

TO: Board Members

THROUGH: Kevin Patteson, Executive Administrator
Les Trobman, General Counsel
Edna Jackson, Deputy Executive Administrator, Operations and Administration

FROM: Gilbert R. Ward, Grants Coordinator, Flood Mitigation Planning

DATE: June 24, 2015

SUBJECT: Fiscal Year 2015 Solicited Flood Protection Planning Grant Applications

ACTION REQUESTED

Consider authorizing the Executive Administrator to: (a) negotiate and execute contracts on or before October 14, 2015 in a total amount not to exceed \$900,000 for solicited grant applications for Flood Protection Planning; and (b) transfer funds from the Water Assistance Fund to the Research and Planning Fund.

BACKGROUND

Grants for flood protection planning have been in existence since first established as part of the Research and Planning Fund program in 1983. To date, the Texas Water Development Board (TWDB) has awarded one-hundred thirty-one (131) Flood Protection Planning grants totaling nearly \$21,250,000.00 in funding assistance. The purpose of the Flood Protection Planning grant program is to enable the state to assist local governments in developing flood protection plans for entire major or minor watersheds (as opposed to local drainage problems) in order to provide protection from flooding through structural and/or non-structural measures. Applications for Flood Protection Planning grants are authorized and described by 31 Texas Administrative Code (TAC) §355.3. Planning for flood protection will include studies and analyses to determine and describe problems resulting from or relating to flooding. Input from the affected public relative to the flood hazard will be incorporated into the planning process. From the planning study, feasible solutions to flooding problems will be identified and recommendations will be provided. Flood Protection Planning grants require a 50 percent local match unless the planning area meets the economically disadvantaged criteria for this program, as per 31 TAC §355.10. Those planning areas that meet the economically disadvantaged criteria require a 25 percent local match.

Our Mission : Board Members

To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas :
Bech Bruun, Chairman | Carlos Rubinstein, Member | Kathleen Jackson, Member
Kevin Patteson, Executive Administrator

KEY ISSUES

A total of \$900,000 has been budgeted for Flood Protection Planning grants from the Research and Planning Fund for Fiscal Year 2015. TWDB staff published a Request for Applications (RFA) in the November 7, 2014 Texas Register (see Attachment A). Twelve applications were received by the designated submittal deadline date of February 25, 2015 for a total requested funding of \$2,037,859.00. Using eligibility criteria guidance provided in 31 TAC §355.5(3), all twelve grant applications were determined to be eligible for review and consideration. Attachment B provides summary descriptions of each of the applications.

Evaluation criteria used by TWDB staff to review, score and rank the twelve applications included population and value of property at risk due to flooding, severity of the existing flood hazard, financial capabilities of the applicant to implement the mitigation alternatives recommended by the study, responsiveness to the RFA, and technical merit of the proposed scope of work. Attachment C indicates funding recommendations in ranked order, totaling \$900,000.

RECOMMENDATION

The Executive Administrator recommends authorization to negotiate and execute contracts on or before October 14, 2015 in a total amount not to exceed \$900,000 for solicited Flood Protection Planning grant applications as follows: Brazos River Authority for \$275,234; City of Hurst for \$61,500; Guadalupe-Blanco River Authority for \$162,700; City of Georgetown for \$332,500 and City of Waco for \$68,066 (see Attachment C).

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and TWDB rules.

Les Trobman, General Counsel

Attachment A: Announcement Published in November 7, 2014 Texas Register

Attachment B: Application Summaries

Attachment C: Funding Recommendations for FY2015 Flood Protection Planning Grants

ATTACHMENT A

Announcement Published in November 7, 2014 Texas Register

Texas Water Development Board
Request for Applications for Flood Protection Planning

The Texas Water Development Board (TWDB) requests, pursuant to 31 Texas Administrative Code (TAC) §355.3, the submission of applications leading to the possible award of contracts to develop flood protection plans for areas in Texas from political subdivisions with the legal authority to plan for and abate flooding and which participate in the National Flood Insurance Program. Flood Protection Planning Grant applications may be submitted by eligible political subdivisions from any area of the State and will be considered and evaluated. In addition, applicants must supply a map of the geographical planning area to be studied.

Description of Planning Purpose and Objectives. The purpose of the Flood Protection Planning Grant Program is for the State to provide financial assistance to local governments to develop flood protection plans for entire major or minor watersheds (as opposed to local drainage areas) that provide protection from flooding through structural and non-structural measures as described in 31 TAC §355.2. Planning for flood protection will include studies and analyses to determine and describe problems resulting from or relating to flooding and the views and needs of the affected public relating to flooding problems. Potential solutions to flooding problems will be identified, and the benefits and costs of these solutions will be estimated. From the planning analysis, feasible solutions to flooding problems will be recommended. The flood protection planning study should also include an assessment of the environmental and cultural resources of the planning area as necessary to evaluate the flood control alternatives being considered. Solutions for localized drainage problems are not eligible for grant funding.

