

Task 9: Flood Infrastructure Financing



Source: Texas Water Development Board

The Texas Water Development Board (TWDB) requires that each Regional Flood Planning Group (RFPG) conduct a survey to assess and report on how Sponsors propose to finance recommended Flood Management Evaluations (FME) and Flood Management Strategies (FMS) and Flood Mitigation Projects (FMP). The objective of the survey is to gain an understanding of the funding needs of Sponsors. The RFPG also provides recommendations on the state's role in financing recommended FMEs, FMSs, and FMPs.

The following sections present an overview of common funding sources for flood mitigation planning, projects, and other flood management efforts, the methodology and results of the financing survey, and recommendations of the Lower Colorado-Lavaca RFPG regarding the state's role in financing flood-related activities and infrastructure. The Lower Colorado-Lavaca RFPG has also adopted several recommendations pertaining to state funding of various specific activities. A recap of these recommendations can be found at the conclusion of this chapter as well as in Chapter 8.

Sources of Funding for Flood Management Activities

Historically in Texas and throughout the United States, the largest share of governmental expenditures for and investments in flood-related activities and drainage and flood infrastructure has been borne by local entities. In a general sense, the provision of drainage services and mitigation of local flood risk is typically a local responsibility and function, much like streets and public safety. However, both the state and federal governments play an important and increasingly important, and sometimes critical role, particularly in financing local and regional flood infrastructure. Historically, at the national level, the federal government has been a primary source of funding for large-scale flood control projects, in some cases providing up to 100 percent of the costs. Examples include large dams and reservoirs that provide large volumes of flood storage, such as Mansfield Dam and Lake Travis, the extensive levee systems and

other water control infrastructure along major rivers, flood conveyance, protection of urban areas and agricultural resources, and to protect and improve navigation. Over time the extent of federal funding support has declined as a share of total needs. As flood risk has grown over time with population growth and urbanization, and now with the added uncertainty and risk associated with a changing climate, rainfall patterns specifically, the need for federal and state assistance is greater now than ever and is increasing.

Generally, larger urban communities bear much or even all the costs for flood and stormwater-related activities, such as floodplain management and regulation and the development and implementation of flood risk reduction projects, both structural and non-structural. Smaller communities, particularly those in rural areas with a limited tax base, often struggle to fund flood-related activities and projects as those needs compete with other needs for basic services. A combination of increased local capabilities to self-fund flood-related activities and projects and increased funding from state and federal sources are needed to address the flood risk reduction needs identified through this regional planning process and documented in this plan. State funding is particularly needed to provide greater access to funding for small, rural communities, incentivize high-priority projects, bridge gaps that may impede the implementation of needed projects, and improve access to federal funding sources.

Counties and cities in Texas have commonly used various methods and sources to fund and finance flood-related activities and infrastructure. This includes local, state, and federal sources. This section discusses some of the most common methods used by local entities to generate revenue and describes various state and federal financial assistance programs available to Texas communities for flood-related activities and projects. *Table 9.1* provides an at-a-glance overview of local, state, and federal funding methods and sources. Each source of funding is characterized according to three key parameters: first, which state and federal agencies are involved, if applicable; second, whether they offer grants, loans, or both; and third, whether they provide regularly occurring or ongoing funding opportunities or are only available after a flood disaster. It is important to note that state and federal financial assistance programs cannot be accessed directly by the general public. Local governments must apply on behalf of their communities to receive and use state and federal funding for flood-related activities and projects.

Local Funding

Through the RFPG's initial outreach efforts, the Lower Colorado-Lavaca RFPG sought to understand the landscape of local funding for flood-related programs and projects in the region. Many communities, particularly smaller and more rural communities, have reported lacking local funding sources for flood risk reduction, including studies to fully assess local flood risks, floodplain management activities, and flood risk reduction infrastructure. Those communities that reported local funding indicated the following primary sources: general fund (taxes); dedicated fees, such as impact and stormwater or drainage utility fees; and bonds (i.e., debt financing).

This section focuses on the funding mechanisms available to municipalities and counties, as nearly all of the Sponsors of recommended FMEs, FMSs, and FMPs are these types of entities. Special purpose districts are briefly discussed as there may be opportunities to create more such districts in the Lower

Colorado-Lavaca Region. This chapter does not discuss funding avenues for other types of local and regional entities, such as river authorities.

