1

Introduction

QUICK **FACTS**

- One-fourth of Texas' land area (66,831 square miles) is in either the 1 percent (100-year) annual chance or 0.2 percent (500-year) annual chance flood hazard areas.
- Approximately 17 percent (5,219,908) or one in six Texans lives or works in either the 1 percent (100-year) annual chance or 0.2 percent (500-year) annual chance flood hazard areas.
- Each of the state's 254 counties has experienced at least one federally declared flood disaster.
- Floods are expensive. Resources invested in reducing the risk and impact of flooding, including to avoid creating additional flood risk, and preparing for floods is cost effective.
- More than 190 regional flood planning group voting members participated in developing the 2023 regional flood plans, meeting hundreds of times between 2020 and 2023.
- This first cycle of the statewide flood planning process is Texas' first attempt to perform comprehensive planning to reduce flood risk and take a broad look at flood hazard across the state.

Texas has a long history of flooding and flood-related loss across the state, which has taken an enormous toll on people and property. In recent years, the 2015 Memorial Day flood took the lives of 14 people in Central Texas and set new river stage records near Wimberley, Texas. In 2017, Hurricane Harvey brought more than 19 trillion gallons of rainwater that caused significant flooding and damage to homes, hospitals, communities, vehicles, and roads with estimated total damage over $125 billion. In the wake of Hurricane Harvey, the 2019 Texas Legislature passed Senate Bill 8, directing the Texas Water Development Board (TWDB) to develop a state flood plan that must provide for orderly preparation for and response to flood conditions to protect against the loss of life and property; be a guide to state flood control policy; and contribute to water development where possible.

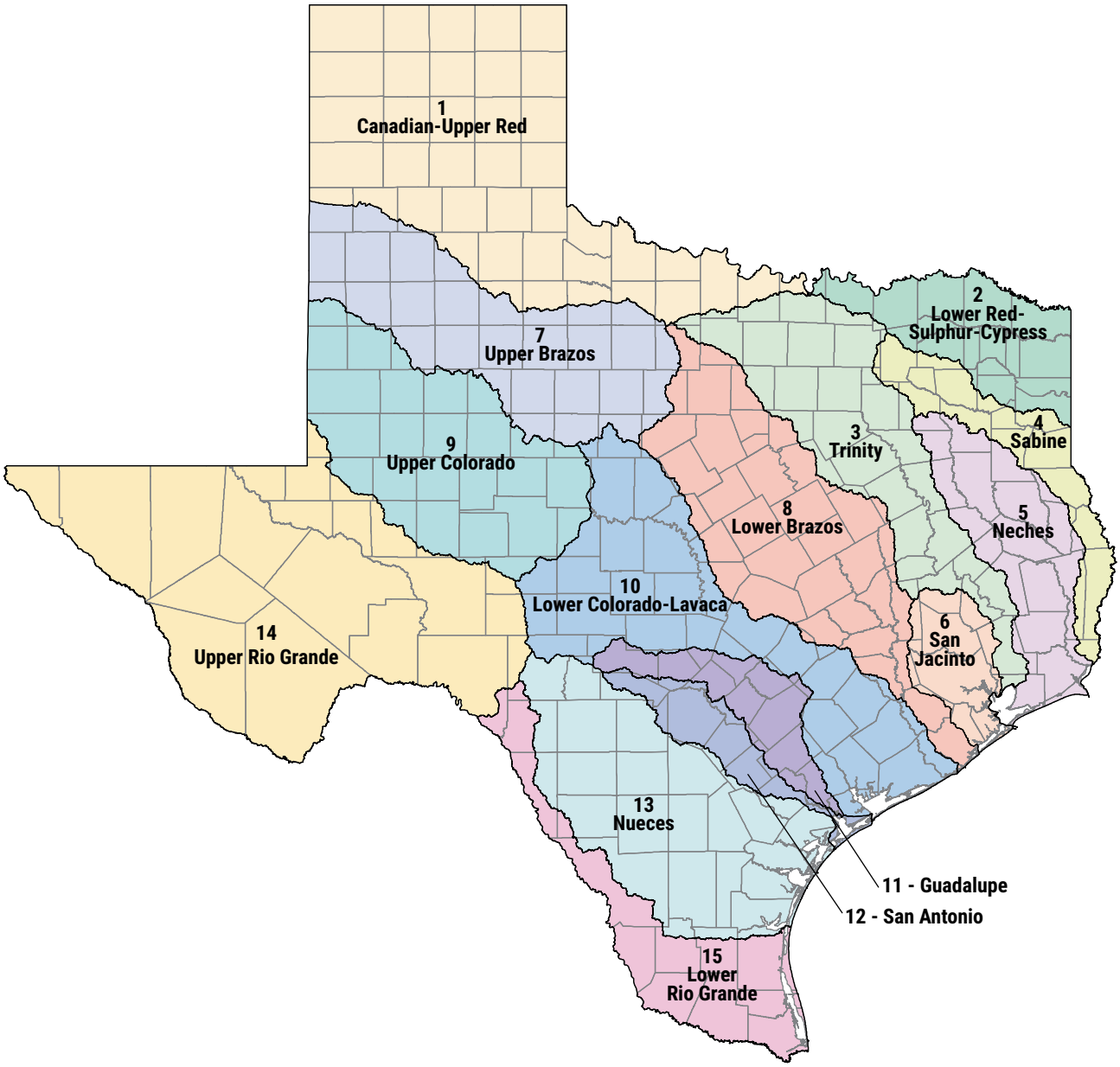
Under 31 Texas Administrative Code § 362.3,[3] the TWDB created 15 flood planning regions based on river basins and administered a regional flood planning process (Figure 1-1). The bottom-up, regional approach intentionally mirrors the TWDB's successful regional water supply planning process that has been administered for more than 25 years.

