

AGENDA ITEM MEMO

BOARD MEETING DATE: July 25, 2023

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Ashley Harden, General Counsel
Matt Nelson, Deputy Executive Administrator, Office of Planning

FROM: Reem Zoun, P.E., CFM, Director, Flood Planning

SUBJECT: 2023 Regional Flood Plans

ACTION REQUESTED

This is an informational item summarizing the development, adoption, and review processes for the 2023 Regional Flood Plans (RFP). No action is requested.

BACKGROUND

In accordance with §16.061 of the Texas Water Code (TWC), the Texas Water Development Board (TWDB) is required to develop and adopt a comprehensive state flood plan every five years that incorporates the regional flood plans developed and approved in accordance with TWC §16.062. Pursuant to TWC §16.062(h) and 31 Texas Administrative Code (TAC) §361.50, regional flood planning groups are required to adopt and submit their regional flood plan for approval every five years.

First cycle of regional flood planning

Texas has just completed its first cycle of the statewide regional flood planning process that was established in 2019 by Senate Bill 8, 86th Texas Legislature. All 15 regional flood planning groups adopted their final RFPs and submitted them for approval on schedule, by January 10, 2023.

Texas's statewide regional flood planning program is the first of its kind, bottom-up, statewide watershed-based flood planning effort aimed at reducing the risk and impacts of flooding. The initial regional flood planning members were designated and convened by TWDB in the fall of 2020. The regional flood planning group (RFPG) members have prepared their plans over the last two and a half years with funding from regional flood planning grant contracts. Each of the planning groups governed themselves and conducted themselves at open meetings and in a participatory manner. The 12 required planning

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group member interests represented in each region include: the public, counties, municipalities, industry, agriculture, environment, small business, electric-generating utilities, river authorities, flood districts, water districts, and water utilities. Planning groups also include non-voting members from state agencies including the TWDB, the Texas Department of Emergency Management, General Land Office, the Texas Department of Agriculture, the Texas Parks and Wildlife Department, Texas Commission on Environmental Quality and the Texas State Soil and Water Conservation Board, as well as liaisons from adjacent planning groups and representatives of any additional interest categories deemed appropriate by the planning group, such as the U.S. Army Corps of Engineers, International Boundary & Water Commission, Texas Department of Transportation, and Federal Emergency Management Agency.

Each planning group approved its own bylaws to govern the methods of conducting their business and each group selected a political subdivision of the state, such as a river authority or council of government, to administer the planning process and enter into and manage the TWDB contract and technical consultant subcontracts related to developing their regional flood plan. With the support of their political subdivision and technical consultants, each regional flood planning group:

- applied for grant funding and entering into a contract with the TWDB;
- procured technical consultants to perform analyses and develop the documents;
- refined a standardized scope of work for developing their regional flood plan with public input;
- developed and submitted a midpoint Technical Memorandum for review;
- submitted a draft regional flood plan for review;
- held at least one public meeting to solicit comments on the draft regional flood plan;
- considered public and other comments and revised their plan, as appropriate; and
- adopted their final regional flood plan and submitted it for approval.

Development of the plans must be performed in conformance with TWC §16.062; Texas Administrative Code, Chapters 361 and 362; and the TWDB grant contract including associated guidance documents. Together, the statute, rules, and contract documents provide a common framework on which the regional flood plans are developed and which allows the TWDB to combine the regional plans in a meaningful way when preparing the state flood plan.

Regional flood plans

The regional and state flood planning processes are guided by the 39 principles (TAC §362.3) that were developed in cooperation with the non-voting member agencies and adopted by the Board, which state that the regional and state flood plans, among others:

- shall be a guide to state, regional, and local flood risk management policy and
- shall be based on the best available science, data, models, and flood risk mapping.
- shall focus on identifying both current and future flood risks, including hazard, exposure, vulnerability, and residual risks; selecting achievable flood mitigation goals, as determined by each RFPG for their region; and incorporating strategies and projects to reduce the identified risks accordingly.

- shall, when possible and at a minimum, evaluate flood risk to life and property associated with 1.0 percent annual chance flood event (the 100-year flood) and address, through recommended strategies and projects, the flood mitigation goals of the RFPG to address flood events associated with a 1 percent annual chance flood event.

