



# Texas

## Flood risk and mitigation

### Overview

Floods and hurricanes are becoming more intense in Texas, with about 400 floods occurring annually.<sup>1</sup> Ninety percent of the state's natural disasters are floods, costing an average of \$254 million a year.<sup>2</sup> As these events become more serious, the physical and economic damage to communities and the threats to human lives and ecosystems also increase. Between 2000 and 2015, 23 federal disasters and emergencies were declared for floods, hurricanes, and severe storms in Texas, which exceeded \$5.3 billion in total assistance from the U.S. government.<sup>3</sup>

Figure 1

### Nearly Every Texas County Includes Designated Special Flood Hazard Areas

Percentage of affected land

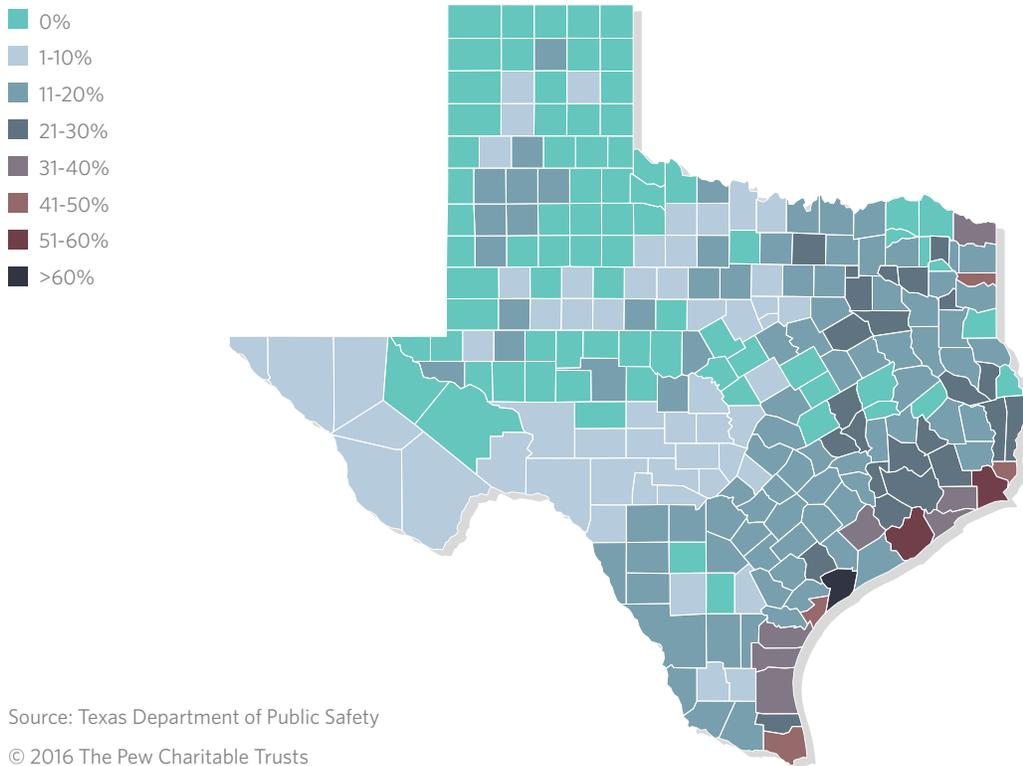
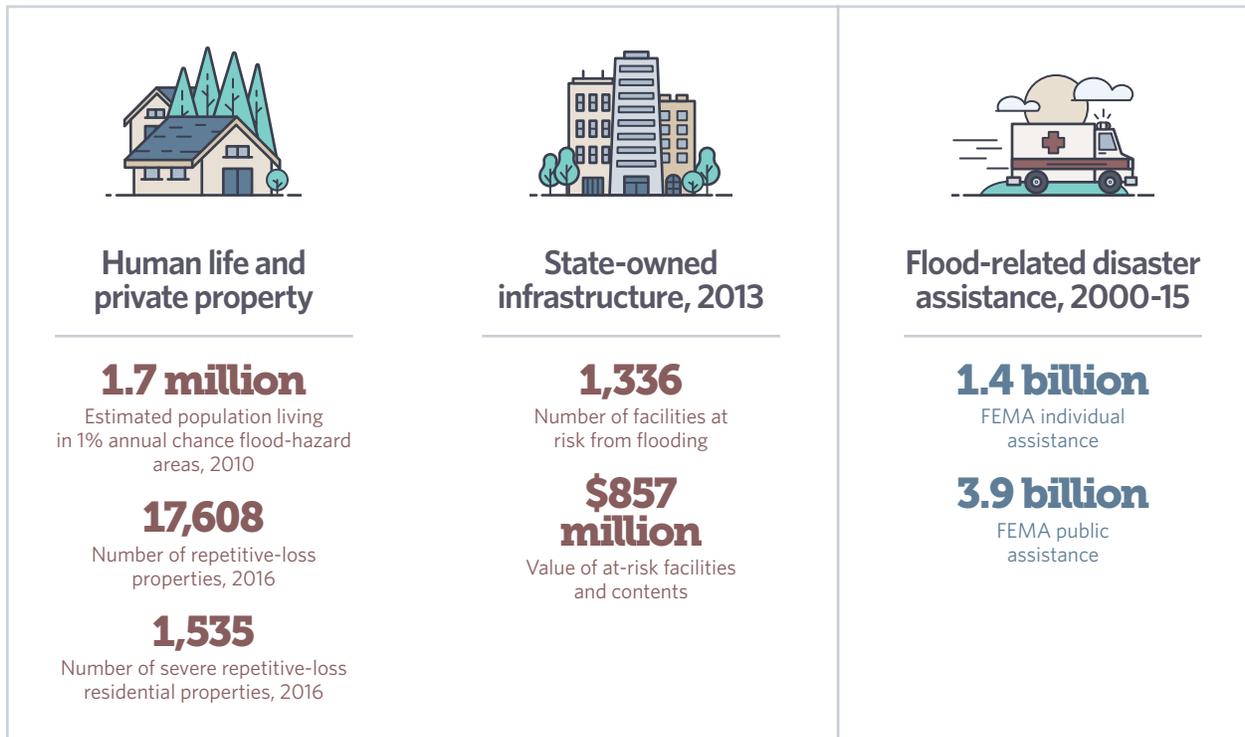