Counties and cities in Texas derive general fund revenues primarily from sales and property taxes and perhaps certain types of fees. The general fund is typically the primary source of revenue available to support governmental administration and various local services, such as public safety, parks, libraries, and street maintenance. Due to demands on general revenue funds for such services and local governmental functions, there is little of what might be considered discretionary funding available for drainage and flood infrastructure.

Table 9.1 Common Sources of Flood Infrastructure Funding in Texas

Source	Federal Agency	State Agency	Program Name	Grant (G)	Loan (L)	Post-Disaster (D)
Federal	FEMA	TDEM	Hazard Mitigation Grant Program (HMGP)	G	-	D
Federal	FEMA	TWDB	Flood Mitigation Assistance (FMA)	G	-	-
Federal	FEMA	TDEM	Building Resilient Infrastructure and Communities (BRIC)	G	-	-
Federal	FEMA	TCEQ	Rehabilitation of High Hazard Potential Dam Grant Program (HHPD)	G	-	-
Federal	FEMA	TBD	Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM)	-	L	-
Federal	FEMA	TDEM	Public Assistance (PA)	G	-	D
Federal	HUD	GLO	Community Development Block Grant – Mitigation (CDBG-MIT)	G	-	D
Federal	HUD	GLO	Community Development Block Grant Disaster Recovery Funds (CDBG-DR)	G	-	D
Federal	HUD	TDA	Community Development Block Grant (TxCDBG) Program for Rural Texas	G	-	-
Federal	USACE	-	Partnerships with USACE, funded through Continuing Authorities Program (CAP), Water Resources Development Acts (WRDA), or other legislative vehicles*	-	-	-
Federal	EPA	TWDB	Clean Water State Revolving Fund (CWSRF)	G**	L	-
State	-	TWDB	Flood Infrastructure Fund (FIF)	G	L	-
State	-	TWDB	Texas Water Development Fund (Dfund)	-	L	-
State	-	TSSWCB	Structural Dam Repair Grant Program	G	-	-

Source	Federal Agency	State Agency	Program Name	Grant (G)	Loan (L)	Post-Disaster (D)
State	-	TSSWCB	Operation and Maintenance (O&M) Grant Program	G	-	-
State	-	TSSWCB	Flood Control Dam Infrastructure Projects - Supplemental Funding	G	-	-
Local	-	-	General fund	-	-	-
Local	-	-	Bonds	-	-	-
Local	-	-	Stormwater or drainage utility fee	-	-	-
Local	-	-	Special-purpose district taxes and fees	-	-	-

**Opportunities to partner with USACE are not considered grant or loan opportunities but shared participation projects where USACE performs planning work and shares in the cost of construction.*

***The CWSRF program offers principal forgiveness, similar to grant funding.*

Dedicated fees such as stormwater or drainage fees are another option for local flood-related funding. Municipalities in Texas can establish a [stormwater utility](#) (sometimes referred to as a drainage utility), which provides the ability to assess fees for drainage services. This approach has advantages in that it provides a stable dedicated source of funding for flood/drainage-related programs and drainage and flood infrastructure. However, as reported in Chapter 3, at present, only three cities in the Lower Colorado-Lavaca Region have established a stormwater utility. Note that this option is not currently available to counties. Impact fees are another potential source of local funding for flood-related efforts. Such fees are assessed on new development and are used to offset a portion of the cost of the public drainage infrastructure required by the new development.

Creating special districts is another approach to generating local funds to support flood-related activities and infrastructure. Special districts are political subdivisions of the state, typically established to provide specific types of services, such as water supply, wastewater collection and treatment, drainage, and/or sanitation) within a defined geographic area. Types of special districts include Water Control and Improvement Districts (WCID), Municipal Utility Districts (MUD), Special Utility Districts, Public Utility Authorities (PUA), Drainage Districts (DD), and Flood Control Districts (FCD). Each of the different types of districts are governed by different state laws or district-specific enabling statutes, which specify the process for creating a district as well as its duties, powers, and sources of revenue. Districts can be created by various means: the Texas Legislature, the Texas Commission on Environmental Quality, county commissioners' courts, or city councils. Depending on the type of district, the districts may be able to raise revenue through taxes, fees, and/or debt issuance (bond) to fund flood and drainage-related improvements within a district's jurisdiction.

