Chapter 9: Flood Infrastructure Financing Analysis

The Texas Water Development Board (TWDB) requires that each regional flood planning group (RFPG) assess and report on how Sponsors propose to finance recommended FMEs, FMSs, and FMPs. A primary aim of this survey effort is to understand the funding needs of local Sponsors and propose what role the state should have in financing the recommended FMEs, FMSs, and FMPs.

Section 9.1 presents an overview of common sources of funding for flood mitigation planning, projects, and other flood management efforts. The methodology and results of the financing survey are presented in Section 9.2.

9.1 Sources of Funding for Flood Management Activities

Communities across the state utilize a variety of funding sources for their flood management efforts, including local, state, and federal sources. This section discusses some of the most common avenues of generating local funding and various state and federal financial assistance programs available to communities. **Table 9.1** on the following page summarizes the local, state, and federal sources discussed in this chapter, and characterizes each by the following 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 are classified as regularly occurring opportunities or are only available after a disaster.

9.1.1 Local Funding

Through the RFPG's initial stakeholder outreach efforts, the Guadalupe RFPG sought to understand the landscape of local funding for flood efforts in the basin. Response rates were low for these efforts but of those that did respond, many communities, particularly smaller and more rural communities, reported that they did not have any local funding sources for flood management activities. Those communities that did report having local funding indicated the following primary sources: general fund and dedicated fees, such as stormwater or drainage utility fees.

This section primarily focuses on the funding mechanisms available to municipalities and counties, as a large majority of the FME, FMS, and FMP Sponsors are these types of entities. Special purpose districts are briefly discussed as there may be opportunities to create more of these types of districts in the region. Funding avenues for other types of local and regional entities, such as river authorities, are not discussed in this Chapter.

A community's general fund revenue (for cities or counties) stems from sales, property, and other taxes and is typically the primary fund used by a government entity to support most departments and services such as police, fire, parks, trash collection, and local government administration. Due to the high demands on this fund for many local needs, there is often not a significant amount available for funding flood projects out of the general fund.

Table 9.1: Common Sources of Flood 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
	FEMA	TWDB	**Flood Mitigation Assistance (FMA)**	G		
	FEMA	TDEM	**Building Resilient Infrastructure and Communities (BRIC)**	G		
	FEMA	TCEQ	**Rehabilitation of High Hazard Potential Dam Grant Program (HHPD)**	G		
	FEMA	*TBD*	**Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM)**		L	
	FEMA	TDEM	**Public Assistance (PA)**	G		D
	HUD	GLO	**Community Development Block Grant – Mitigation (CDBG-MIT)**	G		D
	HUD	GLO	**Community Development Block Grant Disaster Recovery Funds (CDBG-DR)**	G		D
	HUD	TDA	**Community Development Block Grant (TxCDBG) Program for Rural Texas**	G		
	USACE		**Partnerships with USACE, funded through Continuing Authorities Program (CAP), Water Resources Development Acts (WRDA), or other legislative vehicles***			
	EPA	TWDB	**Clean Water State Revolving Fund (CWSRF)**	G**	L	
State		TWDB	**Flood Infrastructure Fund (FIF)**	G	L	
		TWDB	**Texas Water Development Fund (Dfund)**		L	
		TSSWCB	**Structural Dam Repair Grant Program**	G		
		TSSWCB	**Operation and Maintenance (O&M) Grant Program**	G		
		TSSWCB	**Flood Control Dam Infrastructure Projects - Supplemental Funding**	G		
Local			**General fund**			
			Bonds			
			Stormwater or drainage utility fee			
			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, which is similar to grant funding.

Dedicated fees such as stormwater or drainage fees are an increasingly popular tool for local flood-related funding. Municipalities can establish a stormwater utility (sometimes called a drainage utility), which is a legal mechanism used to generate revenue to finance a city's cost to provide and manage stormwater services. To provide these services, municipalities assess fees from users of the stormwater utility system. Impact fees, which are collected from development to cover a portion of the expense to expand storm water systems necessitated by the new development, can also be used as a source of local funding for flood-related efforts.

Another source for local funding to support flood management efforts includes special districts. A special district is a political subdivision established to provide a single public service (such as water supply, drainage, or sanitation) within a specific geographic area. Examples of these special districts include Water Control and Improvement Districts (WCID), Municipal Utility Districts (MUD), Drainage Districts (DD), and Flood Control Districts (FCD). Each of the different types of districts are governed by different state laws, which specify the authorities and process for creation of a district. Districts can be created by various entities, from the Texas Legislature or the Texas Commission on Environmental Quality to county commissioners' courts or city councils. Depending on the type of district, the districts may have the ability to raise revenue through taxes, fees, or issuing bonds to fund flood and drainage-related improvements within a district's area.

Lastly, municipalities and counties have the option to issue debt through general obligation bonds, revenue bonds, or certificates of obligation, which are typically paid back using any of the previously mentioned local revenue raising mechanisms.

Overall, local governments have various options for raising revenue to support local flood-related efforts; however, each avenue presents its own unique challenges and considerations. It is important to note that municipalities have more authority to establish various revenue raising options in comparison to counties. Of the communities that do have access to local funding, the amount available is generally much lower than the total need, leading local communities to seek out state and federal financial assistance programs.