Figure 2

## 1.7 Million Texans Live in Flood-Risk Areas

Life, property, and public infrastructure at risk from flooding, and past federal government aid



Notes: One percent annual-chance flood-hazard areas are locations subject to flooding that have a 1 percent chance of being equaled or exceeded in any year. Repetitive-loss properties are National Flood Insurance Program-insured buildings and/or contents for which the program paid at least two claims of more than \$1,000 in any 10-year period since 1978. Severe repetitive-loss properties are those for which the program has either made at least four claim payments for buildings and/or contents of more than \$5,000 or at least two building-only claim payments for which the total amount exceeds the current value of the property. Disaster assistance figures are as of May 26, 2016.

Sources: Mark English, "Special Flood Hazard Area Exposure Resource Map v2.0," accessed May 9, 2016, <http://www.arcgis.com/home/webmap/viewer.html?webmap=5767b4c3ac164e54916bc7ebc20d25d6>; Texas Department of Public Safety, *State of Texas Mitigation Plan: 2013 Update*, <http://txdps.state.tx.us/dem/Mitigation/txHazMitPlan.pdf>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Repetitive Flood Claims (RFC) Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103321>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Severe Repetitive Loss (SRL) Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103337>; and Federal Emergency Management Agency, "Disaster Declarations," accessed May 2, 2016, <https://www.fema.gov/disasters>

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## Federal flood insurance helps communities prepare