Lastly, municipalities and counties have the authority to [issue debt](#) through general obligation bonds, revenue bonds, or certificates of obligation, typically paid back using any of the aforementioned local revenue-raising mechanisms.

Overall, local governments have various options for raising revenue to support local flood-related efforts; however, each presents its own challenges and considerations. Of the communities with access to local funding, the amount available is generally much lower than the total need, leading local communities to seek assistance from state and federal sources.

The following sections present common sources of state and federal financial assistance. Local entities often encounter barriers to accessing alternative sources (e.g., state and federal) of funding for flood-related activities and projects. This includes a lack of knowledge of funding sources, a lack of expertise in applying for funding, and a lack of local funds to meet matching or cost-sharing requirements. Complex or burdensome application or program requirements as well as prolonged timelines can be barriers to accessing state and federal financial assistance programs. Due to most flood projects not typically generating revenue, communities do not have a steady revenue stream for funding flood projects. Finally, the high demand and competition for state and federal funding assistance, particularly for grants, typically means that some but not all applicants succeed in securing state or federal assistance.

State Funding

Today, communities in Texas have a broader range of state and federal funding sources and programs available to them due to new grant and loan programs that didn't exist even five years ago. Two primary state agencies are currently involved in providing state funding for flood projects: the TWDB and the Texas State Soil and Water Conservation Board (TSSWCB). *Figure 9.1* depicts how local communities responded when asked which state and federal funding sources they have accessed to pay for implementing flood-related activities and projects.

The TWDB's [Flood Infrastructure Fund \(FIF\)](#) is a new funding program established by the Texas Legislature and approved by Texas voters through a constitutional amendment in 2019. The program provides financial assistance through low-interest or zero-interest loans and/or grants (cost match varies) to eligible political subdivisions for flood control, flood mitigation, and drainage projects. FIF rules allow for a wide range of flood projects and related activities, including structural and non-structural flood risk reduction projects, planning studies, and preparedness efforts such as flood early warning systems. After the first State Flood Plan is adopted, only projects included in the most recently adopted state flood plan will be eligible for funding from the FIF. FMEs, FMSs, and FMPs recommended in this Regional Flood Plan will be included in the overall State Flood Plan and thus be eligible to access this funding source. Note that the Flood Protection Planning Grant referenced in *Figure 9.1* has been replaced by Flood Infrastructure Fund Category 1 planning grants.

The TWDB also administers the [Texas Water Development Fund \(Dfund\)](#) program, a state-funded streamlined loan program that provides financing to eligible political subdivisions for several types of water-related infrastructure projects. This program enables the TWDB to fund projects with multiple eligible components (water supply, wastewater, or flood control) in one loan at low market rates. Financial assistance for flood control may include structural and non-structural projects, planning efforts, and flood warning systems.

