Two-Part Event Covering: Statewide Flood Plan & Regional Early Flood Warning Software

When: Thursday, December 14th, 8:30-11:00am
Who: Floodplain, Public Works, and Emergency Preparedness Officials; Stormwater Managers; and Transportation Engineers
Where: NCTCOG Transportation Council Room

Statewide Flood Plan by Texas Water Development Board with Mindy Conyers, Ph.D., State Flood Plan Coordinator
Broad overview of Texas' first State-Wide Flood Plan.
Your Chance to give input and feedback!
8:30am - 10:00am

Regional Early Flood Warning Software with OneRain
Learn about a new product that enables communities to see each other’s data in real time as storms track across the region
10:00am - 11:00am

For Questions, contact Mia Brown at mbbrown@nctcog.org or 817-695-9227
Notes on a state flood plan for Texas

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The statements contained in this presentation are my current views and opinions and are not intended to reflect the positions of, or information from, the Texas Water Development Board, nor is it an indication of any official policy position of the Board.

Notes on a state flood plan for Texas

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Science & Planning for Water Supply

1957

1956

NGDC/NOAA

1997

2013

2015

$2B

www.twdb.texas.gov

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Region C

https://2017.texasstatewaterplan.org/statewide
Water Weekly

For the week of 12/11/17

Water conditions

Drought slowed, but continued its expansion across the state last week. The area of moderate or worse drought is up two percentage points, now covering 37 percent of the state. The area of severe drought grew by five percentage points, now covering 11 percent of the state.

Drought conditions

- 37% now
- 35% a week ago
- 0.8% three months ago
- 5% a year ago

Intensity

- D0 abnormally dry
- D1 drought - moderate
- D2 drought - severe
- D3 drought - extreme
- D4 drought - exceptional

Map courtesy of the U.S. Drought Monitor
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**Flood financial assistance**

- State Flood Protection Grants (1983)
- FEMA Flood Mitigation Assistance (1998)
- FEMA Cooperating Technical Partner (2000)
- National Flood Insurance Program State Coordinator’s Office & Community Assistance Program (2007)
- FEMA Severe Repetitive Loss (2008)
May 2015 through August 2016
Memorandum of Understanding

• Between the Office of the Governor & TWDB (12/2015)

• Allocated $6.8 million from Disaster Contingency Fund

“...for purposes of preparing for a disaster, including installing a network of stream gages to enhance existing flood notification systems and making funds available to state and local entities for floodplain management...”
Subsequent flood related activities

• Flood-hardened USGS stream gages
• TexasFlood.org
• TexMesonet (website, stations, & partners)
• Support of NWS flood forecasting
• Flood Protection Grants
• Community Outreach
Flood grants & outreach

- 17 individual grants
- $3.5 million total grant funding
- 2 new staff for outreach
Science & Planning for Water Supply & FLOOD

1957
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The 85th Texas Legislature

Appropriated $7.8 million for flood activities and expanded use of the Floodplain Management Account

- Flood Protection Grants
- Additional USGS flood gages and TexMesonet stations
- Improvements to TexasFlood.org & TexMesonet.org
- Expanded community assistance
- Model calibration for NWS locations
- Leveraging funds for Cooperating Technical Partners mapping
- Acquisition of LiDAR data
- and
...a state flood plan

• will provide a comprehensive understanding of existing programs, risks, and needs for floodplain management and mitigation

• will incorporate broad input from stakeholders

• will not standardize project evaluations or prioritize projects for funding
The State Flood Plan for Texas

1. Assess risk and roles
2. Estimate flood mitigation costs
3. Determine the future of flood planning in TX

Gap analysis:
What more needs to be done?
What needs to be done better?

Due to legislature December 1, 2018
The State Flood Plan for Texas

1. Assess risk and roles
   a. What is the history and risk of flooding in Texas?
   b. Who has what role in the flood world?
   c. What more can be done to reduce risk?
   d. What kind of risk, if any, is associated with focusing only on the 100-year floodplain?
   e. What is the financial risk to the state for inaction?
The State Flood Plan for Texas

2. Estimate flood mitigation costs
   a. What are the current unimplemented plans to mitigate flood?
   b. What are the statewide mitigation costs?
The State Flood Plan for Texas

3. Determine the future of flood planning in TX
   a. Convene stakeholders to discuss what should go into a state flood plan
   b. Convene stakeholders to discuss what future state planning might look like
One more thing...

Recommendations to reduce flood risk

- Statewide structural and nonstructural policy recommendations for
  - low-cost solutions
  - near-term solutions
  - long-term solutions

- Rec’s to improve collaboration and leverage existing funds

- Rec’s for developing statewide flood planning
a flood plan word-cloud of sorts

collaborative
regional
prevention proactive
science-based
stakeholder-led
early-warning
messaging costs
loss resiliency
communicating risk
Thank you for your time today.

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“Experts Measuring and Understanding Water”

- Founded in 1992
- End-to-end solution provider
  - Design of water monitoring networks
  - Software & Data Analysis
  - Field integration solutions (monitoring, telemetry, training, maintenance)
  - Rainfall data (historical, real-time)
OneRain, Inc.

OneRain end-to-end real-time hydrological monitoring systems
Real-time accurate data can detect and alert threatening flood conditions in advance.
Typical ALERT2 Network

- Base Station
- Receiver/Decoder
- Repeater
  - AC Power
  - Solar Power
- ALERT RF
- ALERT

OneRain
The Rainfall Company
Current Texas ALERT Networks Supported by OneRain

- City of Fort Worth
- City of Grand Prairie
- Harris County Flood Control District
- San Jacinto River Authority
- Trinity River Authority – Lake Livingston
- Brazos River Authority
- Bexar County
Who Uses the Information?

- Emergency Managers
- Sheriff Departments
- Flood Plain Managers
- Engineers
- Hydrologists
- Transportation Departments
- General Public