Texas is a large state with over 268,000 square miles of diverse geographic coverage and rainfall patterns. The river basin-based regional flood planning process enables each planning group to address its own region's unique flood risk and flood risk reduction needs.

The current population of Texas is approximately 30 million and expected to increase to 51.5 million by 2070 (TWDB, 2022). While it is essential to understand our current flood risk and reduce the risk and impact of flooding for those who

[3] https://texas-sos.appianportalsgov.com/rules-and-meetings?$locale=en_US&interface=VIEW_TAC_SUMMARY&queryAsDate=04%2F11%2F2025&recordId=215375

Figure 1-1. The 15 flood planning regions designated by the TWDB on April 9, 2020



are already in harm's way, equally important is the effort to prevent an increase in future flood risk; floodplain management practices play a key role in this. The flood planning process focuses on reducing existing flood risk and avoiding the creation of future flood risks.

We can prepare for and reduce the risk from certain flooding events; however, flood risk can never be fully mitigated. There will always remain some residual risk, whether from a more severe flood event or associated with the possible deficiency of a flood mitigation measure (e.g., levee failure). For instance, the state may never be fully prepared for an event at the scale or severity of Hurricane Harvey. Understanding this and educating the public are crucial to managing flood risk and protecting lives and property. The **regional flood planning groups** facilitated broad public involvement and education throughout the planning process. Between the program's inception in October 2020 and completion of this state flood plan, the 15 planning groups conducted more than 550 public flood planning meetings across the state.

This first cycle of the statewide flood planning process is Texas' first attempt to perform comprehensive planning to reduce flood risk and take a broad look at flood hazard across the state. A tremendous amount of information was generated by the planning groups during the historic first cycle of regional flood planning, which aimed to identify who and what might be exposed to flooding; identify the state's major flood risk reduction infrastructure; consider existing floodplain management practices or lack thereof; and identify and recommend flood risk reduction solutions across the state.

This state flood plan brings together the findings of the 15 regional flood plans[4] and makes legislative and floodplain management recommendations to guide state, regional, and local flood control policy.

1.1 Why plan for floods?

Due to expanding development within **floodplains** and our improved capability to measure and record weather events, the documented severity and impacts of flooding have escalated over the last century, with notable events like the 1921 rainstorm in Williamson County that set a national record with more than 36 inches of rain in 18 hours. Statewide rainfall in 1957 ended a prolonged **drought** but also brought extensive flooding from the Pecos to the Sabine River. More recently, historic flooding in 1998 along the San Marcos, Guadalupe, and San Antonio rivers and the catastrophic effects of Hurricane Harvey in 2017 exemplified the heightened flood risks in Texas.

Although flooding has certain benefits, like recharging groundwater and providing vital nutrients to ecosystems and agricultural lands, it remains a significant threat to the health and safety of Texans. Each of the state's 254 counties has experienced flooding, tropical storms, severe storm events, or all three, proof that floods can affect all areas of Texas (FEMA, 2024). As of the writing of this plan there have been a total of nine multi-billion-dollar flood events to affect Texas from 1980 to 2024. These range in cost from $10 billion to $20 billion (Consumer Price Index-adjusted) (NOAA, 2024). Managing the risks associated with flooding is crucial, given its recurring nature and potential for destruction. By initiating the statewide regional flood planning process, Texas is taking a major step toward addressing these ongoing challenges to safeguard its communities from the impacts of flooding and ensure future resilience in the face of natural disasters (TWDB, 2019). Prior to the statewide regional flood planning process, Texas did not have any state level, comprehensive effort to identify, address, or plan for flood risk. Since water does not adhere to jurisdictional boundaries, watershed-based flood risk reduction planning with collaboration and cooperation between neighboring stakeholders is essential for appropriate management of flood risk.

