



## Texas General Land Office Planning Studies Summary

Below is a comprehensive list of all planning studies funded with planning study dollars allocated from U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Disaster Recovery (CDBG-DR) funds for the following disasters:

### Hurricane Ike, 2015 Floods, 2016 Floods, Hurricane Harvey, CDBG-MIT, 2018 & 2019 Floods

#### ▶ Completed Studies

**Developing Environmental Responses and Models for Catastrophic Flooding Events-Phase 1 (\$1,504,951)** – This environmental study monitored the impact of flooding on the environment through the analysis of soil samples.

**Disaster Economic Impact Study (\$689,699.15)** – The GLO contracted with The University of Texas' McCombs School of Business to run analysis for the Hurricane Harvey Action Plan's Needs Assessment. This led to further analysis regarding the common effects of disasters and the ability to standardize the economic impact of disasters at a national level.

**Disaster Impact Visualization Study (\$509,237)** – This study built real-time visualizations of critical disaster data, which display historical satellite imagery from Hurricane Harvey and other disaster events. The visualizations give communities the ability to observe events and make informed planning decisions.

**Economic Development Strategy and Diversification Study (\$950,000)** – This study developed strategies to expand the economy of nine coastal counties impacted by Hurricane Harvey to make them more resilient to future economic impacts while recovering.

**Evaluating the Effects of a Coastal Spine: National Level Economic Ripple Effects of Storm Surge Events (\$1,548,235.39)** – This study assessed the economic effects of the coastal spine barrier proposal. The findings show the nationwide economic impacts from major storm events in the Galveston Bay.

**Flood Plain Management Services (\$20,139,500)** – U.S. Army Corps of Engineers (USACE) performed flood plain management services necessary to assist the GLO in fulfilling its duty to administer the four flood studies within Combined River Basins Study as well as other interagency projects.

**Gulf Coast Community Protection and Recovery District (GCCPRD) (\$7,000,000)** – The GCCPRD developed a storm surge suppression study to investigate potential coastal projects that could reduce the impact of future storms. The study area consisted of the coastal areas around Brazoria, Chambers, Galveston, Harris, Jefferson, and Orange counties. The results can be found at [gcpdtexas.com](http://gcpdtexas.com).

**Hurricane Harvey Housing Impacts: 49-County Survey Top-Line Findings (\$339,167.73)** – This study surveyed the general population to determine housing needs among residents affected by Hurricane Harvey. The results helped determine the most appropriate housing programs, allocation amounts, and methods of communication based on regional need.

**Measuring, Mapping, and Managing Flood Risk in Texas (Phase 1) (\$2,000,000)** – This study partnered with Texas A&M University System (TAMUS) to measure, map, model, and visually present data recorded during historical flood events across Texas and recommend techniques to mitigate future hazards and risks.

**Overview of Program Requirements to Assist CDBG-DR Beneficiaries (\$1,493,000)** – This study reviewed the GLO's efforts to serve beneficiaries.

**Regional Drainage Data Collection and Oversight (\$1,443,990)** – This study gathered and organized data focusing on regional oversight and the coordination of the drainage infrastructure in Hardin, Jasper, Jefferson, Newton, Orange, Tyler, Polk, Liberty, and Chambers counties. After the data was analyzed, recommendations were made to local community leaders.

**Texas Coastal Resiliency Study (\$2,000,000)** – The Texas Coast Resiliency Study worked with 18 coastal counties to determine the effectiveness of past recovery projects along the Texas coast and assessed vulnerability of existing infrastructure. The study also recommends projects that would improve overall resiliency of the Texas coast.

**2023 Texas Coastal Resiliency Master Plan (\$2,000,000)** – This funding supported the 2023 installment of the Texas Coastal Resiliency Master Plan, that provided a vision to protect coastal communities, infrastructure, and ecological assets from coastal hazards.