Sixty-seven communities in Texas participate in the National Flood Insurance Program's Community Rating System. The voluntary program provides reduced insurance premiums in communities that proactively implement flood plain management practices—such as acquisition and relocation of flood-prone structures, elevation of structures, and flood proofing—that exceed the program's minimum requirements.<sup>4</sup> The highest-rated communities in the state are the cities of Dallas, Friendswood, Grand Prairie, Houston, Kemah, and Plano, which each earned 25 percent discounts for eligible properties.<sup>5</sup>

Figure 3

## State and Federal Investment Supports Texas' Mitigation Efforts

### Risk-reduction expenditures by program and level of government

Program	Federal share	State share
Pre-disaster and other mitigation grants	\$223.8 million	\$44.6 million
Hazard Mitigation Grants made after flood-related disasters	\$1.3 billion	\$446 million

Sources: Federal Emergency Management Agency, "OpenFEMA Dataset: Hazard Mitigation Grants-V1," March 9, 2016, <http://www.fema.gov/openfema-dataset-hazard-mitigation-grants-v1>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Pre-Disaster Mitigation Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103341>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Repetitive Flood Claims (RFC) Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103321>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Severe Repetitive Loss (SRL) Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103337>; and Federal Emergency Management Agency, "Hazard Mitigation Assistance Flood Mitigation Assistance (FMA) Data," March 9, 2016, <https://www.fema.gov/media-library/assets/documents/103339>

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## Importance of policy

Communities must prepare for weather-related catastrophes such as floods and hurricanes, and U.S. policymakers should consider reforms that improve protection and preparation, minimize disruptions to the economy, and reduce costs to the federal government and taxpayers by:

- Increasing federal investment in proactive mitigation programs that help communities prepare for and reduce risk of floods.
- Improving resilience and durability requirements for infrastructure that is rebuilt after disasters.
- Protecting ecosystems, such as wetlands, salt marshes, and dunes, which can absorb storm impacts and help shield property.
- Reforming the National Flood Insurance Program to better communicate actual risk, break the cycle of repeated loss and rebuilding in the most flood-prone areas, and provide incentives to compel communities and homeowners to prepare in advance of floods.

## Endnotes

- 1 Texas Department of Public Safety, *State of Texas Mitigation Plan: 2013 Update*, <http://txdps.state.tx.us/dem/Mitigation/txHazMitPlan.pdf>; and U.S. Department of Energy, Office of Electricity Delivery & Energy Reliability, "State of Texas Energy Sector Risk Profile," [http://www.energy.gov/sites/prod/files/2015/06/f22/TX\\_Energy%20Sector%20Risk%20Profile.pdf](http://www.energy.gov/sites/prod/files/2015/06/f22/TX_Energy%20Sector%20Risk%20Profile.pdf).
- 2 Texas Department of Public Safety, *State of Texas Mitigation Plan: 2013 Update*.
- 3 Federal Emergency Management Agency, "Disaster Declarations," accessed May 26, 2016, <https://www.fema.gov/disasters>. Sum of individual assistance and public assistance for Texas flood-related major disaster and emergency declarations from 2000 to 2015.
- 4 National Flood Insurance Program, "Community Rating System (CRS)," accessed May 26, 2016, [https://www.floodsmart.gov/floodsmart/pages/crs/community\\_rating\\_system.jsp](https://www.floodsmart.gov/floodsmart/pages/crs/community_rating_system.jsp).
- 5 Federal Emergency Management Agency, "Community Rating System," last modified June 1, 2014, [http://www.fema.gov/media-library-data/1398878892102-5cbcaa727a635327277d834491210fec/CRS\\_Communitites\\_May\\_1\\_2014.pdf](http://www.fema.gov/media-library-data/1398878892102-5cbcaa727a635327277d834491210fec/CRS_Communitites_May_1_2014.pdf).

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### For further information, please visit:

[pewtrusts.org/flood-prepared-communities](http://pewtrusts.org/flood-prepared-communities)

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