

2016 Mitigation Competition Project Descriptions



City of Baytown Texas Avenue Drainage Improvements (HMID) - \$3,236,049

The City of Baytown will increase the size of the storm sewer system and inlet locations to bring the system up to code. These improvements will help convey more flow downstream ahead of extreme event storm surge and store more flow during the surge itself. The project will provide significant enhancements including upgrading, extending, re-aligning and relocating the storm sewer system across 67 acres. Construction will take place in the area around Texas Avenue, Pruett Street, Whiting Street and Sterling Avenue.

Total Project Beneficiaries: **11,180**

LMI Beneficiaries: **7,790**

LMI Percentage: **69.68%**

City of Brazoria City-wide Wastewater and Sanitary Sewer Improvements (HMID) - \$3,176,375

The City of Brazoria will improve the municipal wastewater treatment and sanitary sewer collection system by repairing damages to the Wastewater Treatment Plant (WWTP) from the 2016 Flood and installing appropriate flood proofing to prevent future damages. The Wastewater Treatment Plant portion of the project is located at the end of Windsor Road near Country Road 797. Additionally, the city will replace sewer trunk lines and manholes to reduce the amount of infiltration and inflow into the collection system and prevent further damages to the collection system. Construction will take place in the area around S. Indiana Street, W. New York Street, and S. Oregon Street.

Total Project Beneficiaries: **3,045**

LMI Beneficiaries: **1,975**

LMI Percentage: **64.86%**

City of Buffalo Wastewater Plant (SMID) - \$9,628,000

The proposed project will upgrade and expand the City of Buffalo's Wastewater Treatment Plant. During significant weather events, the antiquated sewer system is constantly surcharged, and the plant is subject to overflows, ultimately resulting in service outages. The proposed wastewater treatment plant project will alleviate the risk of surcharges and overflows during severe storm events. The project will include improvements to, or replacement of, the gravity influent lines, aeration basins, clarifiers, blower facilities, sludge handling, disinfection, electrical systems, and the gravity outfall. The project is included in the Leon County Hazard Mitigation Action Plan.

Total Project Beneficiaries: **2,095**

LMI Beneficiaries: **1,240**

LMI Percentage: **59.19%**

Clute Regional Flood Risk Reduction Project: Drainage Improvements (HMID) - \$9,881,420

This project is part of a recommended comprehensive Clute and Lake Jackson Drainage Plan to implement important drainage and storm sewer system management interventions to reduce flooding and water surface elevations in the overall drainage area. The plan included neighboring Lake Jackson and the Velasco Drainage District in the planning process, which will increase future overall resiliency and maximize beneficiary impact on residents and communities. The project will include storm sewer system upgrades and ditch improvements for three sites: Flag Lake Drive & Brazoswood Shopping Center, Plantation to Pin Money and Ditch A from Dixie Drive to Cosa Verde.

Total Beneficiaries: **4,470**

LMI Beneficiaries: **2,755**

LMI Percentage: **61.63%**

2016 Mitigation Competition Project Descriptions (cont.)



Deep East Texas Council of Governments LMI Broadband Telecommunications Infrastructure Project (HMID) - \$9,008,688

The proposed project will make significant telecommunication improvements to provide broadband internet access to communities in northern Newton County. Having a reliable connection will help mitigate the consequences of future disasters by facilitating emergency response and reducing service disruption in several areas, including work, education, health, and sanitation. DETCOG will develop, construct, and operate the broadband system making sure it's affordable to all residents.

Total Project Beneficiaries: **6,710**

LMI Beneficiaries: **3,540**

LMI Percentage: **52.76%**

City of Eastland Flood Mitigation Projects (SMID) - \$9,999,140.72

The City of Eastland will conduct dam repairs including clearing brush overgrowth that currently compromises structural integrity. Vegetation will be removed from spillway areas to restore the original capacity and the spillway of Lake Eastland will be reconstructed. The drainage structure under E. Main Street will be reconstructed to alleviate the chokepoint it now poses to storm drainage in that area. Street repairs will be conducted to restore stormwater carrying capacity and provide a stable driving surface during rain events. Eastland will also use funds to acquire several repetitive flooded properties to create a flood easement.