Each of the 15 final flood plans being presented for approval today include:

- 1) Description of the regional flood planning area:
- 2) Flood risk analyses
- 3) Floodplain management practices and flood protection goals
- 4) Assessment and identification of food mitigation needs
- 5) Identification, evaluation, and recommendation of flood management evaluations (FME) and flood management strategies (FMS) and flood mitigation projects (FMP)
- 6) Impact and contribution of the regional flood plan
- 7) Flood response information and activities
- 8) Administrative, regulatory, and legislative recommendations
- 9) Flood infrastructure financing analysis
- 10) Adoption of plan and public participation

To maximize the number of flood mitigation projects that could be identified and recommended in the first state flood plan, the first cycle of regional flood planning was expanded and extended, through a grant contract amendment, to include an additional 6 months and 10 million dollars for the RFPGs to perform 3 additional scope of work tasks which were the basis for amending the 15 regional plans, as listed below:

- 11) Outreach and Data Collection to Support Tasks 1 – 9
- 12) Perform Identified Flood Management Evaluations (FME), Identify, Evaluate, and Recommend Additional Flood Mitigation Projects (FMP)
- 13) Preparation and adoption of the amended regional flood plan

All 15 amended regional plans were submitted to TWDB by the July 14, 2023, deadline and will, in turn, be reviewed and brought before the Board for consideration at a future date.

The nature of this expedited first flood planning cycle required an intense workload and monthly meetings for most RFPGs. With less than three years to adopt both the first and then the amended regional flood plans, the RFPGs have managed to hold over 550 meetings.

Key findings from the regional flood plans

The State of Texas encompasses an area of over 268,597 square miles and has a population of approximately 30 million. As reported in the 15 RFPs, approximately 21 percent of the state (56,000 square miles) falls within the extent of the 1-percent annual chance floodplain and an additional estimated 4 percent (10,820 square miles) falls within the in the 0.2-percent annual chance floodplain extent. Approximately 8 percent of the state's population is located within the extent of the 1-percent annual chance floodplain and an additional estimated 11.6 percent is within the in the 0.2-percent annual chance floodplain

extent. The RFPG identified approximately 11,200 low water crossings located within the flood planning region. There are a variety of associated flood risks faced by the regions including those summarized as follows in Table 1.

Table 1: Estimated Existing Flood Risks Identified within Texas*

Flood risk components	1-percent annual chance (100yr) floodplain	0.2-percent annual chance (500yr) floodplain **	Total
Number of buildings	877,300	776,600	1,653,900
Number of residential buildings	660,500	623,200	1,283,700
Population	2,406,000	3,478,000	5,884,000
Number of police stations, fire stations, EMS, hospitals, and schools	2,800	3,200	6,000
Roadway miles	45,200	46,600	91,800
Agricultural area (square miles)	16,300	12,300	28,600

*Compilation of data as reported by the RFPGs. Statistics are rounded.

** In addition to flood risk in 1-percent annual chance floodplain

The 15 RFPs include a variety of recommendations to mitigate flood risks to people and property in the state of Texas, including:

- Over 2,330 Flood Management Evaluations (FMEs) with a total estimated study cost of approximately \$1.65 billion
- Over 200 Flood Mitigation Projects (FMPs) with a total estimated project cost of approximately \$38.076 billion. Region 13 does not recommend an FMP in this plan.
- Over 845 Flood Management Strategies (FMSs) with a total estimated cost of approximately \$2.55 billion.

It is anticipated that the number of recommended FMPs and associated cost will increase when the RFPGs amend their plans.

Agency review of the regional flood plans

All 15 of the 2022 draft regional flood plans were submitted to the TWDB by the August 1, 2022, deadline and were reviewed to determine whether statutory and regulatory requirements were met. After reviewing the draft regional flood plans, a comment letter was provided to each RFPG within 120 days that included comments and questions that had to be addressed in their final, adopted regional flood plan to meet statutory, agency rule, and/or contract requirements. The planning groups also provided public notice of their draft plan and held public hearings and accepted oral and written comments.

The planning groups modified their draft regional flood plans to address the TWDB comments and in consideration of other agency and public comments received. Planning groups then adopted their final regional flood plans at a public meeting and submitted them by January 10, 2023.

In accordance with 31 TAC §361.50, the Board is required to consider approval of submitted regional flood plans and may approve a regional flood plan only after it has determined that the regional flood plan complies with statute and rules including TWC §16.062, 31 TAC Chapters 361 and 362.

The establishment and development of the statewide regional flood planning program and the delivery of Texas' first set of regional flood plans within a relatively short time-frame has required a tremendous, sustained effort by all the RFPG chairs, officers, voting members, sponsors, technical consultants, TWDB staff, and involved collaboration with the public and between of various state agencies, political subdivisions and some federal entities. The Executive Administrator sincerely appreciates this historic effort and the contributions of all those involved.

RECOMMENDATION

No action is required.