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	Hurricane Ike	2016 Floods	Hurricane Harvey	MIT
Developing Environmental Responses and Models for Catastrophic Flooding Events-Phase 1			X	
Disaster Economic Impact Study	X	X	X	
Disaster Impact Visualization Study	X	X	X	
Economic Development Strategy and Diversification Study			X	
Evaluating the Effects of a Coastal Spine: National Level Economic Ripple Effects of Storm Surge Events	X			
Flood Plain Management Services			X	
Gulf Coast Community Protection and Recovery District (GCCPRD)	X			
Hurricane Harvey Housing Impacts: 49-County Survey Top-Line Findings			X	
Measuring, Mapping, and Managing Flood Risk in Texas (Phase 1)		X		
Overview of Program Requirements to Assist CDBG-DR Beneficiaries			X	
Regional Drainage Data Collection and Oversight	X			
Texas Coastal Resiliency Study	X			
2023 Texas Coastal Resiliency Master Plan				X

### ► Ongoing Studies

**Alternative Housing – Implementation and Testing (Start date: TBD)** – The purpose of this study is to build and test four (4) alternative housing options to determine if there are innovative solutions for accommodating disaster survivors, including LMI, that are cost effective, safe, secure, and allow for faster construction.

**CHARM Platform Development (Start date: August 2020) (\$19,000,000)** – The CHARM software is currently bolstering local planning efforts by running scenario planning workshops with local communities. When integrated with the disaster database project, this enhancement would provide local communities with the information, tools, and technical expertise to make informed planning decisions.

**Developing Environmental Responses and Models for Catastrophic Flooding Events-Phase 2 (Start date: September 2022) (\$3,000,000)** - The purpose of the second phase is to propose ways of alleviating the persistent environmental and health impacts of catastrophic flooding in Jefferson County, using the strategy developed from the study conducted on the Dickinson Bayou watershed during Phase 1.

**Developing Effective Flood Risk Communication Tools for Texas Communities (Start Date: September 2023) (\$3,000,000)** – We are leveraging the Measuring, Mapping, and Managing Flood Risk study completed by Texas A&M to expand the disaster plain to the mitigation area and further refine disaster risk communication tools for communities to use.

**Disaster Recovery Alternative Housing Study (Start date: January 2020) (\$1,210,561)** – This is an effort to analyze and evaluate alternative housing options to determine if innovative solutions exist for accommodating disaster survivors, including those with low to moderate incomes, that are cost-effective, prudent, secure, and allow for faster construction. After research, this study will proceed with the development of prototypes.

**Flood Studies within Combined River Basins (Start date: September 2020) (\$92,000,000)** – Three regionalized studies, based on Texas’ major river basins covering the Harvey-impacted area, will evaluate mitigation and abatement strategies to reduce disaster impacts and increase community resiliency. TWDB, TDEM, USACE, and USGS are a few of the stakeholders that helped GLO design the scope of the study and will continue to benefit from the study as the results become publicly available. For example, GLO is coordinating with TWDB to ensure the project assessments will be included in the State Flood Plan.

**Green Infrastructure for Texas (Start date: September 2022) (\$2,086,380)** – This study will provide nature-based solutions to stormwater management. Through outreach, coalition building, education, and on-the-ground projects, this grant seeks to stimulate communities to implement green infrastructure projects at any scale.

**Lower Rio Grande Valley Economic Development Study (Start date: June 2022) (\$ 1,009,229)** - This study will develop strategies to expand the economy of three counties in the Valley impacted by 2019 Floods to make them more resilient to future economic impacts while recovering.



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### ► Ongoing Studies (cont.)

**Lower Rio Grande Valley (LRGV) Flood Study (Start date: February 2022) (\$10,000,000)** – A regional flood study, encompassing Hidalgo, Willacy, Cameron, and Starr counties, that mirrors the ongoing Flood Studies within Combined River Basins study.

**Lower Rio Grande Valley Transportation Study (Start date: November 2022) (\$472,500)** - This study will evaluate how city populations located in low tide sections of towns in three counties in the Rio Grande Valley can evacuate on foot to shelters during high rainfall events so that first responders can focus on other issues.

