



# Renewing Texas Infrastructure

## 2012 Texas Infrastructure Report Card

### Texas Section – American Society of Civil Engineers



## Flood Control Fact Sheet

### Key Infrastructure Facts: Existing Condition and Performance

- **There have been 86 federally declared disasters in Texas from 1953-2012, with 60 of these involving widespread, damaging flooding.**
- As a direct result of these disasters, 247 flood mitigation projects totaling over \$381 million have been approved by FEMA through the Hazard Mitigation Grant Program. In order to receive federal funds, local communities must provide a specified percentage of total project funds. The Texas Division of Emergency Management (TDEM) administers these grants, but provides no additional funding.
- Other FEMA grant programs, such as “unmet needs” and Pre-Disaster Mitigation grants, also administered through the TDEM, have accounted for five additional funding opportunities in the last ten years, involving another 51 flood mitigation projects totaling over \$28.3 million.
- The Flood Mitigation Assistance (FMA) Program is a pre-disaster program funded through FEMA and administered by the Texas Water Development Board (TWDB). Funds for FMA come primarily through the National Flood Insurance Program (NFIP) from flood insurance premiums. During the period from 1998-2011, approximately \$51 million in federal funds were utilized to assist 30 communities with flood mitigation projects for their jurisdictions. These projects consist of a mix of buyout with conversion of the land to open space, and drainage projects.
- The Severe Repetitive Loss (SRL) Grant Program under FEMA, provides federal funding to assist state and communities in implementing mitigation measures to reduce or eliminate the long-term risk of flood damage to severe repetitive loss structures insured under the National Flood Insurance Program (NFIP). SRL was created as part of the National Flood Insurance Reform Act of 2004 with the goal of reducing or eliminating claims under the NFIP. TWDB administers the SRL grant program for the state on behalf of FEMA; TWDB awarded \$85,065,000 in funding for 15 projects during the period from 2008-2011.
- The TWDB also manages the Development Fund II program which is a State loan program providing funds through loans to political jurisdictions for water supply, water quality enhancement, municipal solid waste, and flood control. Loans for flood control may include structural and nonstructural flood protection improvements.
- **The State of Texas has no statewide comprehensive floodplain management plan.** Texas divides flood mitigation planning between three state agencies: the GDEM, the Texas Commission on Environmental Quality, and the TWDB. None of these agencies has full authority to implement or participate in flood mitigation capital projects or to provide floodplain management on Texas’ 23 river basins.
- **Texas counties and cities are generally responsible for floodplain management and flood mitigation projects.**
- Texas has passed significant legislation within the past ten years which requires communities to be eligible to participate in the NFIP. Legislation has also provided General Law cities and

counties the ability to enforce stronger flood plain ordinances and to levy fees and fines for violation of floodplain ordinances.

- **Texas is not a participant in the NFIP, although many of its communities are.** However, Texas accounts for approximately 12% of the total flood policies, insurance coverage in force, and total premium paid in the United States. It ranks second in the nation next to Florida.
- Texas has 655,697 NFIP flood policies in force with a total insurance coverage amount of \$162 billion as of May 31, 2012. The total premium paid for policies in force equates to over \$357 million. Between 1978 and 2011, FEMA paid nearly \$5.5 billion in payments for 237,251 flood loss claims in Texas. These payments account for over 13% of the total claim dollars paid in the US. **Texas ranks second in the nation to Louisiana in terms of dollars paid for flood claims.**

## **Anticipated Growth and Other Future Needs**

- **The population of Texas is expected to double in the next 30 to 40 years. Development in the floodplains can be expected to increase, as homebuilders and commercial developers continue to build near the State's streams, rivers, lakes and coast.**
- Most Texas communities have outdated floodplain maps and studies that do not adequately define the existing flood risks to community officials, therefore making flood plain management difficult or even nonexistent
- Flood damages can be expected to increase statewide, as population pressures lead to more development in high-risk areas, development increases in rural counties with no defined flood boundary maps, and property values (and, therefore, damage values) increase.
- Texas will continue to be a major financial drain on the National Flood Insurance Program from escalating flood claims.
- FEMA has implemented an aggressive Map Modernization Program across the nation, with the goal of updating (in five years) all of the maps used by local communities to manage flood plains. The program requires state or local participation in the mapping projects in order to receive federal participation and funding. The State of Texas is not providing any state matching funds for the program, and therefore has left the local communities with the full burden of providing these funds. The target for local participation is approximately 20 percent of project costs. This may limit the ability of many rural counties to participate.
- TWDB recently funded a Flood Funding Needs Database (FloodFUND) Research Study in order to gather information on flood mitigation projects throughout the State of Texas. The information obtained through this research project was used in the development of the 2012 State Water Plan. The results of this study identified projects with a cost estimate of over \$5.64 billion for current and planned flood mitigation projects. This includes an estimated \$330 million in flood mapping studies for streams and rivers throughout Texas with out of date engineering data.

## **Adequacy of Current Funding and Need for Expanded Funding**

- The U.S. Army Corps of Engineers (USACE) funding has decreased for major flood reduction projects in Texas. It takes an estimated 20 years to plan, design and construct a major project.
- **Of the 27 USACE projects within Texas that have flood control features, only 12 received funding in the President's 2012 budget.** Each of these projects requires a local sponsor to participate in the project and provide local matching funds. The State does not participate as a local sponsor in these projects, although the TWDB has provided some funds to the local communities for USACOE planning projects through flood protection planning grants, generally providing fifty percent of the local share requirement of the USACOE.

- The total for all grant funding received by Texas from FEMA to date is 298 flood mitigation projects totaling over \$408 million. Local communities provided the local matching funds. Although the grant programs are administered by the State, no state funds are provided.
- The TWDB funds approximately \$2.0 million in flood protection planning grants during each two-year cycle of the legislature (\$1,000,000 per year). Funds are available to political jurisdictions to develop flood protection plans for entire watersheds to provide protection from flooding through structural and nonstructural measures. These funds require a fifty percent local match, which may prevent some communities from applying for the grants.
- Without financial support from the State, many communities will be unable to plan and construct adequate flood mitigation projects and will be unable to participate in federal programs due to the requirements for local matching funds.
- **With the exception of limited grants and low-interest loans, Texas does not fund statewide flood control infrastructure or floodplain management. The funds collected by the Texas Department of Insurance from NFIP policies and licensing fees are returned to the general fund.**
- **Texas needs to develop a statewide floodplain management plan to mitigate future flood disasters.**

## Sources

- *National Inventory of Dams*, U.S. Army Corps of Engineers ([www.usace.army.mil](http://www.usace.army.mil))
- *Reinvesting in America's Watersheds: A Special Report – Texas*; NRCS
- *FloodFUND Research Project*, Texas Water Development Board, June 2011
- Flood Insurance Statistics, National Flood Insurance Program, Federal Emergency Management Agency, June 2012.
- *Catastrophic Flooding in Texas*, Hydrologic Information Center, National Weather Service.
- National Weather Service website ([www.weather.gov](http://www.weather.gov))
- Interviews and data from the Texas Water Development Board, March 2012.
- Interviews with staff at The Texas Division of Emergency Management (TDEM), July 2012.