Description of Funding Consideration. Up to \$900,000 has been initially authorized for Fiscal Year 2015 assistance for flood protection planning from the TWDB's Research and Planning Fund. Up to fifty percent of the total cost of the project may be provided to individual applicants, with up to seventy-five percent funding available to areas identified in 31 TAC §355.10(a) as economically disadvantaged. In the event that acceptable applications are not submitted, the TWDB retains the right to not award contract funds.

Deadline, Review Criteria, and Contact Person for Additional Information. Six double-sided copies on recycled paper and one digital copy (CD) of a complete Flood Protection Planning Grant application including the required attachments must be filed with the TWDB prior to noon, 12:00 p.m., February 25, 2015. Applications can be directed either in person to Mr. David Carter, Texas Water Development Board, Stephen F. Austin Building, 1700 North Congress Avenue, Austin, Texas or by mail to Mr. David Carter, Texas Water Development Board, P.O. Box 13231 - Capitol Station, Austin, Texas 78711-3231.

Applications will be evaluated according to 31 TAC §355.5. All potential applicants can contact the TWDB to obtain these rules and an application instruction sheet. Requests for information, the TWDB's rules and instruction sheet covering the research and planning fund may be directed to Mr. Gilbert Ward at the preceding mailing address, or by email at gilbert.ward@twdb.texas.gov or by calling (512) 463-6418. This information can also be found on the Internet at the following address: <http://www.twdb.texas.gov>.

TRD-201404980

Les Trobman
General Counsel
Texas Water Development Board
Filed: October 24, 2014

ATTACHMENT B

Application Summaries

Brazos River Authority

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$550,468.00
Amount Requested from TWDB	\$275,234.00
Local Cash	\$275,234.00
Local In-kind	\$0.00

Participants:

Brazos River Authority

Waller County

Brazoria County

Velasco Drainage District

Pecan Grove Municipal Utility District

Austin County

Fort Bend County

City of Richmond

City of Rosenberg

City of Missouri City

Problem Area: Lower Brazos River watershed

Problem Description: The study area is exposed to frequent flooding due to the fact that approximately 10,000 square miles of the lower basin currently does not have any form of flood control protection. This area has a potential to produce extreme rainfall events and has already experienced major floods in the last 25 years. In addition, many locations in the study area are currently dealing with flooding issues using outdated hydrologic and hydraulic studies.

Study Description: The study will utilize Light Detection and Ranging (LIDAR) topography to develop comprehensive hydrologic and hydraulic models of the Lower Brazos River watershed. These models, in turn, will be used to analyze the feasibility of various flood reduction alternatives. In addition, this information will be used to produce flood hazard maps, and will be used for land development planning and regulation.

Study Duration:

24 months

City of Hurst

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$123,000.00
Amount Requested from TWDB	\$61,500.00
Local Cash	\$61,500.00
Local In-kind	\$0.00

Participants:

City of Hurst
City of Fort Worth
City of Bedford

Problem Area: Valley View Branch watershed

Problem Description: The study area is located in the north central area of the Dallas-Fort Worth Metroplex and is almost entirely developed. Due to all of the development that has taken place, runoff has significantly increased, and outdated floodplain data has limited the City's ability to regulate any future development in the study area.

Study Description: The study will perform a detailed engineering analysis of the streams in the Valley View Branch watershed and will aid in the protection of life and property and provide the needed planning required for responsible future development and redevelopment in the watershed.

Study Duration:

15 months

Guadalupe-Blanco River Authority

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$325,400.00
Amount Requested from TWDB	\$162,700.00
Local Cash	\$162,700.00
Local In-kind	\$0.00

Participants:

Guadalupe-Blanco River Authority City of Kyle
City of Wimberley Hays County

Problem Area: Blanco River, York Creek, and Plum Creek watersheds

Problem Description: The study area encompasses communities along Plum Creek, and the San Marcos and Blanco Rivers, which are exposed to frequent flooding events, including many major floods within the past two decades. Several of these communities have been forced to deal with this flooding using outdated hydrologic/hydraulic studies. This proposed study will be added to existing phases of study currently being performed by GBRA and the United States Corps of Engineers and with funding assistance from the TWDB, however this phase of study is considered as beyond a federal interest and therefore will be conducted separate from the existing phases.

Study Description: The study will use a recently produced hydrologic/hydraulic analysis along with accurate Light Detection and Ranging (LIDAR) topography to produce flood hazard information that can be utilized for development and regulatory activities.