Total Project Beneficiaries: **3,415**

LMI Beneficiaries: **1,955**

LMI Percentage: **57.25 %**

Eastland County Lake Leon Mitigation Efforts (SMID) - \$9,805,900

Lake Leon Dam is a large high-hazard dam located approximately 8 miles south of IH-20 on Farm-to-Market (FM) 2461 in Eastland County. More than 72% of the Eastland County population would lose their potable water supply source if the Lake Leon dam were to fail, which would also result in the inundation of downstream homes and roadways.

With these funds, Eastland County will stabilize the remaining portions of the upstream dam embankment and saddle dam to mitigate risk of chronic geotechnical slope failures. Improvements will also include installation of erosion measures and rehabilitation of the concrete principal spillway conduit and riser, as well as replacement of the existing raw water intake conduit with a floating intake structure. These improvements will mitigate the risk of a catastrophic dam failure associated with an erosion breach of the auxiliary spillway during an extreme flood event.

Total Project Beneficiaries: **6,625**

LMI Beneficiaries: **3,395**

LMI Percentage: **51.25%**

City of Elgin Water Treatment Plant (SMID) - \$4,899,840

The Pistol Hill Ground Storage Tank project will add an additional water storage tank and increase the amount of water available to all of Elgin. During previous disaster events, the city and its citizens were faced with water pressure issues that could have impacted clean water access. With an additional water storage tank, the city will have the capacity and availability to provide water and lessen the suffering of its citizens during a disaster.

Total Project Beneficiaries: **8,090**

LMI Beneficiaries: **4,695**

LMI Percentage: **58.03%**

2016 Mitigation Competition Project Descriptions (cont.)



City of Freeport Stormwater Inflow Improvements - \$5,931,626

The City of Freeport will mitigate the risk of public health hazards associated with sewage overflows, accommodate stormwater surges in a responsible manner, promote an environmentally sound method of wastewater collection and treatment and mitigate negative community aspects of improper sewer disposal. By upsizing mechanical components, rehabilitating and replacing sanitary sewer lines, manholes, and improving service laterals within this project, it will mitigate the risks of future flooding by reducing the stormwater inflow into the sanitary sewer system. The project will rehabilitate the existing sanitary sewer system to improve resiliency against future storm and flood events.

Total Project Beneficiaries: **12,025**

LMI Beneficiaries: **8,080**

LMI Percentage: **67.19%**

Harris County Carpenters Bayou - Cloverleaf Drainage Improvements (HMID) - \$10,000,000

The Cloverleaf Stormwater Drainage Improvements will serve a portion of the Carpenters Bayou watershed. With these funds, Harris County will improve roadside ditches, construct a trunk line and a 109 acre-feet stormwater detention facility north of the San Jacinto Funeral Home & Memorial Park, for an approximate combined 50yr Level-of-Service (LOS). The proposed trunk line alignment will run along Nancy Rose Street beginning with its headwaters near Victoria Street, turning eastward along Hillsboro Street, and out falling into the proposed detention facility north of the San Jacinto Funeral Home & Memorial Park. The proposed detention basin will provide approximately 109 acre-feet of potential storage for mitigating conveyance impacts from Cloverleaf drainage improvements. The use of a stormwater trunk line will serve as a centralized drainage "artery" and for allowing lateral tie-ins from roadside ditch connections, before safely out falling into proposed detention basin.

Total Project Beneficiaries: **11,185**

LMI Beneficiaries: **8,880**

LMI Percentage: **79.39 %**

Hidalgo County Main Floodwater Channel Expansion Project - Phase 2 (SMID) - \$9,962,444.40

The Hidalgo County Main Floodwater Channel Expansion Project was jointly submitted by Hidalgo County and Hidalgo County Drainage District No. 1 ("Drainage District"). This is Phase 2 of a 2-phase project, and both phases work in tandem. Expanding the Main Floodwater Channel will add millions of cubic yards of storm-water capacity, which in turn will benefit the citizens of Hidalgo County and provide mitigation against flooding for a large portion of Hidalgo County and the Rio Grande Valley.