In the realm of flood planning, the truth of the adage that "prevention is better than cure" can't be overstated; resources spent to reduce the risk and impact of flooding goes much further than the cost of recovery efforts. Planning for floods is a proactive approach that prioritizes preparedness and mitigation over the costly, time-consuming, and potentially repetitive process of recovery. The cost of recovery from a large flood or storm event is often much greater than the upfront cost of reducing the potential risk and impact of flooding. Once flooding occurs, there may be widespread damage to infrastructure, properties, and ecosystems that are expensive to repair or replace. Floods can also disrupt business operations, leading to revenue losses and job interruptions, and cause long-term and costly impacts to a population's health through waterborne diseases or injuries.

[4] www.twdb.texas.gov/flood/planning/plans/index.asp

In addition to reducing human suffering and economic damage caused by a storm event, flood planning and preparedness is a good financial investment for our future. The aftermath of flood events often entails significant and ongoing economic and social burdens. For example, Hurricane Harvey in 2017 brought unprecedented devastation to Texas, with nearly 4.5 feet of rain, 130-mile-per-hour winds, and widespread riverine and urban flooding (FEMA, 2017). More than 19 trillion gallons of rainwater caused significant flooding to 80,000 homes and left numerous hospitals, communities, and roads severely impacted. The response efforts involved the deployment of thousands of personnel; provision of such resources as food, water, and medical care; and the allocation of billions in federal funds to assist impacted Texans with recovery.

In areas prone to flooding, the flood recovery process can often take several years, and sometimes communities struggle to fully recover before being impacted by another flood event, perpetuating a cycle of vulnerability and prolonged hardships. Planning for flooding before it occurs allows communities to proactively implement measures to mitigate the impact of floods, reduce potential damage, and safeguard lives and property. By taking preemptive action, communities can enhance their resilience, minimize recovery time, and avoid the costly consequences of unpreparedness in the face of future flood events (FEMA, 2023).

Texas faces the dual challenge of high population density in flood prone areas and the increasing risks associated with flooding due to ongoing development and population growth across the state. To effectively address these challenges, we must identify vulnerable areas and implement suitable land-use policies, incorporating flood mitigation strategies into development plans. Furthermore, the uncertainties of climate variability and its impact on precipitation patterns emphasize the need for comprehensive flood planning. Coordinated statewide flood planning is critical to the implementation of cohesive strategies, leveraging collective expertise and resources to help reduce the negative impacts of floods on Texas communities (TWDB, 2019). As such, there are several local, state, and national agencies and programs intended to advance flood mitigation in the state, many of which are listed in Chapter 10 of this plan.

1.2 Flood fundamentals

It is important that everyone reading this flood plan shares at least a basic understanding of a few of the fundamental, and often misunderstood, terms associated with flooding and flood risk. The intricacies of these concepts not only shape our preparedness and mitigation strategies but also influence the way we respond to and recover from flood events.

1.2.1 Key terminology

Flooding

An overflow of water onto normally dry land. The inundation of a normally dry area caused by rising water in an existing waterway, such as a river, stream, or drainage ditch. Ponding of water at or near the point where the rain fell. Flooding is a longer-term event than flash flooding; it may last days or weeks (NWS, n.d.). While it can threaten people and infrastructure and cause economic damage, flooding is also a naturally occurring phenomenon providing beneficial ecosystem services and helps to maintain the natural hydrology of rivers and streams.

Flash flooding

A flood caused by heavy or excessive rainfall in a short period of time, generally less than six hours. Flash floods are usually characterized by raging torrents after heavy rains that rip through riverbeds, urban streets, or mountain canyons. They can occur within minutes or a few hours of excessive rainfall. They can also occur even if no rain has fallen, for instance after a levee or dam has failed or after a sudden release of water by a

debris jam (NWS, n.d.). A portion of Central Texas following the curve of the Balcones Escarpment from Dallas to Austin and extending just southwest of San Antonio has earned the moniker **Flash Flood Alley** because of the steep terrain, shallow soil, and intense rainfall rates. Areas with large amounts of impervious surfaces, exposed bedrock, or other solid surfaces that reduce infiltration and increase runoff are especially susceptible to flash flooding. Near El Paso, runoff from steep slopes flows rapidly over dry, impenetrable soils, transporting and depositing eroded materials across the landscape.

Flood risk

Flood risk is a combination of the probability (likelihood or chance) of a flood event happening and the impact if it occurred. It is determined by the intersection of three components: hazard, which represents the potential flooding event; exposure, indicating the people and assets in the flood's path; and vulnerability, denoting the susceptibility of those people and to harm. The greater each component, the higher the overall flood risk for an area.

