

## Chapter 12, Section 3: Texas-sized Challenge

Texas Government. Globalyceum. 2019. <https://globalyceum.com/table-of-contents-for-texas-government/>

### Focus Questions

*What is the difference between recovery and resilience?*

*Who declares disasters and evacuations in Texas?*

*What must a governor do to receive disaster assistance from the US government?*

*How have local government plans changed, post Hurricane Harvey?*

### Key Terms

*Resilience*

*500-year floods*

*Floodplains*

*Stafford Act (1988)*

*Emergency management coordinator*

*Texas Emergency Management Plan*

*Federal Emergency Management Agency*

*Texas Division of Emergency Management*

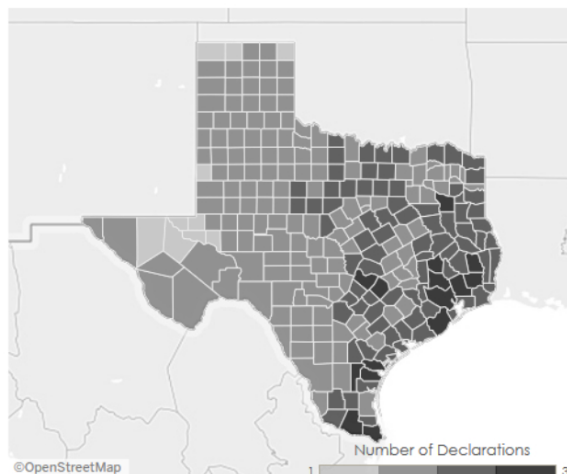
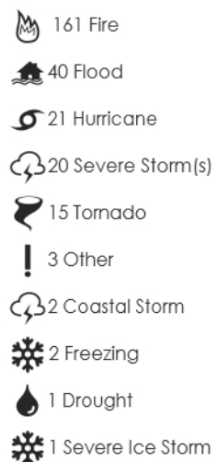
While Texas has many problems to face, few are as pressing as natural disasters. Climate change, zoning, building codes, and urban sprawl combine to create deadly scenarios where increased weather volatility is causing death and property damage. Texans approach the weather with a shrug, noting, “If you don’t like the weather, just wait a few minutes. It’ll change.” Yet weather causes great damage due to decisions made by developers, governments, and people. As the residents of coastal Texas experienced in 2017 with Hurricane Harvey, current government policy may not be adequate. To meet that need, Texas planning and emergency management policy are currently undergoing massive changes in an effort to keep citizens, businesses, and properties safe in the future.

## Identifying the Problem

The National Centers for Environmental Information recently announced that the rise in overall temperature will lead to more droughts, higher rainfall, and stronger hurricanes. In short, Texas is likely to swing between drought and flood, with the droughts of 2011-2014 and Hurricane Harvey the future rather than unusual historic events.

### Data Visualization: Disaster Declarations for Texas Counties

Click on an incident or county to filter the visualization. Click again to reset.



Weather affects all regions of Texas. Rural areas face drought, fires, and flooding, with few city and county emergency services to help the populations. Suburban and urban areas face flooding, due to large swaths of concrete and little open land. When cities receive heavy downpours, roads direct water into cement control channels that overflow back into streets and neighborhoods. When everything is cement, water cannot soak into the ground, leading to a lack of groundwater tables and low aquifer levels that are needed during times of drought.

Some of these issues are compounded by government decisions to allow homes to be built in floodplains, which are low-lying areas along a river or body of water, where water naturally runs after rains. Scientists and policymakers often predict how often floods occur in these areas, using designations like 100- or 500-year floods, which means there is a 1-in-100, or a 1-in-500 chance that a flood of large or great magnitude will occur in the area. Because the flood odds were initially estimated to be low in many areas, property in floodplains were sold for houses and commercial properties.