Total Project Beneficiaries: **377,800**

LMI Beneficiaries: **205,010**

LMI Percentage: **54.26%**

City of Houston Alief Forest Area Flood Mitigation (HMID) - \$8,183,191.89

The Alief Parks Area Flood Mitigation Project will reconfigure existing city parks to detain stormwater and reduce flood risk in surrounding areas located in the 100-year floodplain. Detention facilities will be installed in two different parks, Boone Park and Hackberry Park, and will together be able to detain 40 acre-feet of stormwater. The proposed improvements will also improve recreational spaces and deliver additional park amenities, such as wetlands habitat and other vegetation that will slow the movement of stormwater and improve stormwater quality. The improved detention at the city parks will complement and enhance conveyance improvements planned for future years in the City's Capital Improvement Plan (CIP) for the Alief Forest North and Alief Forest South neighborhoods.

Total Project Beneficiaries: **8,150**

LMI Beneficiaries: **5,135**

LMI Percentage: **63.00%**

2016 Mitigation Competition Project Descriptions (cont.)



Jacinto City Drainage Improvements (HMID) - \$5,319,717

During heavy rainfall events in Jacinto City, ponding and street blockage create unsafe conditions for emergency access and hinder residents from being able to leave their homes in the case of an emergency. To minimize the risk of future flooding and impacts from storms, the city will replace/re-set the storm sewer and upsize pipes to help to relieve storm water. The city also will replace old and small inlets to aid in quicker water release from streets during heavy storm events and increase the ability of the storm sewer to function properly.

Total Project Beneficiaries: **10,625**

LMI Beneficiaries: **8,335**

LMI Percentage: **78.45%**

Jasper County - Precinct 2 Road and Drainage Improvements (SMID) - \$4,194,643.56

Jasper County will mitigate flooding on CR 200 and improve the capacity of the drainage structures through the City of Browndell and the Mill Creek drainage flow area by reconstructing CR 200, including roadway elevation and drainage structure improvements. Additionally, the roadway segment will be hardened to mitigate the excessive amount of repetitive erosion of the road.

Total Project Beneficiaries: **190**

LMI Beneficiaries: **100**

LMI Percentage: **52.63%**

City of Kingsville Citywide Wastewater Collection System Improvements (SMID) - \$7,293,111

Due to several major flood events and inadequately sized infrastructure, Kingsville's sanitary sewer system needs upgrades and repairs. Existing sewer infrastructure is unequipped to handle the increased inflow due to rain from storms and hurricanes. With these funds, Kingsville will install a new 3-pump lift station on Business 77B near a current water detention area to pump the stormwater to Tranquitas Creek and rehabilitate nine existing lift stations, including well and pump repairs, and valve checks. Additional improvements include repairing 78 manholes throughout the city to make the sewer system more resilient during flooding events. These activities constitute a significant undertaking to improve the efficiency of operations of the sewer system in Kingsville, enhancing the ability of the system to rebound after a major event.

Total Project Beneficiaries: **24,575**

LMI Beneficiaries: **12,825**

LMI Percentage: **52.19%**

City of Newton Flood/Drainage & Sewer (HMID) - \$4,457,650

The City of Newton will improve drainage and sewer systems by acquiring land for water detention basin to contain excessive flood waters that enter the city's wastewater collection system. Additional improvements include elevation of a lift station between US 190 and SH 87 and replacement of manholes throughout the City of Newton, as well as improvements to the city's wastewater treatment plant. These improvements will prevent the inundation of roads, which can limit access for emergency responders to many residential areas, and prevent problems with the sewage system during heavy rainfall.

Total Project Beneficiaries: **1,890**

LMI Beneficiaries: **1,000**

LMI Percentage: **52.91%**

2016 Mitigation Competition Project Descriptions (cont.)



Newton County Flood and Drainage Improvements (HMID) - \$3,650,657.85

Newton County will mitigate the threat to public health and safety that storm events have by reconstructing bridges and culverts in a major drainage basin flowing into the Sabine river in Newton County. The project will include the replacement of bridges and box culverts in the Big Cow Creek watershed and a bridge and box culvert in the Caney Creek watershed.