1.2.2 Flood frequency

Frequency of flooding is defined as the probability, expressed as a percentage, that a flood of a given size will be equaled or exceeded in any given year. Flood frequency helps us understand the likelihood of different flood events that may occur in a particular area. A 2-year rainfall or storm event has a 50 percent chance of occurring during any given year; a 2-year rain event can occur multiple times a year. Similarly, a 100-year annual chance flood has a 1 percent chance, and a 500-year annual chance flood has a 0.2 percent chance of occurring within any given year. However, each of these storm events can occur more than once during a year.

To determine flood frequency, scientists analyze historical rainfall data identifying significant rain events over extended periods. This helps estimate the probability of different flood events. Communities can then use that information to plan for floods and design infrastructure to withstand certain annual chance flood events like the 1 percent annual chance storm event or build outside the boundaries of 1 percent annual chance floodplain.

The term "1 percent annual chance flood event" versus "100-year flood" provides a clearer understanding of the probability of occurrence, indicating a 1 percent chance of that specific flood event happening in any given year. Using terminology that's easier to understand helps avoid the misconception that such a flood will only occur once every 100 years. Notably there is a 26 percent or greater likelihood that a building located within a 100-year floodplain will experience at least one flood during a 30-year mortgage (USGS, 2018). For the purposes of this plan, we will use the term "1 percent annual chance flood event."

1.2.3 Types of flooding

Riverine flooding (also known as fluvial flooding)

Abundant rainfall can result in more runoff entering a river channel than can be contained within its banks. When water levels exceed the capacity of a channel, the river overflows onto adjacent lands, called the floodplain. On steep, narrow floodplains, sometimes lesser volume of runoff is needed in the streams to create excess overflows. In areas where the land is flat and floodplains are more expansive, greater volumes of runoff are required to cause flooding, and the impacts of which may take hours or days to reach locations downstream (TWDB, 2019).

Urban, local, or stormwater flooding (also known as pluvial flooding)

This type of localized flooding occurs when rainfall overwhelms the capacity of engineered drainage systems to carry away rapidly accumulating volumes of water. It typically dissipates quickly, except in situations when pumping equipment

fails due to loss of power, inflows exceed pumping or conveyance capacity, or debris blocks the passage of water. The solid surfaces of buildings and streets (also called impervious cover) prevent rainfall from soaking into the ground, resulting in runoff. Because this type of flooding is most common in urban environments, it is also called urban flooding (TWDB, 2019).

Coastal flooding

Low-pressure systems may gain strength as they travel across the warm waters of the Gulf of Mexico, sometimes developing into tropical storms or hurricanes. As these systems approach the Texas coast, stronger winds combined with changes in water surface elevation can produce a storm surge that drives ocean water inland across the flat coastal plain. High-tide events also may cause frequent, localized flooding of low-lying coastal lands (TWDB, 2019).

Structural failure flooding

Gradual or sudden catastrophic failure of man-made infrastructure, such as dams or levees, can occur when intense or extensive rainfall results in the uncontrolled release of floodwater. Failures may arise if a rain event exceeds the design capacity of a structure, such as when the Callaway and McGuire dams failed in Robertson County in May 2004 (TWDB, 2019).

Other regional flooding

Texas is defined by a diverse range of landscapes, each characterized by a variety of geological formations and climatic conditions, affecting regional flooding in distinct ways. Storms in the Texas Panhandle cause flooding in and around playa lakes; shallow, circular wetlands primarily fed by rainfall. West Texas' dry climate experiences extended periods of drought conditions. When it rains, alluvial fans, or fan-shaped deposits of water-transported material common to the region, can rapidly redirect water flow across wide areas, creating complex and sudden flooding scenarios (FEMA, 2020). In the Lower Rio Grande Valley, where rainfall can be highly variable, arroyos, dry creeks or stream beds that temporarily fill and flow after heavy rain, can rapidly channel large volumes of water, leading to sudden and severe storm events (Love, 2023).

1.2.4 Variability of storm events

The probabilities of certain rain events change over time as more data is collected when new rain events occur. Large storm events can increase the probabilistic flood depth of a particular region. Much of Texas' rainfall amount for various storm events increased because Atlas 14[5] incorporated more recent rainfall data in the rainfall frequency analysis. Publication of the next iteration, Atlas 15, is expected in 2027. This trend points to the need for updating both flood risk estimates and continued flood planning efforts to address these shifting risks.