As seen recently, floodplains are experiencing flooding beyond prediction, especially in coastal areas. Houston alone has experienced three “500-year floods” in the last few years. Texas, of all the states, has the highest number of deaths due to natural disasters. While flooding is the number one reason, tornadoes, lightning, and extreme heat also cause death. Policymakers must examine how to make communities safer, and help businesses and citizens bounce back stronger from disasters. This happens by making communities resilient and ensuring a strong emergency management system.



*Port Arthur, Texas, August 31, 2017*

## **Resilience versus Recovery**

Local urban planning in Texas is embracing the concept of resilience, which is the ability to quickly “spring back” from an event. For more than a century, federal, state, and local governments focused on helping citizens and communities recover from disasters. As early as 1803, Congress passed legislation to help the city of Portsmouth, New Hampshire, recover from a fire by suspending taxes so merchants could rebuild. After years of individual bills aimed to help communities rebuild, the Federal Emergency Management Agency was created in 1979 to organize disaster response.

When areas experienced recurring disasters like flooding and fires, it became clear that recovery alone was not sufficient. Modern plans should prevent long-lasting damage from predictable events. For example, updated building codes prevent flooding. When home and commercial developers plan and build homes and offices, they have standards and guidelines for the property designs. While some guidelines make homes and offices more expensive, those changes can save lives and protect property. Texas Land Commissioner George P. Bush noted that only one percent of homes built after 2009 flooded during Hurricane Harvey because recent codes required builders to raise home foundations above the levels where water regularly pooled. He encouraged developers to take similar caution when building near streams, rivers, and lakes, noting that building a few inches above flood pool levels was wise.



*FEMA and Texas Disaster Recovery Center, 2008*

Another resiliency method is government-funded buying homes from homeowners in flood-prone areas so that owners can move to safer areas. While buy-outs are increasing in Texas, researchers at Texas A&M released a 2019 study noting that homes were bought in a “checkerboard” over a large area rather than a planned group. The researchers argued that purchasing clusters of homes, rather than a home here or there, would better help homeowners and local governments. Once an entire neighborhood is bought, the houses can be removed and the land used for flood control.

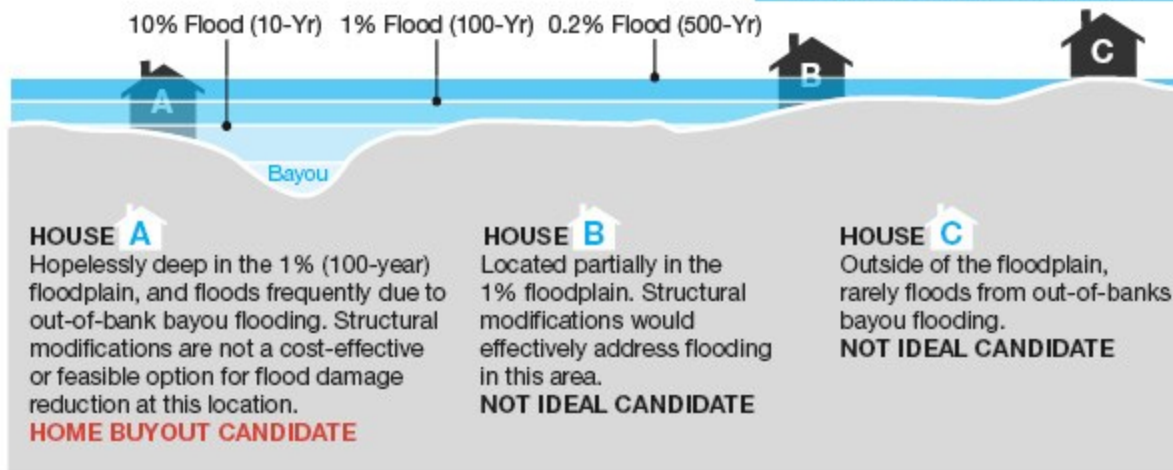
Texas cities are looking beyond just flooding and hurricanes. In North Texas, local and regional governments realized that increased weather volatility and densely populated towns mean tornadoes and straight-line winds cause heavy damage and loss of life. Many regional and local governments, like the Panhandle Regional Planning Commission, offer rebate programs to help citizens purchase safe-rooms for their homes. In addition, new schools are built to withstand higher winds and debris, offering shelter to children during school hours, and possibly to the public during a disaster.

