Texas Water Development Board

Science: Collecting water data
- Current amount of water
- Texas population
- Location of water
- Collaboration with local communities
- Communities at risk
- Water management costs
- Potential water shortages

Planning: Assessing the state's future needs
- Population forecast

Goal: Securing the water future of Texas
- Inform and educate the public about Texas water
- Provide data and maps for public health and safety
- Facilitate communities' abilities to create new water supplies
- Enable decision makers to manage and conserve existing supplies
- Finance water, flood, and wastewater projects

www.twdb.texas.gov
Agenda

• Welcome and opening remarks

• TWDB Flood Activities: Past, Present, and Future

• Presentations of Senate Bill (SB) 7 and SB 8 stakeholder consideration issues
  (interactive with real-time polling and audience participation)

• Breakout session discussions (optional)
  – Group 1: discussion on flood planning
  – Group 2: discussion on financial assistance

• Adjourn
Agenda

What won’t be covered today:
• Flood Insurance Rate Maps (FIRMs) or insurance issues
• Local regulations, bond programs, or projects
• Federal projects or programs
• Disaster recovery efforts
• Public assistance to homeowners/businesses
TWDB Flood Activities: Past, Present, and Future
Texas Weather:
Drought. Flood. Repeat.
TWDB Flood Responsibilities

• Prior to 2015, TWDB:
  – Funded state grants for flood protection planning to conduct feasibility studies for an entire watershed to evaluate both structural and nonstructural solutions
  – Administered federal Flood Mitigation Assistance Grant (FMA) Program
  – Served as state coordinator for:
    • National Flood Insurance Program (NFIP)
    • Cooperating Technical Partner Program
Expanded Flood Responsibilities in 2015

<table>
<thead>
<tr>
<th>NEW EFFORTS</th>
<th>DATA</th>
<th>SCIENCE</th>
<th>COMMUNICATION</th>
<th>FUNDING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2015 MOU $6.8 million
85th Legislature $7.8 million
### New and Expanded Data Collection

<table>
<thead>
<tr>
<th>NEW EFFORTS</th>
<th>DATA</th>
<th>SCIENCE</th>
<th>COMMUNICATION</th>
<th>FUNDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood Gages</td>
<td>River Forecast Model Calibration</td>
<td>TexasFlood.org</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TexMesonet</td>
<td>TexMesonet.org</td>
<td>State Flood Assessment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPANDED EFFORTS</th>
<th>Lidar Data</th>
<th>Flood Mapping</th>
<th>Community Outreach</th>
<th>Flood Protection Grants</th>
</tr>
</thead>
</table>

[Visit www.twdb.texas.gov](http://www.twdb.texas.gov) | [Join us on Facebook](http://www.facebook.com/twdbboard) | [Follow us on Twitter](http://twdb)
Creation of a Flood Gage Network
Creation of TexMesonet
statewide earth observation network

• Collects:
  precipitation, wind
direction/speed, air
temp., relative
humidity, soil
moisture/temp.

• Supports flood &
drought monitoring
and forecasting
1. Assess risk and roles
2. Estimate flood mitigation costs
3. Envision the future of flood planning in Texas
Flood-related Roles and Responsibilities
We asked: What would most benefit your community?
Three Pillars of Flood Risk Management

Mapping → Planning → Mitigation

Flood Risk Management Policies & Goals
“Texas needs to work toward making the Texas Gulf Coast—and indeed the entire state—more resilient in the face of future risks, whether the threat comes from hurricanes, tornadoes, wildfires, flooding or other disasters.”
Outcomes of the 86th Texas Legislature

- **SB 7 (Sen. Creighton):** Creates the Flood Infrastructure Fund (FIF) and the Texas Infrastructure Resiliency Fund (TIRF)
- **SB 8 (Sen. Perry):** Creates a new state and regional flood planning process
- **HJR 4 (Rep. Phelan):** Flood Infrastructure Fund creation outside the treasury
- **SB 500:** Appropriates funding for bills, including:
  - Expansion of TexMesonet
  - Lidar acquisition
  - Development of a dashboard/datahub
  - Updates to reservoir flood pool measurements
SB 7 and SB 8
Implementation Process Timeline

August 2019: Informal, pre-rulemaking request for feedback, stakeholder workshops, and webinar

Fall 2019/Early 2020: Formal rulemaking activities, including public comment period

Early 2020: Flood funding applications are solicited

Mid 2020: Regional flood planning groups are formed
Opportunities to Provide Input

• In following presentations on SB 7 and SB 8:
  – Respond to Poll Everywhere questions as member of audience
  – Pose questions and comments to the group
• Attend breakout session(s) or mingle
• Provide written comments by August 30
• Participate in formal rulemaking public comment options this fall
• Participate in regional flood planning process
Poll Everywhere
Tell us a little bit about yourself.