The amount of rainfall defining storm events varies across Texas. For comparison, a 1 percent annual chance or a 100-year storm event for 24-hour duration ranges from 4 to 5 inches of rainfall in El Paso, 6 to 7 inches in Amarillo, 12 to 13 inches in Austin, and 17 to 18 inches in Houston (NOAA, 2018). Figure 1-2 presents the 1 percent (100-year) and 50 percent (2-year) annual chance rainfall depths across Texas, which reflect the regional variability of rainfall amounts across the state.

1.3 Regional flood planning

In the wake of historic flooding in Texas, in 2019 the TWDB presented the Texas State Flood Assessment[6] to the 86th Texas Legislature. The document aimed to assess flood risks across Texas and provide recommendations for better flood management. The report's main findings

[5] Atlas 14 is a rainfall study conducted by the National Oceanic and Atmospheric Administration (NOAA). It offers up-to-date rainfall information, like a weather map for rain. It helps us prepare for floods, plan drainage systems, and manage water resources (OWP, n.d.).

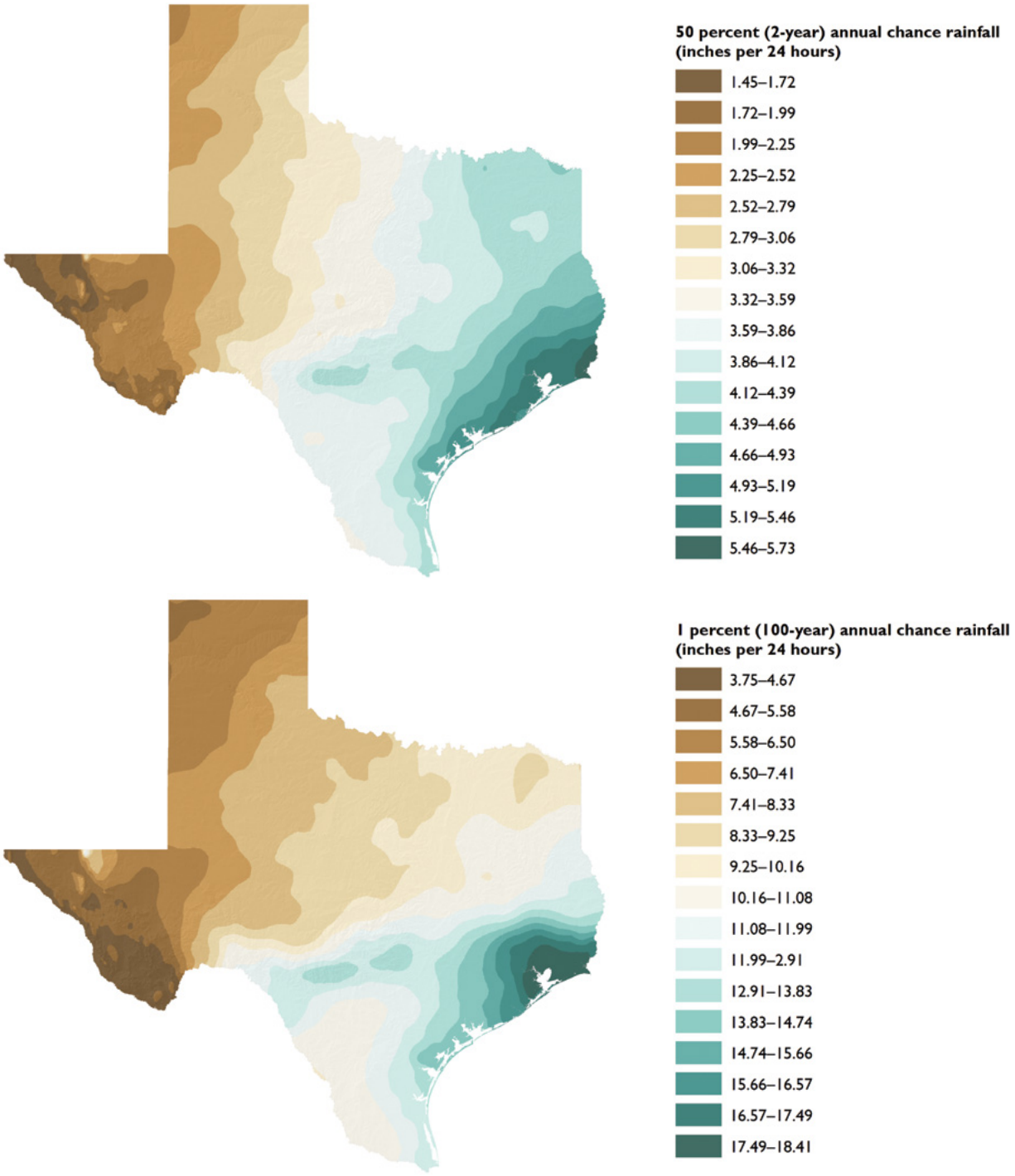
[6] https://texasfloodassessment.org/

Figure 1-2. Regional variability of rainfall in Texas

Map summary: These maps illustrate the varying intensity of 24-hour rainfall across Texas that corresponds to a 1 percent (100-year) annual chance storm event and 50 percent annual chance storm event (2-year), respectively. These metrics represent the amount of rainfall in inches with a 1 percent chance and 50 percent chance of being exceeded in any given year. The maps were generated utilizing Atlas 14 rainfall dataset.