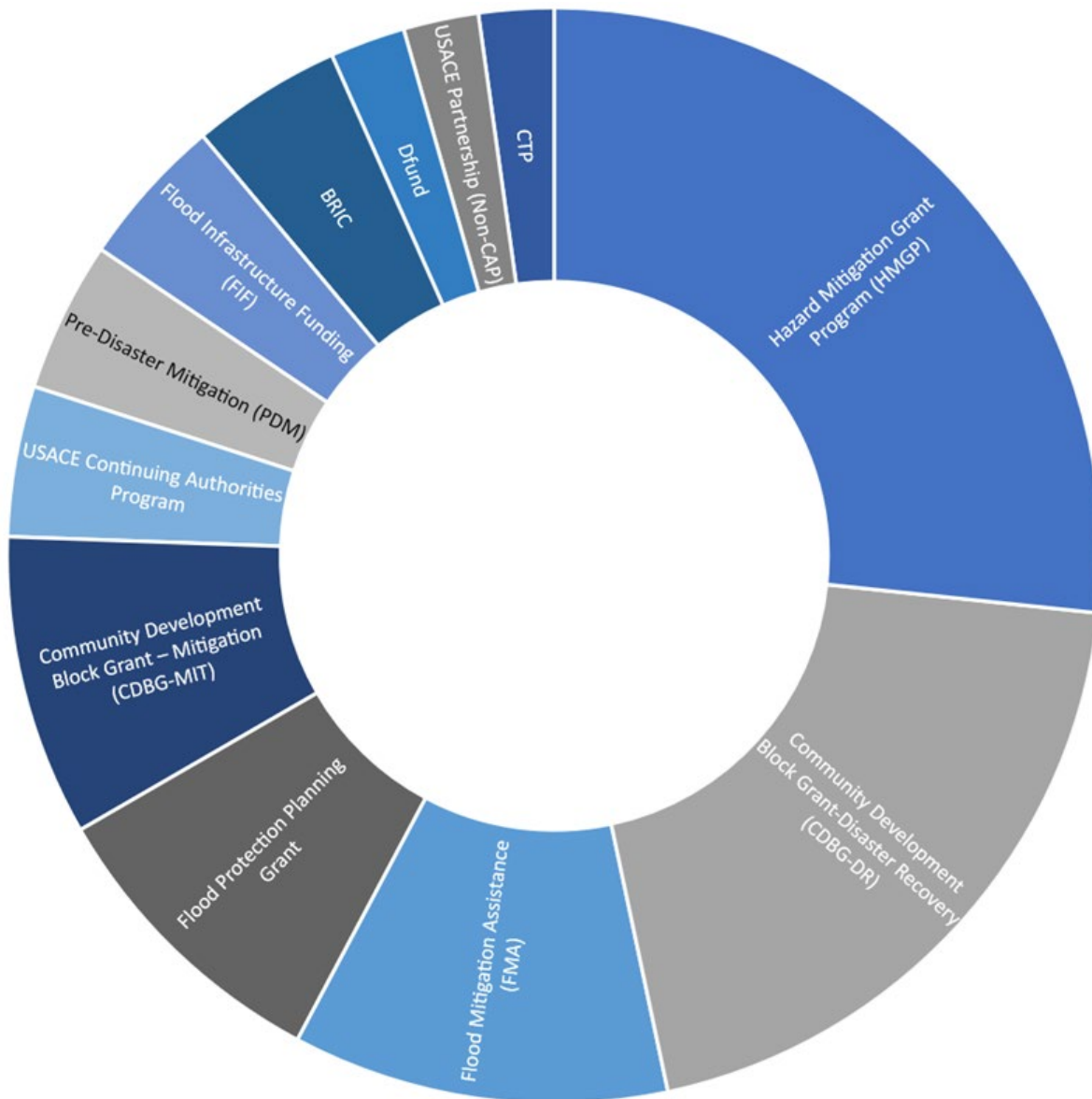
The [Texas State Soil & Water \(TSSWCB\)](#) has three state-funded programs specifically for flood control dams: the Operation and Maintenance (O&M) Grant Program; the Flood Control Dam Infrastructure Projects - Supplemental Funding Program; and the Structural Repair Grant Program. The O&M Grant Program is for local soil and water conservation districts (SWCD) and certain co-owners of small flood control dams. This program reimburses SWCDs 90 percent of the cost of an eligible O&M activity as defined by the program rules; the remaining 10 percent must be paid with non-state funding. The Flood Control Dam Infrastructure Projects - Supplemental Funding program was newly created and funded in 2019 by the Texas Legislature. Grants are provided to local sponsors of flood control dams, including SWCDs, to fund the repair and rehabilitation of the flood control structures to ensure dams meet safety criteria to adequately protect lives downstream. The Structural Repair Grant Program provides state grant funds to provide 95 percent of the cost of allowable repair activities on dams constructed by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), including match funding for federal projects through the NRCS Dam Rehabilitation Program and the NRCS Emergency Watershed Protection (EWP) Program.

Federal Funding

Funding for flood-related activities and projects is available from programs administered by seven different federal agencies and discussed in this section. The funding for these programs originates from the federal government, but for many programs, a state agency partner plays a key role in the management of the program. Each funding program has its own eligibility requirements, applicant and project types, application processes, award timelines, etc. A few examples of eligibility requirements for some of the federal grant programs are: requiring applicants to be participants in the National Flood Insurance Program (NFIP), requiring recipients to have an approved Hazard Mitigation Plan, or requiring a project to have a benefit/cost ratio of 1.0 or greater. More information regarding each program and its unique eligibility requirements and award processes can be found at the Internet web links in this section.