# Flood Control District Home Buyout Considerations

## BEFORE

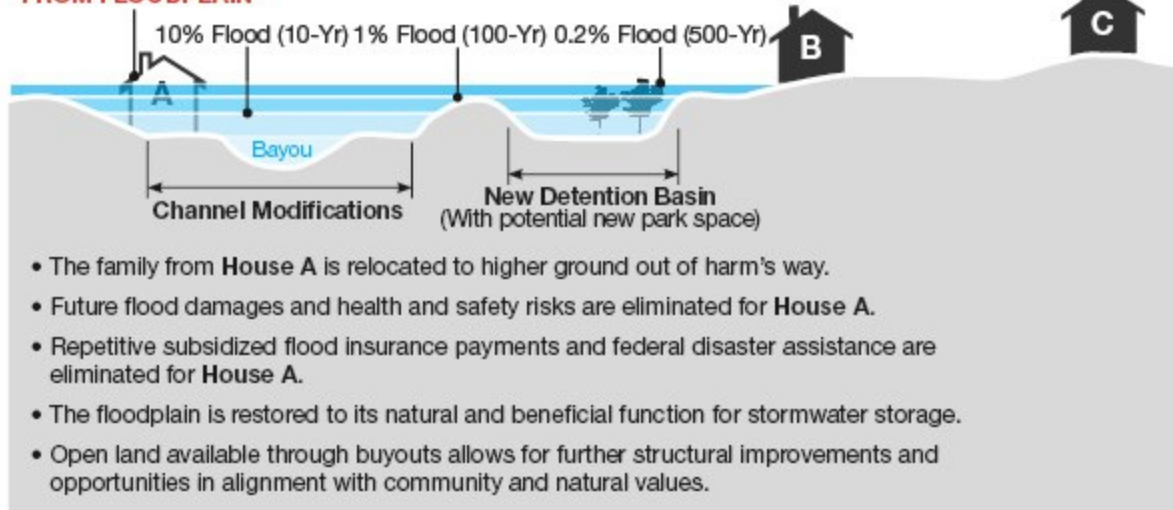
**The Floodplain and Probability**  
Different flood events have different chances of occurring in any given year in any given location:

- 10-Year Flood: 10% Chance
- 100-Year Flood: 1% Chance
- 500-Year Flood: 0.2% Chance



