

i. Hazard Warning System

The Hazard Warning System program is a crucial component of a comprehensive, long-term recovery strategy to improve advanced warning of residents to reduce or eliminate the number of lives lost. This action promotes public safety services through enhancing the communities existing method of detecting flooding. The City of San Marcos has experienced frequent flooding associated with both localized heavy rainfall events, as well as large regional flooding events. To provide a tool in addressing and managing these flooding events, the City's goal is to develop a flood early warning system (FEWS) to be used by City staff (including Emergency Management, Engineering, Public Services, and other departments) and the public. The City has completed a feasibility study under the CDBG-DR program. Findings and recommendations were presented in the report entitled "San Marcos Flood Early Warning System (FEWS) Project, San Marcos, Texas", prepared by Scheibe Consulting and dated February 21, 2019. Basic FEWS recommendations include the installation of stream and rain gauges along each major stream in San Marcos, updating the City's web-site, and integrating with the Hays County Flood Warning System. CDBG-MIT funds are allocated for implementation of the FEWS. This program will be administered by the City of San Marcos through the Engineering Department and Office of Emergency Management.

Allocation Amount: \$300,000

Eligible Mitigation Activity

This program is an eligible mitigation activity under the infrastructure criteria, as defined in the CDBG-MIT requirements, and will improve the warning system(s) in San Marcos.

Eligible Activities

Activities allowed under CDBG-MIT; HCDA Section 105(a)(1-5), 105(a)(7-9), and 105(a)(11), include but are not limited to:

- Acquisition or disposition of real property.
- Infrastructure improvements (such as water and sewer facilities, streets, provision of generators, removal of debris, bridges, etc.), including flood control and drainage repair and improvements through the construction or rehabilitation of stormwater management system.
- Natural or green infrastructure.
- Clearance, demolition, rehabilitation of publicly or privately-owned buildings, and code enforcement.
- Removal of materials and architectural barriers.
- Public service (such as job training and employment services, healthcare, child care, and crime prevention within the 15 percent cap).

- Buyouts or acquisition with or without relocation assistance, down payment assistance, housing assistance, demolition or other activities designed to relocate families outside of floodplains.

Ineligible Activities

- Emergency response services.
- CDBG–MIT funds may not be used to enlarge a dam or levee beyond the original footprint of the structure that existed prior to the disaster event. However, CDBG–MIT funds can be used for levees and dams if used to:
 - Register and maintain entries regarding such structures with the USACE National Levee Database or National Inventory of Dams;
 - Ensure that the structure is admitted in the USACE PL 84–99 Rehabilitation Program (Rehabilitation Assistance for Non-Federal Flood Control Projects);
 - Ensure the structure is accredited under the FEMA NFIP;
 - Maintain file documentation demonstrating a risk assessment prior to funding the flood control structure and documentation that the investment includes risk reduction measures.
- Funds may not be used to assist a privately-owned utility for any purpose.
- Buildings and facilities used for the general conduct of government (e.g., city halls, courthouses, and emergency operation centers).
- By law, (codified in the HCD Act as a note to 105(a)), the amount of CDBG–MIT funds that may be contributed to a USACE project is \$250,000 or less.

National Objective

This program will meet the CDBG-MIT requirements for the National Objective of urgent need mitigation for the following reasons:

- The entire city limits of the City of San Marcos are included in the designation as the most impacted and distressed area. Therefore all projects done within the city limits meet this requirement.
- Installation of a flood hazard warning system will result in a measurable and verifiable reduction in the risk of loss of life and property by providing advance warning of possible flooding so people at risk can be evacuated.

Geographic Eligibility

At least fifty-percent of the funds spent on projects under this program will be spent on projects located within the City of San Marcos, with others potentially spent on projects outside of the city limits, but on ones that will benefit San Marcos' residents. More information about the location of specific projects will be available once these projects are selected for implementation.

Selection Criteria

Through its HMP, the City of San Marcos Office of Emergency Management has a current list of warning system projects. An analysis will be conducted to select

projects that will maximize system capacity and have the greatest benefit on the health, safety, and overall welfare of residents. After the selection of potential projects, the City Council will approve the selection to be funded with CDBG-MIT funds. Projects will be prioritized using the criteria below.

For CDBG-MIT funding, priority will be given to projects that:

- Benefit primarily LMI communities;
- Can be completed in a timely manner;
- Coordinate with other local and/or regional warning system efforts to ensure consistency; and
- Meet or further the goals identified within the City's comprehensive plan.

Maximum Award Amount

No person, household or business will receive direct benefits through this program; therefore, no maximum award amount has been set. If this Action Plan is amended to include activities that provide funding to direct beneficiaries, the City will set a maximum award amount for each such activity, and will adopt a policy for when and how exceptions might be considered.

Project

With Amendment No. 1, an enhanced flood early warning system is planned for the Hazard Warning System category funding. The CDBG-DR grant has paid for a feasibility study and design, and the CDBG-MIT grant will pay for installation. The project involves installing additional stream and rain gauges and integrating them electronically with the Hays County Flood Warning System.

The City of San Marcos has experienced frequent flooding associated with both localized heavy rainfall events, as well as large regional flooding events. Using funding allocated by Amendment No. 1 to provide a tool in addressing and managing these flooding events, the City's goal is to develop a flood early warning system (FEWS) to be used by the City staff (including Emergency Management, Engineering, Public Services, and other departments) and the public.

As a first step in developing the flood early warning system, using CDBG-DR funding, the City hired a consultant to conduct a feasibility study that included the following:

- Interviewing numerous regional FEWS owner and operators
- Review of existing stream gauge and rain gauge equipment
- Review of FEWS real-time and forecasting options
- Review of current flood risk information available to the City
- Review of FEWS web-interface options
- Developing recommendations for a flood warning system.

The feasibility study findings and recommendations were presented in the report entitled "San Marcos Flood Early Warning System (FEWS) Project, San Marcos,

Texas”, prepared by Scheibe Consulting and dated February 21, 2019. Basic FEWS recommendations include the installation of stream and rain gauges along each major stream in San Marcos, updating the City’s web-site, and integrating with the Hays County Flood Warning System. At a minimum, two stream and rain gauges are planned to be installed along the following streams.

- Cottonwood Creek
- Purgatory Creek
- San Marcos River
- Sessoms Creek
- Sink Creek
- Willow Springs Creeks

The estimated budget to implement these FEWS recommendations is \$300,000.

Timeline

Purchase, installation, and integration of the gauges is planned to be completed by Fall, 2023. See Appendix D for projected timeline of expenditures.