Figure 9.1 depicts how local communities responded when asked which state and federal funding sources they have used to obtain funding for implementing flood management activities and projects.

Figure 9.1 State and Federal Funding Sources Utilized by Local Communities in the Region



Federal Emergency Management Agency (FEMA)

Common FEMA-administered federal flood-related funding programs include Flood Mitigation Assistance (FMA), Building Resilient Infrastructure and Communities (BRIC), Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM), Rehabilitation of High Hazard Potential Dam (HHPD) Grant Program, Hazard Mitigation Grant Program (HMGP), the Public Assistance (PA) program, and the Cooperating Technical Partners (CTP) Program.

Flood Mitigation Assistance (FMA) is a nationally competitive annual grant program that provides funding to states, local communities, federally recognized tribes, and territories. FMA is administered in Texas by the [TWDB](#). Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program (NFIP). Funding is typically a 75

percent federal grant with a 25 percent local match. Projects mitigating repetitive loss and severe repetitive loss properties may be funded through a 90 percent federal grant and 100 percent federal grant, respectively. FEMA's FMA program now includes a disaster initiative called Swift Current. The program was released as a pilot initiative in 2022 and explored ways to make flood mitigation assistance more readily available during disaster recovery. Similar to traditional FMA, the program mitigates repetitive losses and substantially damaged buildings insured under the NFIP.

The [Building Resilient Infrastructure and Communities \(BRIC\)](#) is a new nationally competitive non-disaster annual grant program implemented in 2020. The program supports states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is administered in Texas by the Texas Division of Emergency Management ([TDEM](#)). Funding is typically a 75 percent federal grant with a 25 percent local match. Small, impoverished communities may be funded through a 90 percent federal grant and 100 percent federal grant, respectively.

[Safeguarding Tomorrow through Ongoing Risk Mitigation \(STORM\)](#) is a new revolving loan program enacted through federal legislation in 2021 to provide needed and sustainable funding for hazard mitigation projects. The program is designed to provide capitalization grants to states to establish revolving loan funds for projects to reduce risks from disaster, natural hazards, and other related environmental harm. At the time of the publication of this plan, the program does not yet appear to be operational and has not yet been implemented in Texas.

FEMA's [Rehabilitation of High Hazard Potential Dam \(HHPD\) Grant Program](#), administered in Texas by the Texas Commission on Environmental Quality (TCEQ), provides technical, planning, design, and construction assistance in the form of grants for the rehabilitation of eligible high hazard potential dams. The cost-share requirement is typically no less than 35 percent state or local share.

Under the [Hazard Mitigation Grant Program \(HMGP\)](#), FEMA provides funding to state, local, tribal, and territorial governments to rebuild from a recent disaster in a way that reduces, or mitigates, future disaster losses in their communities. The program is administered in Texas by [TDEM](#). Funding is typically a 75 percent federal grant with a 25 percent local match. While the program is associated with Presidential Disaster Declarations, the HMGP is not a disaster relief program for individual disaster victims or a recovery program that funds repairs to public property damaged during a disaster. The key purpose of HMGP is to ensure that the opportunity to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster.

FEMA's [Public Assistance \(PA\)](#) program provides supplemental grants to state, tribal, territorial, and local governments and certain types of private non-profits following a declared disaster so communities can quickly respond to and recover from major disasters or emergencies through actions such as debris removal, life-saving emergency protective measures, and restoring public infrastructure. Funding cost-share levels are determined for each disaster and are typically not less than 75 percent federal grant (25 percent local match) and typically not more than 90 percent federal grant (10 percent local match). In Texas, FEMA PA is administered by TDEM. In some situations, FEMA may fund mitigation measures as

part of the repair of damaged infrastructure. Generally, mitigation measures are eligible if they directly reduce future hazard impacts on damaged infrastructure and are cost-effective. Funding is limited to eligible damaged facilities located within PA-declared counties.