## AFTER

**HOME REMOVED  
FROM FLOODPLAIN**

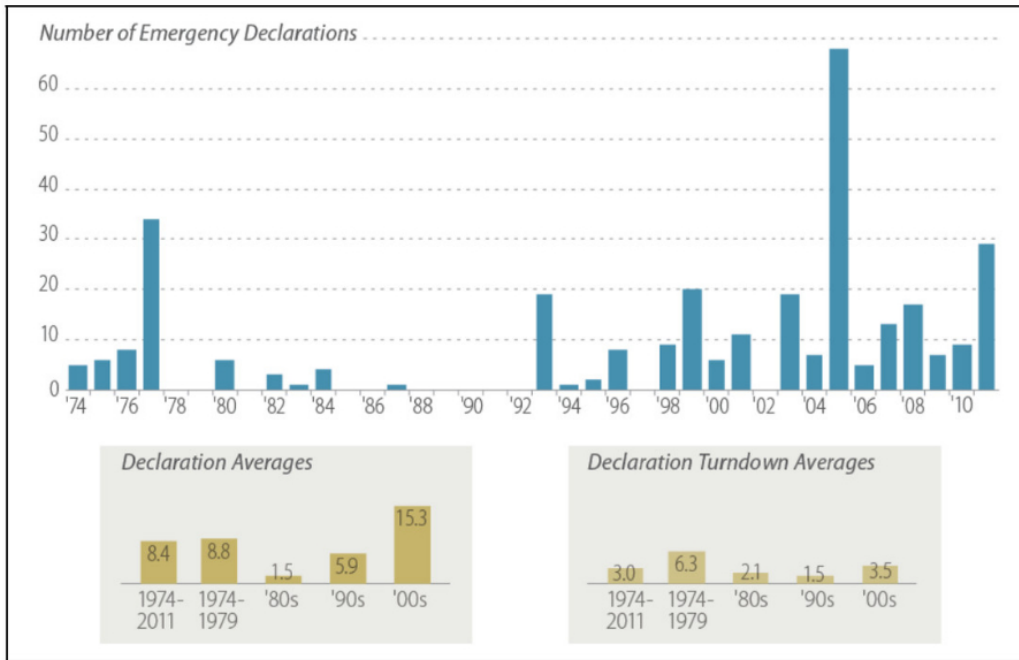


## Emergency Management

Emergency response policy is also changing to meet new needs. Emergency planning has its roots in the Stafford Act (1988), a US law that explains how and when the national government provides aid to states and local governments recovering from disasters. Before a state can receive aid, the governor must request that the president declare a disaster, and the president then reviews whether the state and local governments were overwhelmed when they carried out their emergency plans and whether the disaster declaration is necessary for recovery. Tribal governments may seek a disaster declaration from the president directly, if reservation land has been affected. Emergency declarations provide up to \$5 million in aid while major disaster declarations (hurricanes, earthquakes, flooding) provide both monetary aid and federal assistance programs. Not all requests are granted, however.

## Emergency Declarations

1974-2011



**Source:** CRS analysis based on data provided by FEMA.

To ensure Texas qualifies for aid, the Texas Division of Emergency Management (TDEM) provides guidelines for local governments to create and maintain emergency management plans. Cities must either join their county’s plan or create an independent plan for the city. All county and city plans are submitted to TDEM for approval and kept as reference in case cities or counties need assistance.

Funding plays a large part in whether cities opt to join a county plan. Many smaller cities join their county plan, even though counties may not be able to serve every city equally during a disaster. Smaller cities may not have funds to hire a full-time emergency management coordinator to plan and oversee emergency management plans. These positions often cost between \$60,000 to \$150,000 a year, and because of the demands on staff time, simply updating emergency management plans can run more than \$2,500 for each update. Larger cities are better able to fund an office of emergency management, which can create and test emergency plans to address the specific needs of the city.

While the governor of Texas can declare disasters, suspend state laws, and use other unusual powers during a crisis, emergency management in Texas is still considered a local matter. If a local government is overwhelmed, they reach out to other local governments for assistance, which is referred to as mutual aid. The state also sends assistance when requested, once a local government has declared a disaster. Disaster declarations and evacuations are also decided by local elected executives: mayors decide for cities and county judges decide for unincorporated county land. Should a mayor and county judge disagree on an evacuation, however, the county judge makes the final decision.



*Texas Department of Emergency Management (TDEM) State Response Activation Exercise, 2012*

## **Post-Harvey Emergency Management**

Hurricane Harvey revealed cracks in the Texas emergency management system. Neighboring cities and counties varied widely in responding, with some issuing mandatory evacuations and others only voluntary evacuations. In the days before Harvey hit, Governor Greg Abbott spoke to journalists and advised citizens to “strongly consider evacuating,” even if their local government officials had not ordered a mandatory evacuation.

Houston’s mayor and the Harris County Judge did not order evacuations in the days before the storm, arguing that it was dangerous to place over four million residents on the road when it was unclear where flooding would occur. Leaders disagreed, sometimes publicly, allowing the media and public to watch the power struggle. Abbott finally announced that he would head north if he lived in Houston, while the Harris County emergency management spokesperson stated that local officials knew best and had not ordered evacuations. Once the rain began, evacuations were no longer a safe option.