Regional variations: Rainfall depth for storm events varies significantly across Texas. For example, the Gulf Coast regions receive a much higher rainfall amount during storm events compared to arid areas like West Texas. These variations highlight the differing thresholds for severe weather events across the state.

Significance: Understanding regional differences is important for flood planning and emergency preparedness. Even areas with lower 1 percent (100-year) annual chance storm event values can face significant flood risks, requiring appropriate mitigation efforts statewide.



highlighted the significant flood risks faced by the state, with more than 5 million Texans living in areas at high risk of flooding. It emphasized the need for improved floodplain mapping, infrastructure resilience, and coordination among agencies to enhance preparedness, response, and recovery efforts in the face of future floods. The report's primary recommendations included updating floodplain maps, enhancing infrastructure standards, implementing watershed-based flood management approaches, and investing in flood risk communication and public education to mitigate the impact of floods in Texas (TWDB, 2019).

As a result of the Texas State Flood Assessment, and similar efforts such as the Eye of the Storm Report,[7] the Texas Legislature created Texas' first-ever regional and state flood planning process and provided funding for investments in flood science and mapping efforts to support flood plan development. The legislature created the regional and state flood planning framework and charged the TWDB with designating flood planning regions based on river basins; selecting and convening the initial regional planning group memberships; and administering the funding and flood planning through grant contracts. Additionally, the legislature created a new flood financial assistance fund and directed the TWDB with its administration to help fund flood mitigation projects.

1.3.1 Regional flood planning groups

Each of the 15 regional flood planning areas has an associated planning group composed of local stakeholders who volunteer for this time-consuming process. Under Texas Water Code § 16.061,[8] the regional flood planning groups are responsible for developing regional flood plans every five years that are funded primarily through legislative appropriations, administered by the TWDB, and guided by statute, rules, contracts, and input from planning group members and the public. In accordance with the Texas Open Meetings Act, all planning groups and their committees conduct their business in meetings that are open to the public and that give the public advance notice of the time, date, location, and subject matter of the meetings.

Statute requires that each planning group maintain at least one representative of each of the following 12 interest categories:

1. The public
2. Counties
3. Municipalities
4. Industry
5. Agriculture
6. Environment
7. Small business
8. Electric-generating utilities
9. River authorities
10. Flood districts
11. Water districts
12. Water utilities

Planning groups must have at least one voting representative from each required interest. To ensure adequate representation, planning groups may designate representatives for additional interests that are important to the planning area. Planning groups may also add additional voting and non-voting members to each group following their own bylaws. Currently, each planning group has at least 12 voting members. More than 190 voting members participated in developing the 2023 regional flood plans, meeting hundreds of times between 2020 and 2023 (see Acknowledgments). Non-voting members include representatives from the TWDB, Texas Commission on Environmental Quality, Texas General Land Office, Texas Parks and Wildlife Department, Texas Department of Agriculture, Texas State Soil and Water Conservation Board, and Texas Division of Emergency Management.

Similar to the regional water supply planning process, the success of Texas' regional flood planning process depends on the service of planning

[7] www.rebuildtexas.today/eyeofthestorm

[8] https://statutes.capitol.texas.gov/Docs/WA/htm/WA.16.htm

group members who dedicated many hours to this effort. Strong leadership from planning group chairs and other members, as well as the ability to attract new members who bring fresh ideas to the table, will ensure the dynamic continuity of the planning process.

1.3.2 Program requirements

A regional flood plan must meet all statutory, administrative rule, and contract requirements. During each five-year planning cycle, each planning group must

- maintain its membership and governing bylaws;
- designate a political subdivision of the state, such as a municipality, river authority, or council of governments, to serve as its administrator for the purpose of arranging meetings, managing grant-funded contracts, and providing public notices (the political subdivision provides staff resources, at its region's expense, to perform these administrative services);
- apply to the TWDB for regional flood planning grant funding through its political subdivision;
- select a technical consultant(s) to serve at the direction of the planning group and collect information, perform analyses, and prepare the regional flood plan document;
- direct the development of its flood plan, including making decisions about which flood management strategies, projects, or evaluations to consider and recommend;
- solicit and consider public input, conduct open meetings, and—together with its political subdivision—provide required public notices, including for public hearings on the draft regional flood plan;
- submit its technical memorandum and draft regional flood plan and standardized data to the TWDB for review; and
- adopt a final regional flood plan and submit it to the TWDB for approval.

