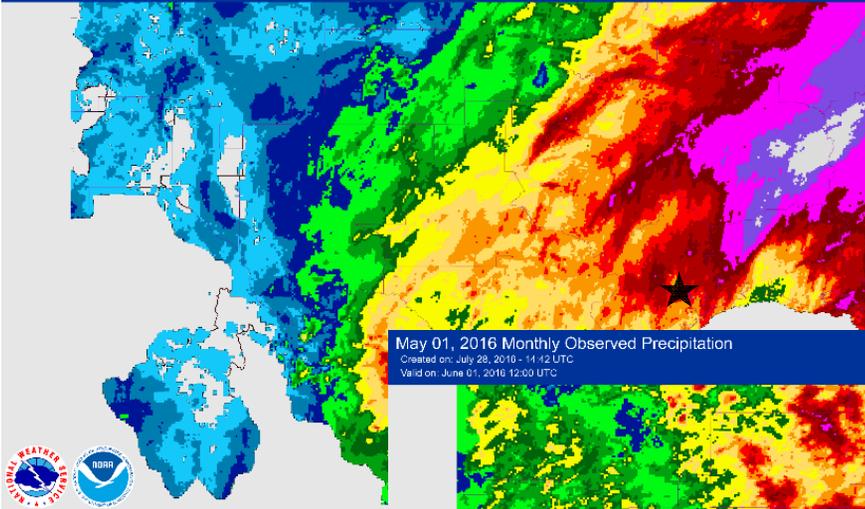
Repair to the level of protection provided by the structure prior to the flood, hurricane, or coastal storm.

Damages must be flood related and exceed \$15k in estimated cost to repair.