The [Cooperating Technical Partners](#) (CTP) program is an effort launched by FEMA in 1999 to increase local involvement in developing and updating Flood Insurance Rate Maps (FIRMs), Flood Insurance Study reports, and associated geospatial data in support of FEMA's Risk Mapping, Assessment and Planning (Risk MAP) Program. To participate in the program, interested NFIP-participating communities, state or regional agencies, universities, territories, tribes, or non-profits must complete training and execute a partnership agreement. Working with the FEMA regions, a program participant can develop business plans and apply for grants to perform eligible activities.

Housing and Urban Development (HUD)

HUD administers the following three federal funding programs: Community Development Block Grant – Disaster Recovery (CDBG-DR), Community Development Block Grant – Mitigation (CDBG-MIT), and Community Development Block Grant (TxCDBG) for Rural Texas.

Following a major disaster, Congress may appropriate funds to the Department of Housing and Urban Development (HUD) under the [Community Development Block Grant – Disaster Recovery \(CDBG-DR\)](#) program when there are significant unmet needs for long-term recovery. Appropriations for CDBG-DR are frequently very large, and the program provides 100 percent grants in most cases. The CDBG-DR is administered in Texas by the [Texas General Land Office \(GLO\)](#). The special appropriation provides funds to the most impacted and distressed areas for disaster relief, long term-recovery, restoration of infrastructure, housing, and economic revitalization.

The [Community Development Block Grant – Mitigation \(CDBG-MIT\)](#) is administered in Texas by the [GLO](#). Eligible grantees can use CDBG Mitigation (CDBG-MIT) assistance in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks with typically 100% grants. The primary feature differentiating CDBG-MIT from CDBG-DR is that, unlike CDBG-DR which funds recovery from a recent disaster to restore damaged services, systems, and infrastructure, CDBG-MIT funds are intended to support mitigation efforts to rebuild in a way that will lessen the impact of future disasters.

The [Community Development Block Grant \(CDBG\)](#) program also provides annual grants on a formula basis to small, rural cities and counties to develop viable communities by providing decent housing and suitable living environments and expanding economic opportunities principally for persons of low- to moderate-income. Funds can be used for public facilities such as water and wastewater infrastructure, street and drainage improvements, and housing. In Texas, the CDBG program is administered by the [Texas Department of Agriculture \(TDA\)](#).

United States Army Corps of Engineers (USACE)

The United States Army Corps of Engineers works with non-federal partners (states, tribes, counties, or local governments) throughout the country to investigate water resources-related needs and opportunities and develops civil works projects that would otherwise be beyond the sole capability of the non-federal partner(s). Partnerships are typically initiated or requested by the local community to

their local USACE District office. Before any project or study can begin, USACE determines whether there is an existing authority under which the project could be considered, such as the [US Army Corps of Engineers Continuing Authorities Program \(CAP\)](#), or whether Congress must establish study or project authority and appropriate specific funding for the activity. New study or project authorizations are typically provided through periodic Water Resource Development Acts (WRDA) or another legislative vehicle. Congress will not authorize a project until required studies are completed and a recommendation to Congress is made via a Report of the Chief of Engineers (Chief's Report) or Report of the Director of Civil Works (Director's Report). Opportunities to partner with USACE are not considered grant or loan opportunities but shared participation projects where USACE performs planning work and shares in the cost of construction. USACE also provides technical assistance to state and local governments through their Floodplain Management Services and the Planning Assistance to States programs.

U.S. Environmental Protection Agency (EPA)

The [Clean Water State Revolving Fund \(CWSRF\)](#), administered by the TWDB, provides financial assistance in the form of loans with subsidized interest rates and sometimes partial principal forgiveness for planning, acquisition, design, and construction of wastewater, reuse, and stormwater infrastructure projects. Projects can be structural or non-structural. Loans for Low Impact Development (LID) projects are also eligible.