As waters rose, police and public responders were overwhelmed. Citizens from Texas and Louisiana started using social media to coordinate rescues with private water vehicles. Once the rain stopped, a secondary disaster struck. Dam operators released water, and neighborhoods that had survived the rain were flooded by water from dangerously full reservoirs. By October, more than 80 citizens had died directly or indirectly from Harvey’s winds, rains, and secondary flooding. In response, Abbott created the Commission to Rebuild Texas. The commission worked with local, state, and federal agencies to examine and assist with recovery, as well as recommend ways to better handle future disasters. These suggestions led to the passage of 31 bills in the 2019 legislative session, aiming to fix problems in communication and planning.



**Francisco Sanchez** ✓  
@DisasterPIO



Local officials know best. Houston has no evacuation order. In Harris County: very limited to select communities. LOCAL LEADERS KNOW BEST.



**Marjorie Owens** ✓ @clumsyandshy · Aug 25, 2017

Gov. Abbott: If I were in Houston I would head north ... Think of your life first.  
#Harvey2017

2:02 PM · Aug 25, 2017 · [Twitter for iPhone](#)

*Francisco Sanchez Emergency Management Coordinator using Twitter, 2017*

**Communication.** The first problem to be tackled was communication between state and local agencies. Problems existed from the very beginning, when state officials were unable to contact local officials due to old contact lists. All cities and counties were required to send contact information for elected executives, emergency management coordinators, and other important contacts. When it was time to make calls, many of the contacts were no longer in office or employed. Now, contact lists must be updated yearly.

Local emergency plans must also explain how the government will use social media and 911 systems to communicate with residents, with the state asking government to push out more reverse-911 calls and texts, to notify residents of emergencies. Dam operators, of both government and privately-run dams, must communicate with local government emergency operations centers before releasing water that may come near neighborhoods.



*Hugo Dam 2015 Flood*

**Planning.** Other laws attempt to correct problems with planning and preparation. A notable change is that officials serving as emergency management coordinators will eventually be credentialed, similar to licensing for other emergency officials, like police, firefighters, and nurses. Currently no official state-wide certification exists, though some officials may have degrees in emergency management or related fields, and have taken courses through FEMA's Emergency Management Institute and other training programs.

Beyond personnel, emergency plans are changing. County and independent city plans will now be more robust, following a "model guide" that will include specifics on problems like removing wet and dry debris from damage to homes and businesses, planning with school districts, and devising orderly evacuation strategies.



*Local governments are increasingly using tabletop and live-action simulations to test their emergency management plans, like this joint City of Denton/University of North Texas drill in May of 2019.*

The bills also restructured the agencies. Prior to Harvey, TDEM was an agency of the Department of Public Safety. If a city or county was overwhelmed by an incident, it needed to seek aid through two levels of regional offices before pursuing assistance from the state office in Austin. This system proved confusing and cumbersome, but in September of 2019, TDEM became a stand-alone agency. The new authority enabled the division to streamline regional assistance to just six regions, each with an emergency operations center and an assistant chief of response. The state's emergency operations center is set to move to Texas A&M University, which houses other state emergency programs, such as the Emergency Operations Training Center, the Texas Forest Service, Task Force 1 -- the state's urban search and rescue team-- and the Firefighter Recruit Academy. The move gathered state resources under one umbrella to facilitate planning, training, and communication.

Despite the emphasis on government preparation and planning, the Texas culture of self-sufficiency continues. Because the government cannot help everyone in a crisis, cities and counties promote citizen engagement and preparedness through volunteer programs like Community Emergency Response Team, Medical Reserve Corps, and SKYWARN® weather training. These and other programs help citizens become aware of potential problems and assist in response to disasters. Individual preparedness -- having flood insurance, stocking emergency supplies, storing important documents and medicines in accessible places, and planning for regional hazards -- continues to matter to Texans, who want to face problems on their own.





*Medical Reserve Corps Event, 2018*

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