What town or county do you call home?
Poll Everywhere
Tell us a little bit about yourself.

What interests do you most identify with (top 2)?

- Floodplain manager/flood professional
- City or county
- State government
- Federal government
- Water-related district or political subdivision
- Concerned citizen/flood survivor
- Legislative/policy

- Council of government
- Environmental/natural resources
- Engineering/consulting
- Real estate/development
- Education/academics
- Business
- Professional association
- Insurance
- Other
SB 7: Flood Financing
SB 7: Flood Financing

• Low interest loans
• Grants:
  – Lack of ability to repay a loan
  – Outside of metropolitan statistical area
• Can fund both structural and non-structural mitigation activities
# Flood Mitigation Activities

## Structural
- Local drainage
- Bridges, culverts, pipes
- Local detention / retention
- Regional detention / retention
- Channel conveyance
- Infrastructure

## Non-structural
- NFIP
- Development ordinances
- Elevation, flood-proofing
- Training & education
- Warning system
- Buyouts or relocati...
SB 7: Flood Financing

Prior to adoption of state flood plan in 2024, the Flood Infrastructure Fund can fund projects that have been developed through cooperative planning efforts:

• Drainage
• Flood mitigation
• Flood control

After adoption of state flood plan in 2024:
• Can fund projects in state flood plan
SB 7: Form of Financial Assistance
(Issue 1)

Given that the amount of funding is limited and the needs for financial assistance are great, should the TWDB:

A. Give out more grants than loans to meet immediate needs for those that qualify?

B. Give out more low-interest loans to maximize overall funds available over time?

C. Balance loans and grants based on program demands and interest?
SB 7: Form of Financial Assistance (Issue 1)

How important are the needs for financial assistance for repair and rehab of existing infrastructure that manages floodwaters?

A. Very important

B. About the same importance as needs for new infrastructure/mitigation activities

C. Less important than the needs for new infrastructure/mitigation activities
What is the best use of state funds?

A. Local match for federal programs?
B. Complement to federal buyout programs?
C. Assistance to implement local projects that lack funding?
SB 7: Prioritization of Projects (Issue 2)

What types of projects do you consider to be the most impactful at addressing loss of life and property from flooding?
Which criteria should TWDB use in its point system?

- Severity of risk?
- Risk to life vs. property?
- Benefit to cost ratio?
- Diverse urban/rural benefits?
- Repeated historical losses?
- Regional benefits?
- Socioeconomic considerations?
- Emergency need?
- Local contribution?
- Readiness to proceed?
- Water supply benefits?
- Multiple project benefits (including benefits to natural resources, recreation, etc.)?
- Expedites delivery of federally funded project?
- Others?
Should state financial assistance be available for political subdivisions to purchase private property to prevent future flood losses?

A. Yes
B. No
C. Only in conjunction with federal programs
SB 7: Property Buyouts (Issue 4)

• How could state funds be used to complement federal buyout programs?

• What requirements for future land use should be placed upon properties that are bought out?
SB 7: Other Issues

• Should the entities that get the most value from flood mitigation (i.e. those in the floodplain) pay more? If so, how? If not, why not?

• What other issues do you see that the TWDB faces for this program?

  • What other issues do potential program participants face?