U.S. Department of Agriculture (USDA)

The USDA Natural Resources Conservation Service (NRCS) provides technical and financial assistance to local government agencies through the following programs: Emergency Watershed Protection Program, Watershed Protection and Flood Prevention Program, Watershed Surveys and Planning, and Watershed Rehabilitation. The [Emergency Watershed Protection \(EWP\)](#) program, a federal emergency recovery program, helps local communities recover after a natural disaster by offering technical and financial assistance to relieve imminent threats to life and property caused by floods and other natural disasters that impair a watershed. The [Watershed Protection and Flood Prevention Program](#) helps units of federal, state, local, and tribal government protect and restore watersheds; prevent erosion, floodwater, and sediment damage; further the conservation development, use and disposal of water; and further the conservation and proper use of land in authorized watersheds. The [Watershed Surveys and Planning Program](#) focuses on funding watershed plans, river basin surveys and studies, flood hazard analyses, and floodplain management assistance to identify solutions that use land treatment and non-structural measures to solve resource problems. Lastly, the [Watershed Rehabilitation Program](#) helps project sponsors rehabilitate aging dams that are reaching the end of their design lives. This rehabilitation addresses critical public health and safety concerns. The USDA offers various [Water and Environmental grant and loan funding programs](#) for water and waste facilities, including stormwater facilities, in rural communities.

Special Appropriations

Occasionally Congress may appropriate federal funds for special circumstances such as recovery from natural disasters or pandemics (COVID-19). A few examples of recent special appropriations from the federal government that can be used to fund flood-related activities are discussed in this section.

In 2021, the American Rescue Plan Act (ARPA) provided a substantial infusion of resources to eligible state, local, territorial, and tribal governments to support their response to and recovery from the COVID-19 pandemic. Coronavirus State and Local Fiscal Recovery Funds, a part of ARPA, delivers \$350 billion directly to the state, local, and tribal governments across the country. Some of the authorized uses include improving stormwater facilities and infrastructure. Although not a direct appropriation to local governments like ARPA, the 2021 Infrastructure Investment and Jobs Act, also referred to as the Bipartisan Infrastructure Law (BIL), authorizes over \$1 trillion for infrastructure spending across the United States and provides for a significant infusion of resources over the next several years into existing federal financial assistance programs as well as creating new programs.

Flood Infrastructure Financing Survey

This task required obtaining relevant information from Sponsors of the recommended FMEs, FMSs, and FMPs that have capital costs, for example, in the form of a mailed survey or other means of collecting the required information. The primary aim of this survey effort was to understand the funding needs of local Sponsors and then make recommendations as to the state's role in financing FMEs, FMSs, and FMPs. For Lower Colorado-Lavaca Region, the online survey referenced elsewhere in this plan included questions about local funding needs and sources. Additionally, targeted outreach via phone calls and emails to Sponsors was conducted to gather information on sources and needs for funding for recommended FMEs, FMSs, and FMPs. A follow-up survey via email was also sent to Sponsors to garner additional responses.

A total of 59 Sponsors of recommended FMEs, FMSs, and FMPs with capital costs identified were contacted, and X responded. This represents a response rate of X percent. *Appendix 9.1* presents the survey results for each FME, FMS, and FMP in *Table 19*. The response rate for the survey does not represent a significant percentage of respondents. It, therefore, does not accurately represent the total need for state and federal funding in the Lower Colorado-Lavaca Region. To assess the remaining need, it was estimated that 90 percent of total project costs are required from state and federal sources for those actions where the Sponsor did not respond to the survey. This represents an average of 10 percent projected local investment in projects. A high percentage of outside needs is supported by the initial outreach, which confirmed that many communities, particularly smaller and more rural communities, do not have adequate local funding available for flood management activities. Those communities that reported having local funding indicated relatively little local funding available in relation to overall need.

Overall, an estimated \$378,000,000 in state and federal funding is needed to implement the recommended FMEs, FMSs, and FMPs. Since most federal funding programs are dependent on the availability of funds or project selection in a nationally competitive grant program, it is difficult to estimate how much federal funding may be available to implement these studies, strategies, and projects. It is conservatively estimated that as much as the full amount may be needed from state sources. This number does not represent the amount of funding needed to mitigate all risks in the region and solve flooding problems in their totality. This number simply represents the funding needs for the specific, identified studies, strategies, and projects in this cycle of regional flood planning. Future

cycles of regional flood planning will continue to identify more projects and studies needed to further flood mitigation efforts in the Lower Colorado-Lavaca Region.