Study Duration:

24 months

City of Georgetown

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$700,000.00
Amount Requested from TWDB	\$332,500.00
Local Cash	\$352,500.00
Local In-kind	\$15,000.00

Participants:

City of Georgetown	Georgetown Economic Development Corporation
Williamson County	Texas Department of Transportation
City of Leander	Capital Area Council of Government
City of Liberty Hill	Liberty Hill Independent School District
Burnet County	Leander Independent School District
Brazos River Authority	City of Bertram
Georgetown Chamber of Commerce	City of Burnet
Georgetown Independent School District	

Problem Area: North Fork San Gabriel River, South Fork San Gabriel River, and San Gabriel River from the confluence (of North and South Forks) to the City of Georgetown ETJ downstream limit.

Problem Description: The study area has an outdated Master Drainage Plan. This problem is further exacerbated by frequent flooding in a portion of the study area due to inadequate drainage infrastructure and a population which has almost doubled. In addition, it has become increasingly important for an evaluation of the impact of new development on hydrologic/hydraulic conditions in these watersheds.

Study Description: The study will perform a detailed hydrologic/hydraulic assessment of the study area which would accurately identify flood problem areas, aid in the development of a practical storm water management plan to address critical flooding problems, as well as provide the City with the information it needs to manage growth and development within the study area. The study will also review and evaluate the City's outdated Flood Insurance Rate Map (FIRM) for these watersheds with the intention of submitting updated and corrected information to FEMA.

Study Duration:

26 months

City of Waco

Research and Planning Fund Category:
Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$645,787.00
Amount Requested from TWDB	\$300,000.00
Local Cash	\$303,787.00
Local In-kind	\$42,000.00

Participants:

City of Waco
City of Robinson
City of Hewitt

City of Woodway
City of Beverly Hills
McLennan County

Problem Area: Flat Creek, Cottonwood Creek, Primrose Creek, Waco Creek, and Barron's Branch watersheds

Problem Description: The study area has experienced urban sprawl and growth of surrounding suburbs since the early 1960s. These suburbs are predominantly upstream of the City and contribute to and exacerbate the effects that upstream urbanization has on storm water runoff.

Study Description: This study will contribute to the development of a comprehensive system of hydrologic/hydraulic models which will be used to evaluate the causes and extent of riverine flooding in the City and will develop mitigation alternatives to reduce the severity and frequency of flooding within the City. The study will also produce effective methods to identify/analyze flood hazards from future developments within the City.

Study Duration:
16 months

Orange County Drainage District

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$400,000.00
Amount Requested from TWDB	\$200,000.00
Local Cash	\$100,000.00
Local In-kind	\$100,000.00

Participants: Orange County Drainage District

Problem Area: Tiger Creek, Ten Mile Creek, and Caney Creek watersheds

Problem Description: Within the past 30 years, there have been 10 major storm events which have occurred in which each event resulted in flood related damages of more than \$200,000 within Orange County; and seven of these events received Presidential disaster declarations. The most recent of which was Hurricane Ike in 2008 which resulted in over \$117 million in paid NFIP flood claims.

Study Description: Project activities consist of a detailed hydrologic/hydraulic analysis of the contributing drainages. Tasks include identification of flood damages, alternatives analysis, economics analysis and flood damage reduction improvement recommendations. Cost effectiveness of the alternatives will be evaluated by the study, as well as proposing an implementation and phasing schedule for the recommended alternatives, and identification of potential funding sources for the improvements.

Study Duration:

21 months

City of Bulverde

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$100,000.00
Amount Requested from TWDB	\$50,000.00
Local Cash	\$50,000.00
Local In-kind	\$0.00

Participants:

City of Bulverde
Comal County

San Antonio River Authority
Guadalupe-Blanco River Authority

Problem Area: Lewis Creek, Indian Creek, and Cibolo Creek Tributary 19 watersheds

Problem Description: The study area has experienced many drainage problems dating from the late 1990s during the formation of the City of Bulverde. To date, only one comprehensive drainage study has been done for this area. A majority of the creeks in the study area have not been thoroughly studied and historical flooding would indicate that the creeks are inadequate to carry flood discharge.

Study Description: The study will aid in the completion of an ongoing detailed hydraulic analysis of Lewis Creek and Cibolo Creek Tributary 19, as well as begin a hydrologic and hydraulic analysis of Indian Creek. This study will identify and develop flood control alternatives and an implementation plan for capital improvements in the study area.

Study Duration:

16 months

Nueces County Drainage District No. 2

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$120,000.00
Amount Requested from TWDB	\$60,000.00
Local Cash	\$60,000.00
Local In-kind	\$0.00

Participants: Nueces County Drainage District No. 2

Problem Area: Oso Bay and Petronila Creek watersheds

Problem Description: The study area is subject to frequent flooding events primarily due to inadequate drainage channel capacities, undersized pipe crossings, constrictions caused by man-made barriers such as roads, railways, and irrigation canals, and its flat topography. Planning is needed in the study area due to the capacity of the existing drainage system as well as anticipated population growth and land use/development in this area.