**North Central Texas Council of Governments Study (Start Date: July 2022) (\$4,000,000)** – This forward-thinking study will look to dissolve silos and improve delivery of consolidated, adaptive infrastructure before expected population growth makes addressing these issues more difficult and costly. The focus of the study is on (1) Transportation Infrastructure and Safety, (2) Stormwater Runoff, and (3) Environmental Features and Tools.

**Project Management Services (Start date: February 2021) (\$4,194,000)** – Provider shall perform the comprehensive project management services necessary to assist the GLO in fulfilling its duty to administer the four flood studies within Combined River Basins Study.

**Regional CHARM Enhancements (Start Date: TBD) (\$11,169,253)** – Using a combination of 2018, 2019, and MIT funding to provide better service for vulnerable regions, we are working with AgriLife to enhance existing CHARM capabilities to provide regional planning and coordination capabilities. This will require super-computing capabilities and large-scale stakeholder engagement for the LRGV and East Texas communities affected by the 2018 & 2019 disasters. In addition, CHARM workshops to walk communities through the process of developing RCP/LHMPP plans and create a training program to increase local competence and capacity.

**Resilient Housing Study (Start date: April 2022) (\$792,875)** – This study will evaluate the resilience of HAP homes that have been subjected to multiple disasters through a random sampling and analysis. The study will have three phases: first establish a statewide zoning resource, second capture the long-term beneficiary experience, and finally develop educational materials on the recovery process and resilient home maintenance.

**State Hazard Mitigation Plan (Start date: May 2021) (\$5,000,000)** – The GLO is partnering with the Texas Division of Emergency Management (TDEM) to provide CDBG-MIT funds for the development of a State of Texas Hazard Mitigation Plan. The plan makes a state eligible for assistance up to 15 percent for estimated aggregate amounts of a disaster. The state hazard mitigation plan should serve as the framework for the local hazard mitigation plans within that state.

**Technical Flood Model Reviewer (Start date: TBD) (\$TBD)** – Provider will perform engineering oversight services being performed previously by USACE. Such services are necessary to meeting the GLO's CDBG-MIT goal of reducing flooding risks and prevent associated damages in Texas in the event of a disaster.

**Texas Disaster Information System (TDIS) (Start date: June 2019 - UT; October 2020 - TAMUS) (\$41,459,740)** – The GLO, UT, and A&M are working to create and oversee a system capable of securing the state's disaster data needs, which will ultimately serve as a critical tool assisting Texas communities develop better disaster recovery and mitigation plans.

**Texas Integrated Flood Framework (TIFF) (Start date: November 2020) (\$13,000,000)** – The GLO is actively coordinating with USACE/USGS/TWDB to ensure flood planning efforts are not duplicated. Through the establishment of intergovernmental workgroups, this grant seeks to standardize data sharing, flood modeling, and planning activities. TWDB is the grant recipient and the lead agency for completing this work.

	2015 Floods	2016 Floods	Hurricane Harvey	MIT	2018 Floods	2019 Disasters
Alternative Housing – Implementation and Testing			X	X		
CHARM Platform Development			X	X		
Developing Environmental Responses and Models for Catastrophic Flooding Events-Phase 2			X			
Developing Effective Flood Risk Communication Tools for Texas Communities				X		
Disaster Recovery Alternative Housing Study			X			
Enhanced State Hazard Mitigation Plan				X		
Flood Studies within Combined River Basins			X			
Green Infrastructure for Texas			X			
Lower Rio Grande Valley Economic Development Study						X
Lower Rio Grande Valley (LRGV) Flood Study	X			X		
Lower Rio Grande Valley Transportation Study						X
North Central Texas COG Study				X		
Project Management Services	X		X			
Regional CHARM Enhancements				X	X	X
Resilient Housing Study				X		
Technical Flood Model Reviewer		X		X		
Texas Disaster Information System (TDIS)				X		
Texas Integrated Flood Framework (TIFF)				X		