Recommendations – State Role in Flood Infrastructure Finance

As noted at the outset of this chapter, the Regional Flood Planning Groups have an opportunity to offer recommendations as to the role of the state in the financing of flood-related activities and infrastructure. In this regard, the Lower Colorado-Lavaca RFPG offers the following recommendations:

- Generally, the Lower Colorado-Lavaca RFPG believes that the role of the State of Texas in financing flood-related activities, programs, and flood mitigation infrastructure should be expanded. More specifically, ongoing and increased funding for both technical and financial assistance should be made available through the existing financial assistance programs administered by the Texas Water Development Board and the Texas State Soil and Water Conservation Board.
- The Lower Colorado-Lavaca RFPG supports a continuation and expansion of the TWDB's role as an important and sometimes critical source of financial assistance for all water-related planning activities and project implementation, including activities and projects related to flood risk reduction. This role historically has included: 1) providing access to needed funding for economically disadvantaged communities that have limited capacity to self-finance flood-related activities and projects; 2) making financial assistance available and more affordable (e.g., grants, low-interest loans) to any and all eligible entities for flood-related activities and projects; and 3) providing funding to bridge gaps in available and needed funding for implementation of flood risk reduction projects. The latter is often needed to enable such projects to proceed. The assistance should continue to be provided, as appropriate, in the form of grants, with an appropriate level of local cost-share, below-market low-interest-rate loans pegged to the state's high credit rating, subsidized low or zero-interest loans through the Clean Water SRF, or other programs; or a combination of the above.

The Lower Colorado-Lavaca RFPG has also adopted several recommendations pertaining to state funding of various flood-related programs and activities and the administration of such programs. These are found in Chapter 8 and summarized below:

- 8.1.3 – Establish and provide state budget appropriations and/or assess fees to fund the implementation of a levee safety program similar to the TCEQ dam safety program.
- 8.1.5 – Provide ongoing state appropriations to the TWDB for additional grant funding for Regional Flood Planning Groups to continue functioning during the interim between planning cycles.
- 8.1.6 – Increase state funding and technical assistance for developing and maintaining accurate watershed models and FEMA Flood Rate Insurance Maps (FIRMs). TWDB should consider such updates a high priority for future flood planning grants through the Flood Infrastructure Fund.

- 8.1.7 – Establish and fund a state program specifically to assist counties and cities with assessing and prioritizing low water crossings for flood risk mitigation. Funding should also be provided on a cost-sharing basis to implement structural and/or non-structural flood risk reduction measures at high-risk low water crossings.
- 8.2.3 – Revise the scoring criteria for funding associated with stormwater and flood-related projects that benefit agricultural and/or rural areas.
- 8.2.4 – The TWDB should continue to include and refine its criteria for evaluating and ranking applications for financial assistance for flood risk mitigation studies and projects, considerations of social vulnerability (SVI scores), and other measures of social, economic, and environmental resilience and sustainability. This should include modifying the benefit-cost methodology to account for such factors rather than relying solely on traditional measures of benefit (e.g., avoidance of flood losses to property, the value of infrastructure to be constructed, etc.).
- 8.2.5 – Provide direct technical assistance to economically distressed communities and/or those with high social vulnerability by preparing funding applications for federal and/or state financial assistance for flood planning and implementing flood risk reduction measures.
- 8.2.6 – Reduce or eliminate barriers to and provide incentives for the planning, funding, and implementation of inter-jurisdictional flood risk reduction measures, either structural and/or non-structural.
- 8.2.8 – Allow small communities to benefit from the TWDB Flood Infrastructure Fund (FIF) incentives for green and nature-based projects by: 1) working with Texas Municipal League, Texas Association of Counties, and Texas Floodplain Management Association to train community officials on the basics of Low Impact Development (LID) and Green Stormwater Infrastructure (GSI); 2) developing model ordinances for use by small communities in establishing LID and GSI regulations, such as green street design standards; 3) publicizing and assisting RFPGs to publicize successfully implemented GSI projects; 4) adjusting cost-benefit analysis calculations as needed to include environmental values; and 5) by setting aside a percentage of FIF funds for smaller communities that may not be able to otherwise meet FIF incentives for green and nature-based projects.

The RFPG also offers the following recommendation with regard to local funding of flood-related activities and projects:

- 8.2.1 – The TWDB should actively promote the establishment of local drainage utilities, where appropriate, to provide a stable and predictable source of funding through the assessment of drainage fees and to support ongoing operations and maintenance (O&M) of existing flood mitigation and other drainage infrastructure. This should include the provision of technical assistance with the creation of local drainage utilities.