Study Description: This study will review the needs of the existing drainage system, identify necessary drainage improvements and cost estimates, obtain public input and stakeholder support, and create an implementation plan to program projects over the short and long-term.

Study Duration:

8 months

City of Beaumont

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$750,000.00
Amount Requested from TWDB	\$250,000.00
Local Cash	\$500,000.00
Local In-kind	\$0.00

Participants: City of Beaumont

Problem Area: Neches River and Hillebrandt Bayou watersheds

Problem Description: The study area covers the City of Beaumont and portions of Jefferson County. The last comprehensive study was developed more than 30 years ago and no longer depicts flood risk within the City due to widespread development and changes over the years.

Study Description: The study will build upon and update the City's current Master Drainage Plan in addition to developing a comprehensive understanding of the City's current drainage infrastructure in order to create a strategic Capital Improvement Plan designed to reduce flooding risk in the study area.

Study Duration:

16 months

Liberty County

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$300,000.00
Amount Requested from TWDB	\$150,000.00
Local Cash	\$150,000.00
Local In-kind	\$0.00

Participants:

Liberty County

City of Cleveland

City of North Cleveland

City of Plum Grove

Harris County

Montgomery County

San Jacinto River Authority

Problem Area: East Fork San Jacinto River, Luce Bayou, and Tarkington Bayou watersheds

Problem Description: The study area includes unincorporated and undeveloped areas of Liberty County that is expected to be developed in the near future due to the start of the construction of Grand Parkway segment H in 2015. Due to significant storm events and their impact to this area in the past, there is a need to address this problem in order to provide flood protection solutions to reduce the risk to property, public safety, and critical infrastructure in the future.

Study Description: The study will create both hydrologic and hydraulic models to evaluate the impacts due to the runoff and define Base Flood Elevations in this future development area. Flood protection solutions will be developed such as channel improvements to convey runoff more effectively, regional detention to decrease peak flow rates, and development regulations to limit the increase of runoff from this future development.

Study Duration:

20 months

La Salle County

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$300,500.00
Amount Requested from TWDB	\$150,250.00
Local Cash	\$135,250.00
Local In-kind	\$15,000.00

Participants: La Salle County

Problem Area: Mustang Creek watershed

Problem Description: The study area is located totally within the jurisdiction of La Salle County. Currently, Mustang Creek's capacity is insufficient in containing and routing storm water during significant storm events. As a result, Mustang Creek becomes inundated with storm water, which overflows into adjacent properties, and causes damage to residences nearby.

Study Description: This study will evaluate past flood events and provide flood protection solutions and hydrologic considerations to alleviate/prevent future flooding in the study area. In addition, the study will update the current Flood Insurance Rate Maps (FIRMs), which contain outdated data for the peak discharge and base flood elevations, which are over 25 years old.

Study Duration:

14 months

Bee County

Research and Planning Fund Category:

Flood Protection Planning

Proposed Study Funding:

Total Study Costs	\$91,350.00
Amount Requested from TWDB	\$45,675.00
Local Cash	\$45,675.00
Local In-kind	\$0.00

Participants: Bee County

Problem Area: Mission River watershed

Problem Description: The study area consists of a section of Highway 181 which is a hurricane evacuation route. During moderate to heavy rain events, 181 will flood at the junction of Farm Road 623, rendering this major hurricane evacuation route impassible.

Study Description: This study will perform a detailed hydrologic/hydraulic assessment of the study area which would successfully mitigate the flooding issue at Highway 181 and Farm Road 623. Currently, the County is trying to determine if the flooding issue is due to a specific cause at the intersection or if it is the result of a lack of channelization in the creek bed.

Study Duration:

12 months

ATTACHMENT C

FUNDING RECOMMENDATIONS FOR FY2015 FLOOD PROTECTION PLANNING GRANTS (In Order as Ranked by TWDB Staff Review)

Rank Order	Requested Funding	2015 Funding Recommendation
Brazos River Authority	\$275,234	\$275,234
City of Hurst	\$61,500	\$61,500
Guadalupe-Blanco River Authority	\$162,700	\$162,700
City of Georgetown	\$332,500	\$332,500
City of Waco	\$300,000	\$68,066
Orange County Drainage District	\$200,000	\$0
City of Bulverde	\$50,000	\$0
Nueces County Drainage District #2	\$60,000	\$0
City of Beaumont	\$250,000	\$0
Liberty County	\$150,000	\$0
LaSalle County	\$150,250	\$0
Bee County	\$45,675	\$0
TOTAL	\$2,037,859	\$900,000

* The Top 4 applications are recommended for fully funding, however after funding of the fourth place application, there is \$68,066 remaining of the \$900,000 available in funds. We recommend coordinating with the City of Waco to determine specific watersheds which can be fully studied with the remaining funds available.