Total Project Beneficiaries: **4,168**
LMI Beneficiaries: **2,506**
LMI Percentage: **60.12%**

San Augustine Emergency Storm Shelter & Community Center (SMID) - \$3,960,000

The goal of this countywide storm mitigation project is to increase resilience to disasters and reduce the risk of loss of life or injury as well as damage to, or loss of, property. By lessening the impact of future disasters, San Augustine residents will endure far less suffering and hardship because of flood and tornado events. With these funds, officials will improve the existing structures located at the San Augustine County Fairground, which will serve to provide temporary emergency sheltering from storms, tornado and floods, as well as other critical incidents.

Total Project Beneficiaries: **2,315**
LMI Beneficiaries: **1355**
LMI Percentage: **58.53%**

City of Sweeny Flood Mitigation Project (HMID) - \$5,398,293

The city's location, low elevation, and flat topography places the community at serious risk to significant rain events, storms, and riverine flooding. With these funds, the city will replace the existing sanitary sewer trunk line to significantly decrease the infiltration and inflow into the city's collection system. The city also will install new permanent emergency generators at the three remaining lift stations without emergency power, the FM 1459 Lift Station located in a rural area of the city, the FM 524 Lift Station located in an industrial area of the city, and the San Bernard Lift Station located in the area of San Bernard. Installing these generators will allow all lift stations on the collection system to operate in the event of an extended power outage.

Additionally, the city will improve a caliche road that provides access to the wastewater plant. The road will be elevated and hardened using stabilized subgrade and flexible base material to allow access to the plant during flood events. The existing bridge near the plant entrance will be reconstructed at a higher elevation, a new earthen berm will be constructed around the plant site to protect it from flooding, and a new pump station will be installed inside the plant to discharge any stormwater within the berm area.

Total Project Beneficiaries: **3,650**
LMI Beneficiaries: **2,080**
LMI Percentage: **56.99%**

City of Tenaha (SMID) - \$3,875,691

The City of Tenaha will replace deteriorated sewer lines, inadequate manholes, upgrade lift stations and add monitoring SCADA equipment and generators at all crucial infrastructure points. During previous disaster events, the city and its citizens were faced with depleted water tanks, possibly leading to water restrictions, mixing of flood water and wastewater in the streets, and sink holes.

The city will replace the most problematic and critical sanitary sewer infrastructure. Manholes will be equipped with water-tight rings and covers. Failing lines will be replaced. The wastewater treatment plant will be equipped with an equalization basin to regulate the influent flow of the plant. An existing abandoned lagoon will be rehabilitated and returned to service.

2016 Mitigation Competition Project Descriptions (cont.)



City of Tenaha (SMID) - \$3,875,691 (cont.)

The two remote lift station pumps will be replaced with higher capacity lift station pumps. All water facilities such as remote wells, water plants, and elevated storage tanks will receive standby generators. These generators will maintain water service through significant rain events regardless of damage to the electrical grid.

Remote lift stations and the wastewater treatment plant will be equipped with standby generators to provide the necessary power in the event of power grid failure. SCADA monitoring systems will be installed at all critical infrastructure such as remote water wells, water plants, remote storage tanks, lift stations, and the wastewater plant to allow city staff to monitor the statuses of the critical infrastructure during significant events. Monitoring these statuses will enable quicker response to outages, eliminate the need to check critical infrastructure during significant storm events, and provide real time feedback to emergency response teams.

Total Project Beneficiaries: **1,455**

LMI Beneficiaries: **1,130**

LMI Percentage: **77.66%**

City of Zavalla Citywide Flood Mitigation (SMID) - \$3,600,000

The City of Zavalla will improve drainage and elevate streets in flood prone areas throughout the city providing citywide benefit. Utilities including water and sewer infrastructure located under existing streets will also be moved out from underneath these streets to eliminate the need to cut into streets to make repairs or provide maintenance. These actions will reduce flooding risks from residential streets, houses, buildings, and other infrastructure into natural drainage pathways.

These improvements will take place on Townsend Street between Jacks Street and Highway 147; along Campus Drive between FM 2109 and East Main Street; along Pickard Road from the northern city limit boundary to Campus Drive; on Johnson Street between Barge Road and East Main again from South 2nd Street to South 1st Street; improving Barge Road from East Main Street to the southern city limit boundary; on North 2nd Street from the northern city limit boundary to East Main Street and from Johnson to Miller Road.

Total Project Beneficiaries: **770**

LMI Beneficiaries: **415**

LMI Percentage: **53.90%**