  • How do you suggest that we address those issues?
SB 8: Regional and State Flood Planning
SB 8: Regional Flood Planning

Regional Water Planning Areas of Texas

Resources: The Texas Water Development Board (TWDB) website provides a comprehensive guide to water resources in Texas, including information on regional water planning areas. The website also offers tools and resources for planning and managing water resources.

www.twdb.texas.gov  www.facebook.com/twdbboard  @twdb
SB 8: Planning by Watershed
SB 8: Supporting Data

LiDAR + Hydrology + Hydraulics = Base level engineering
SB 8: Planning Group Membership
(Issue 1)

Required interests:
• Public
• Counties
• Municipalities
• Industries
• Agricultural interests
• Environmental interests
• Small businesses
• Electric generating utilities
• River authorities
• Water districts
• Water utilities

Ex officio members:
• TWDB
• Texas Commission on Environmental Quality
• General Land Office
• Texas Parks and Wildlife Department
• Texas Department of Agriculture
• Texas State Soil and Water Conservation Board
• Texas Division of Emergency Management
What other interests should be represented on the regional flood planning groups?
To what extent should the regional flood plans consider local stormwater and drainage issues?

A. **Regional plans should focus only on flooding that results in the loss of life or property.**

B. **All regional plans should include a lower limit for project scale, such as contributing drainage area of greater than 1.0 square mile.**

C. **Regional flood groups should have some flexibility on consideration of project scale.**
What timeframe should the planning process cover?

A. 10 years?
B. 20 years?
C. 30 years?
D. 40 years?
E. 50 years?
SB 8: Planning Area Boundaries (Issue 3)

Option A: Potential Flood Planning Region Boundaries

Option B: Potential Flood Planning Region Boundaries

Factors in boundary selection:
- Economic development
- History of flooding
- Existing development patterns
- Existing infrastructure
- Potential environmental constraints

Region A1 - Canadian-Upper Red
Region A2 - Upper Red
Region A3 - Lower Red-Sulphur-Cypress
Region A4 - Sabine
Region A5 - Neches
Region A6 - Trinity
Region A7 - San Jacinto
Region A8 - Lower Brazos-San Bernard
Region A9 - Upper Brazos
Region A10 - Lower Colorado-Lavaca
Region A11 - Upper Colorado
Region A12 - Guadalupe
Region A13 - San Antonio
Region A14 - Nueces
Region A15 - Lower Rio Grande
Region A16 - Upper Rio Grande

Factors in boundary selection:
- Economic development
- History of flooding
- Existing development patterns
- Existing infrastructure
- Potential environmental constraints

Region B1 - Canadian-Upper Red
Region B2 - Lower Red-Sulphur-Cypress
Region B3 - Sabine
Region B4 - Neches
Region B5 - Trinity
Region B6 - San Jacinto
Region B7 - Lower Brazos-San Bernard
Region B8 - Upper Brazos
Region B9 - Lower Colorado-Lavaca
Region B10 - Upper Colorado-Lavaca
Region B11 - San Antonio-Guadalupe-Lavaca
Region B12 - Nueces
Region B13 - Lower Rio Grande
Region B14 - Upper Rio Grande
SB 8: Planning Area Boundaries
(Issue 3)

• How should the larger river basins be divided?
  • How should the smaller river basins be combined with other basins?
• How should the coastal basins be addressed?
Please review and provide comments on proposed guidance principles and rule outline.

• Have the guidance principles been crafted to adequately reflect the public interest of the entire state?
SB 8: Other Issues

• What other issues do you see that the TWDB faces for this program?

• What other issues do the flood planning groups face?

• How do you suggest that we address those issues?
Opportunities to Provide Input

• Provide written comments by August 30
• Attend breakout session or mingle
• Participate in formal rulemaking public comment options this fall
• Participate in regional flood planning process starting in 2020
Stay in Touch!

Board Meetings

Meet the board members
View monthly board meeting agenda
Watch board meeting video
Board meeting schedule
News & Media
Stakeholder Opportunities

Agency Tweets

@txwbd
Follow @txwbd
6,010 followers

NWSWGRFC
@NWSWGRFC

Clear weekend for Texas with 0 gages in flood stage across the state! Good weekend to enjoy the water whether its the lakes, rivers, or the Gulf of Mexico. Enjoy! #txwx #water

Weekend Outlook

Hot Topics

- We're Hiring
- Schedule for Flood Outreach Meetings
- Flood Implementation Fund FAQ
- Sign up for emails on TWDB's new flood programs
Stay in Touch!

- Contact flood@twdb.Texas.gov for general information
- Send written comments to rulescomments@twdb.Texas.gov
Optional Breakout Session Discussions

- Group 1: Flood planning
- Group 2: Financial assistance

Thank you for being here today!