To facilitate developing the regional flood plans, each planning group is supported by a dedicated TWDB regional flood planner who serves as a project manager and non-voting planning group member that attends every planning group meeting and manages the associated grant contract. The planners also provide technical and administrative assistance during meetings and throughout development of the regional flood plans to help ensure the planning groups meet their deadlines and all planning requirements.

1.3.3 Development of the regional flood plans

Each of the 15 planning groups is tasked with producing long-range regional flood plans that aim to address current and future flood risk across the state. These plans generally follow a standard format across the regions based upon statute, administrative rules, and an established scope of work for each planning cycle. Regional flood planning is based on 39 guiding principles, the most important of which is to provide for the orderly preparation for the identification and reduction of flood conditions to protect against the loss of life and property and reduce injuries and other flood-related human suffering.

Planning groups identify both current and future flood risks, including hazard, exposure, vulnerability, and residual risks; select achievable flood mitigation goals; and recommend evaluations, projects, and strategies to identify or reduce flood risk. Planning groups report the associated data that considers a 30-year planning horizon (in this cycle from 2023 to 2053) by county, river basin, and regional flood planning area. The regional plans also include an assessment of current floodplain management, land use regulations, economic development practices, and policy recommendations.

While each successive iteration of regional flood planning will take place over five-year periods, the first cycle of regional flood planning was completed in a little over two years, an expedited schedule made even more complicated with the global COVID-19 pandemic. Further, during the first cycle of regional flood planning, the groups

2016 flooding in Deweyville, Texas; photo courtesy of Texas Parks and Wildlife Department

were given additional funding and time to perform flood management evaluations to be able to recommend additional flood mitigation projects for inclusion in the regional flood plans. This tripled the number of projects recommended in the state flood plan.

It is estimated that there are more than 1,450 communities in Texas, including 254 counties and over 1,200 cities and municipalities. The statewide regional flood planning program had a positive impact in promoting awareness about flood risk and flood risk reduction. The 15 regional flood plans include flood risk reduction solutions from more than 1,050 unique entities and communities as sponsors. While there is a need for growth in public outreach in the future planning cycles, this number reflects an encouraging participation by communities in the regional flood planning program, considering this being the first cycle.

Overall, the 15 regional flood plans are the product of hundreds of meetings; the effort and many hours of hard work by the planning group members, consultants, and stakeholders; and a large amount of information that the planning groups developed along the way. Each regional plan presents information in 10 chapters.

1.4 State flood plan

After planning groups adopt their regional flood plans, they submit them to the TWDB for approval. As required by statute, the TWDB develops the state flood plan based on the adopted regional plans. The state flood plan compiles key information from the regional flood plans and serves as a guide to state flood policy. The state plan explains planning methodology, presents data for the entire state, including the statewide flood risk, and provides policy recommendations to the Texas Legislature. Statute requires that the state flood plan rank the flood risk reduction solutions recommended by the regional planning groups based on flood risk and flood risk reduction provided by each solution. Prior to adopting the final flood plan, the TWDB releases a draft state flood plan for public comment, solicits and

considers the public comments, holds a minimum of one public hearing, and publishes its intent to adopt the final state flood plan in the *Texas Register*.

The regional and state flood plans are developed based on adopted guidance principles that were created by the TWDB in coordination with the Texas Commission on Environmental Quality, Texas Department of Agriculture, Texas General Land Office, Texas Parks and Wildlife Department, Texas Division of Emergency Management, and Texas State Soil and Water Conservation Board. Every five years, the TWDB must review and revise the guidance principles with input from these state entities.

1.4.1 The Interactive State Flood Plan Viewer

The 2024 State Flood Plan is supported by an interactive website[9] that is an integral part of the TWDB's adopted state flood plan. The **Interactive State Flood Plan Viewer** allows stakeholders to take an up-close look at data thematically and at discrete levels not found in the electronic or bound versions of this written plan. The enormous amount of flood planning data is presented in geographical and tabular forms with clickable links to help users navigate and download data. The viewer is largely driven by the 15 regional datasets and serves as a user-friendly interface that the public, legislators, and other agencies can explore and utilize. The viewer is publicly available on the TWDB website.

This approach to delivering flood planning data to the public provides more comprehensive and customizable views at a variety of scales, from a single area snapshot to the statewide big picture. The viewer is intended to be suitable for displaying visual information and delivering raw data in a manner that will best serve a wide range of stakeholders, including members of the public, flood planners, local officials, and technical consultants.