9.1.2 State Funding

Today, communities have a broader range of state and federal funding sources and programs available due to new grant and loan programs that didn't exist even five years ago. There are two primary state agencies currently involved in providing state funding for flood projects: the TWDB and the Texas State Soil and Water Conservation Board (TSSWCB). It is important to note that state and federal financial assistance programs discussed herein are not directly available to homeowners and the general public. Local governments apply on behalf of their communities to receive and implement funding for flood projects in their jurisdiction.

The TWDB's Flood Infrastructure Fund (FIF) is a new funding program passed by the Texas Legislature and approved by Texas voters through a constitutional amendment in 2019. The program provides financial assistance in the form of low or no interest loans and 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, including structural and nonstructural 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 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 will thus be eligible for this funding source.

The TWDB also manages the Texas Water Development Fund (Dfund) program, which is a state-funded streamlined loan program that provides financing for several types of infrastructure projects to eligible political subdivisions. 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 nonstructural 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 a grant program for local soil and water conservation districts (SWCD) and certain co-sponsors of flood control dams. This program reimburses SWCDs 90 percent of the cost of an eligible operation and maintenance 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 (USDA-NRCS), including match funding for federal projects through the Dam Rehabilitation Program and the Emergency Watershed Protection (EWP) Program of the Texas NRCS.

9.1.3 Federal Funding

Federal funding currently accounts for a large share of total available funding for flood projects throughout the state, with federal funding programs having greater access and availability to large funding amounts from the federal government appropriated by Congress. Commonly utilized funding programs administered by seven different federal agencies are discussed in this section. The funding for these programs originates from the federal government but for many of the programs, a state agency partner plays a key role in the management of the program. Each funding program has its own unique eligible applicants, eligible project types, requirements, and application and award timelines. A few examples of eligibility requirements for some of the federal grant programs are: requiring recipients of funding to participate 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 their unique eligibility requirements and award processes can be found at the links in this section.

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. 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 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 so they can 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 nonprofits 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 retore damaged services, systems, and infrastructure, CDBG-MIT funds are intended to support mitigation efforts to rebuild in a way which will lessen the impact of future disasters.

The Community Development Block Grant (CDBG) program provides annual grants on a formula basis to small, rural cities and to 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).

U.S. Army Corps of Engineers (USACE)

The USACE works with non-Federal partners (States, Tribes, counties, or local governments) throughout the country to investigate water resources and related land problems and opportunities and, if

warranted, develop 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 via another legislative vehicle. Congress will not provide project authority until a completed study results in a recommendation to Congress of a water resources project, conveyed 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 has technical assistance opportunities, including Floodplain Management Services and the Planning Assistance to States program, available to local communities.

U.S. Environmental Protection Agency (EPA)

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

U.S. Department of Agriculture (USDA)

The USDA's 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; to prevent erosion, floodwater, and sediment damage; to further the conservation development, use and disposal of water; and to further the conservation and proper use of land in authorized watersheds. The focus of Watershed Surveys and Planning program is funding watershed plans, river basin surveys and studies, flood hazard analyses, and floodplain management assistance aimed at identifying solutions that use land treatment and nonstructural 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 also offers various Water and Environmental grant and loan funding programs, which can be used for water and waste facilities, including stormwater facilities, in rural communities.

Special Appropriations

On occasion and when the need is large enough, Congress may appropriate funds for special circumstances such 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 for 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 (SLFRF), a part of ARPA, delivers $350 billion directly to 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 (IIJA), also called the Bipartisan Infrastructure Law (BIL), authorizes over $1 trillion for infrastructure spending across the U.S. 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.

9.1.4 Barriers to Funding

Local communities encounter barriers to accessing or seeking funding sources for flood management activities, including lack of knowledge of funding sources, lack of expertise to apply for funding, and no local funds available for local match requirements. As opposed to some other types of infrastructure, flood projects do not typically generate revenue and many communities do not have steady revenue streams to fund flood projects, as discussed in Section 9.1.1. Consequently, communities struggle to generate funds for local match requirements or loan repayment. Complex or burdensome application or program requirements as well as prolonged timelines also act as barriers to accessing state and local financial assistance programs. Of those communities able to overcome these barriers, apply for funding, and generate local resources for match requirements, the high demand for state and federal funding, particularly for grant opportunities, means that need outstrips supply, leaving many local communities without the resources they need to address flood risks.

9.2 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 propose what role the state should have in financing the recommended FMEs, FMSs, and FMPs. For the Guadalupe region, a first round of targeted outreach via phone calls and emails to Sponsors gathered preliminary information on funding needs for recommended FMEs, FMSs, and FMPs. To garner additional responses, a follow-up survey via email was also sent to Sponsors.

A total of 54 Sponsors of recommended FMEs, FMSs, and FMPs with capital costs identified were contacted and 6 responded. This represents a response rate of 11% percent. **Appendix 9.1** presents the results of the survey for each FME, FMS, and FMP in Table 19. The response rate for the survey does not represent a significant percentage of respondents and therefore does not accurately represent the total need for state and federal funding in the Guadalupe basin. To assess the remaining need, it was estimated that 90% 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% projected local investment in projects. A high percentage of outside need is supported by the initial stakeholder outreach discussed in Section 9.1.1, which confirmed that many communities, particularly smaller and more rural communities, do not have any local funding available for flood management activities. Those communities that did report having local funding indicated relatively little local funding available in relation to overall need.

Overall, there is an estimated $829,882,808 in state and federal funding projected to be needed to implement the recommended FMEs, FMSs, and FMPs in this regional flood plan. Since most federal funding programs are dependent on availability or on 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 Guadalupe region.