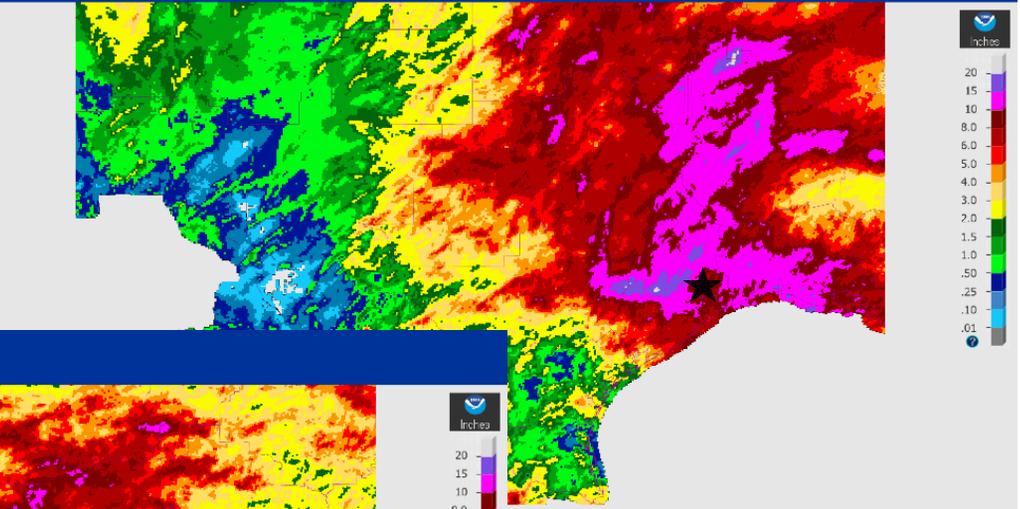


# SPRING FLOOD EVENT ACROSS TEXAS

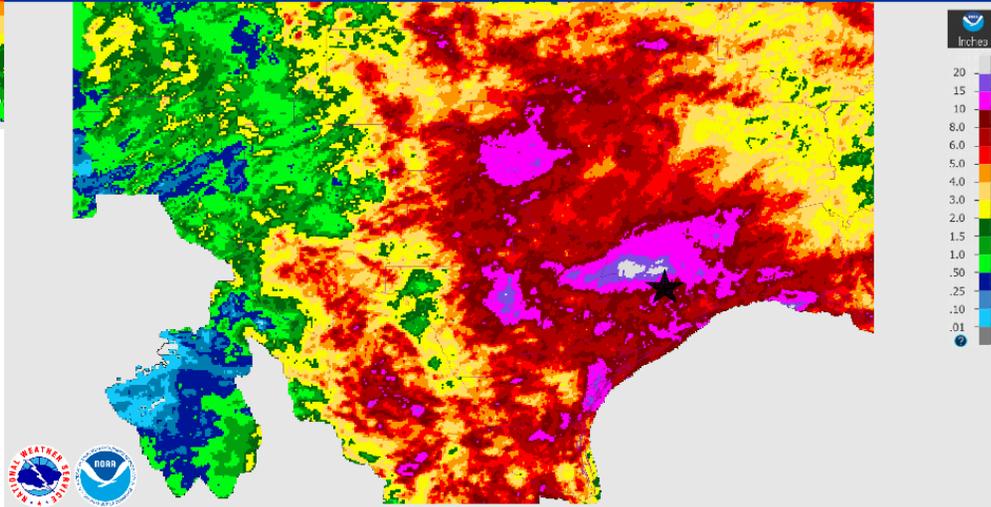
March 01, 2016 Monthly Observed Precipitation  
Created on: July 28, 2016 - 11:40 UTC  
Valid on: April 01, 2016 12:00 UTC



April 01, 2016 Monthly Observed Precipitation  
Created on: July 28, 2016 - 11:38 UTC  
Valid on: May 01, 2016 12:00 UTC



May 01, 2016 Monthly Observed Precipitation  
Created on: July 28, 2016 - 11:42 UTC  
Valid on: June 01, 2016 12:00 UTC