The viewer displays, summarizes, and disseminates at varying geographic scales all data generated by the TWDB state flood planning process, including, but not limited to, existing infrastructure, flood hazard areas and exposure, critical and other infrastructure at risk, recommended flood risk evaluations, and flood mitigation project recommendations.

The viewer allows query and download of flood models provided by the regional flood planning groups. Users can find models by location or association with flood management evaluations, flood mitigation projects, and flood management strategies.

1.4.2 Organization of the state flood plan

Chapter 2 of this plan summarizes the TWDB's policy recommendations to the Texas Legislature, and Chapter 3 summarizes existing major flood infrastructure and key ongoing flood projects as identified by the regional flood planning groups. Chapter 4 illustrates existing and future flood risk across the state. Chapter 5 summarizes current floodplain management practices and recommendations from the regional flood planning groups and the TWDB. Chapter 6 describes the goals adopted by the flood planning groups to help guide plan development, and Chapter 7 outlines the flood risk solutions as recommended by the regional flood planning groups. Chapters 8 and 9 examine the outcomes of plan implementation, including potential risk reduction and financial cost. Finally, Chapter 10 includes discussions of ongoing flood efforts in Texas as well as some key challenges and critical factors identified by the regional flood planning groups.

[9] Texasstatefloodplan.org

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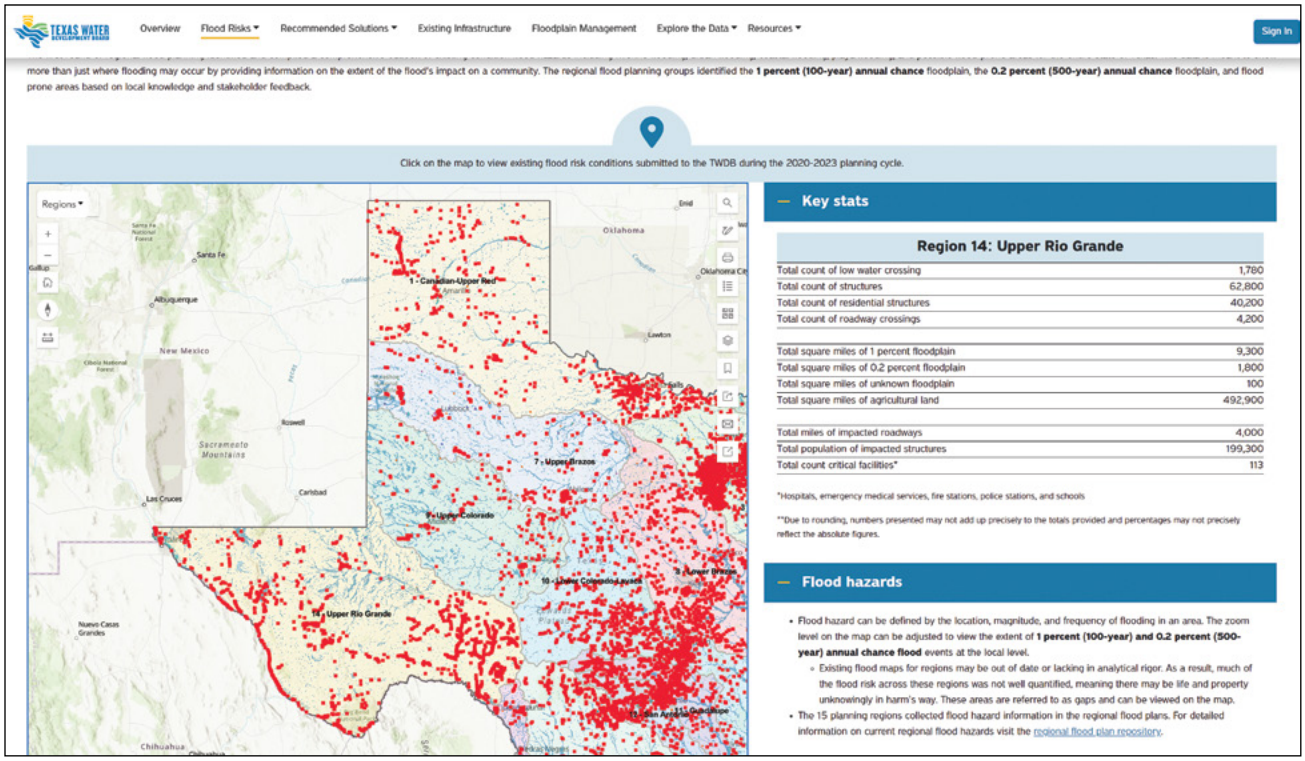

The Interactive State Flood Plan Viewer enables users to take an in-depth look at the 2024 State Flood Plan data