File Name

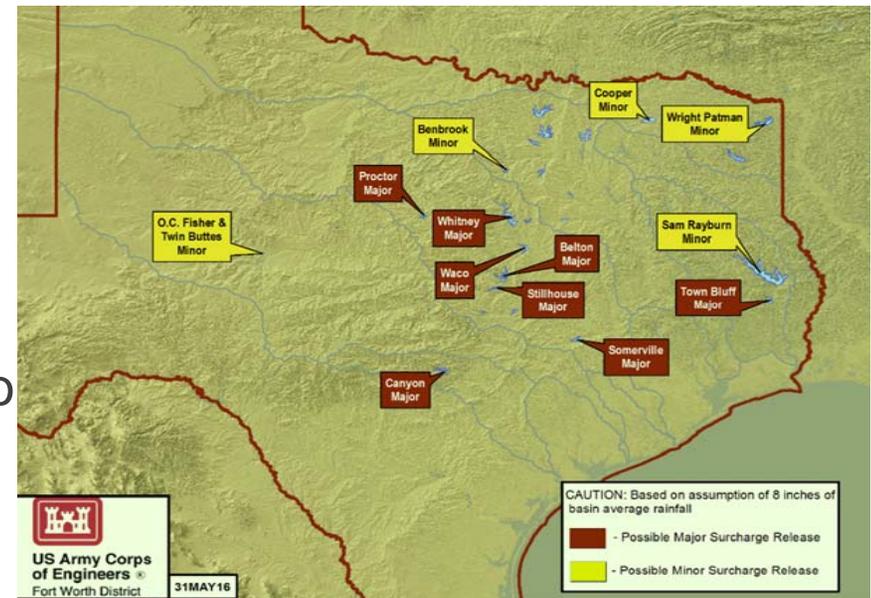


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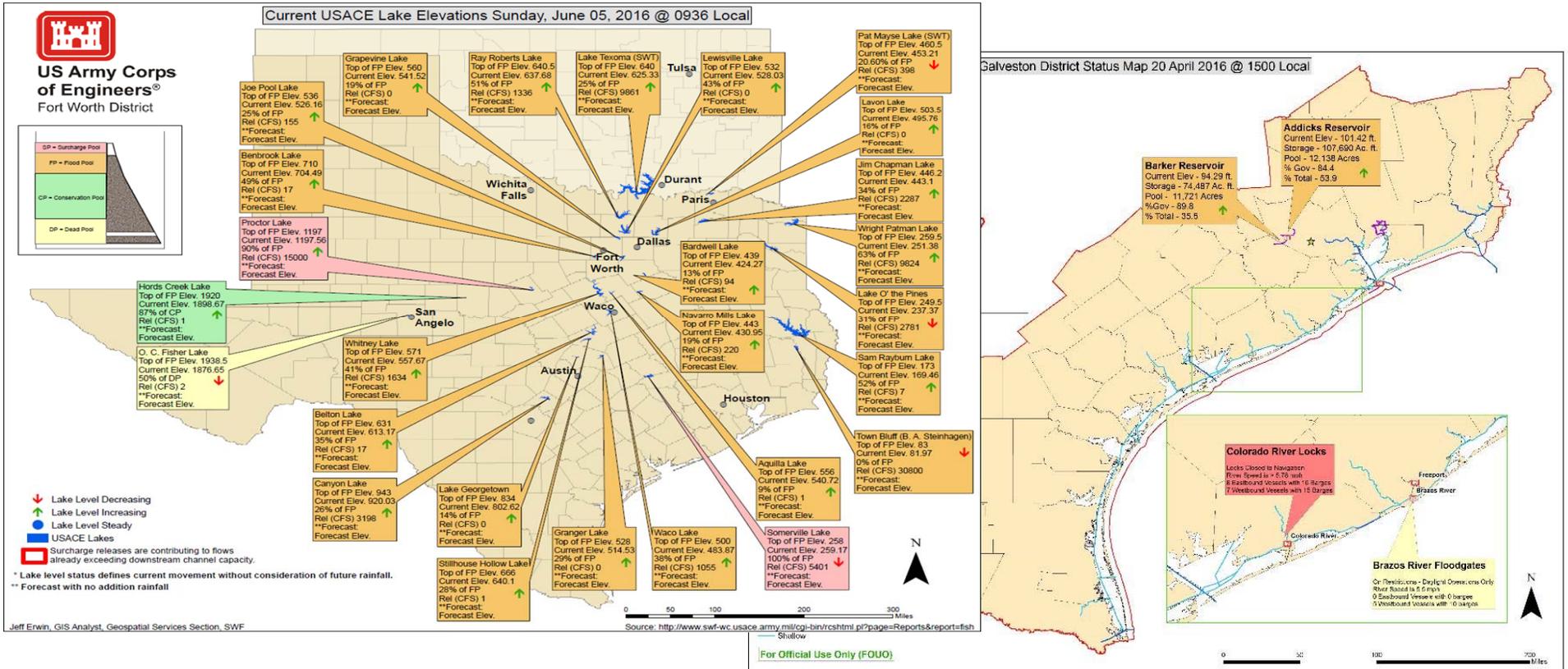


## USACE LAKES AND RESERVOIR OPERATIONS

- **April – May:** continued precipitation concentrating on the eastern third of the state. Focus was on the Houston – Galveston area.
- **27 May** – Reservoir levels are closely monitored. 23 of 29 structures were at flood capacity. Somerville Dam goes into surcharge operations. Hydropower production at Sam Rayburn Lake is suspended to reduce releases.
- **29 May** – NWS and GCRFC predict an additional 8-10 inches of precipitation over the next 72 hours.



# USACE LAKES AND RESERVOIR OPERATIONS



# USACE LAKES AND RESERVOIR OPERATIONS

- Running models w/ current weather forecast
- Dam inspection teams deployed for 24/7 inspections of dams
- Daily updates w/ downstream Stakeholders
- Monitoring downstream of dams
- Working w/ Navigation Stakeholders to prioritize critical barge movement



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## PARTNERSHIP AND STAKEHOLDER INTERACTIONS

- Lake/Reservoir release plans and potential impact models are shared with downstream stakeholders
- Releases are socialized before changes are made
- USACE works with National Weather Service, River Forecast Center and various State and Local stakeholders
- Releases are determined using pool elevation vs rate of rise curves
- Reservoir Operations had two standing conference calls for stakeholders and numerous additional conference calls
- Navigation daily conference call and email updates

## OTHER RESPONSE ACTIONS

- USACE provided over 300,000 sandbags to counties
- Provided hydrology and hydraulic modeling data
- Inspected numerous non-federal dams and levees
- Liaisons to State and TransStar
- Debris management Subject Matter Experts to counties



## RECOVERY & MITIGATION

- Inspection and assessment of projects eligible for rehabilitation assistance (PL84-99)
- Repairs ongoing to any Federal Project
- Three new projects underway w/ local sponsors as result of flooding (Continuing Authorities Program)
- One Congressional request for large Houston metro study (entire system analysis)
- Two other studies initiated to model all watersheds within coastal Texas



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