

Grant Title/Project Name:	CDBG-MIT Flood Monitoring System
Department:	Infrastructure
Requestor:	Bob Daigh
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Contact Phone Number:	512-943-3330
Start Date:	6/1/2021
End Date:	12/30/2023
Please select request category:	Asset, Service
Describe the purpose of the grant in detail to include all requirements.	This grant would provide funding for a Flood Monitoring System. This includes the installation of various gaging and warning devices to collect information to inform OEM personnel on flood risk. Various Flood Monitoring Tools would be developed such as web maps (similar to ATXFloods). This system would reduce the risk of flooding injuries and deaths at the various low water crossings throughout the County. This program is experimental. The use of devices and software will be studied for a period of approximately five years. At the end of that time, it is anticipated that the Commissioners Court will make a determination to expand or reduce the flood monitoring system program based on the results of this initial implementation.
Select the type of grant your department is applying for:	Federal
What is the amount of the grant?	\$3,731,500.00
Please provide a breakdown of the total cost above.	Flood Monitoring Hardware Devices (Flashers, Rain Gages, Stream Gages, Cameras): \$2,431,500.00. Flood Monitoring Software Tools (Web Maps, Alerts, Triggers): \$300,000.00. Hydrologic and Hydraulic Modeling: \$500,000.00. System Testing & Calibration: \$500,000.00.
Is there a match requirement?	Yes
What is the source of the match?	While a match is not required, it does increase the County's chances of obtaining the grant. County is committing to match 10% from 2019 Road Bond Funds.
Does the grant cover the cost of the request 100%?	No

If not, how much is left unpaid?	
What is the plan to obtain grants/funds for the remaining amount?	
List other similar assets in the County and/or region and if they are available for use?	
How is this asset request different from any similar assets currently in the County and/or region?	
What types of events/purpose would this asset be used for that cannot be accomplished with a current County asset?	
How often do these events occur?	
Identify the number of personnel required to operate this asset and/or be available for the function where it is to be used? How much time is required of those personnel? What is the cost of the personnel?	
Where will the asset be stored?	
What is the useful life of the asset?	
Will a replacement be requested from general funds when useful life has been exhausted?	
Will other agencies be billed for the use of this asset (e.g. vendors paid, employee worked hours and paid, inventory costs etc.)?	
Does this asset require insurance coverage?	
If yes, what is the estimate of asset insurance coverage?	
Will this asset require on-going maintenance? Please describe the maintenance required along with an estimate for these costs.	
How will this asset be funded when the grant ends?	

What is the impact if the grant is not received?	
New Personnel position is:	
Where will this position office?	
Who will this position report to?	
What tasks will this position perform? Include the five primary functions and the percentage of time spent to be spent on each function.	
Will this position take over tasks from current County employee?	
If yes, please explain the impact to current employee.	
How will this position be funded when the grant ends?	
Does this position or a similar position currently exist within the department?	
If "yes" how many of these similar positions exist	
Describe any alternatives considered to achieve desired outcome in lieu of a position (i.e. equipment, software, technology or change in business practice).	
Describe how workload will be accomplished/re-allocated should grant not be approved.	
List other similar items in the County and/or region and if they available for use?	The Upper Brushy Creek WCID has multiple rainfall and reservoir gages at each of the dams. There are a few USGS stream gages throughout the County. The City of Austin hosts and maintains ATXFloods.com which shows various low water crossing closures in the County. All of these data sources will be leveraged and coordinated during the development of the overall Flood Monitoring System.
How is this item request different from any similar assets currently in the County and/or region?	This grant application will allow the County to develop County specific flood monitoring tools that will protect the traveling public during rain events. 30 low water crossing flashers are proposed that will notify drivers when the roadway is flooded. Additionally, the flood monitoring tools will alert and notify first responders of high risk situations to proactively minimize the risk of flooding.

What types of events/purpose would this item be used for that cannot be accomplished with a current County asset?	Flashing lights at low water crossings. Alerts to Emergency Services Personnel of flood events and low water crossings. Public web Map to display rainfall and stream gage information to citizens. Floodplain modeling and mapping to improve flood risk awareness.
Identify the number of personnel required to operate this item and/or be available for the function where it is to be used?	No additional employees are anticipated. Maintenance of the hardware and software beyond the initial three year test period is to be contracted at an approximate cost of \$100,000.00 per year, which will be split between OEM and Road & Bridge budgets.
Please explain how this item will create the need for more or less personnel (or mark n/a for no change)?	The low water crossings that have flashers are automated to turn on when the road is flooding. This will reduce the hours County staff spends closing the numerous low water crossing gates that must be manually closed during flood events. Additionally, it is expected that this Flood Monitoring System will result in a reduced number of high water rescues, thus reducing personnel hours during flood events.
Where will the item be stored?	The Williamson County Emergency Services Operations Center will house the server, computer and antennas.
What is the useful life of the item?	Devices can last 30+ years or longer, with proper maintenance. The most frequently replaced items are the batteries which require replacement about every five years. Other components can be damaged or vandalized necessitating on-going maintenance. Servers and computers to house the data have a life-cycle of approximately five years.
Will other agencies be billed for the use of this item (e.g. vendors paid, employee worked hours and paid, inventory costs etc.)?	
Does this item require insurance coverage?	No
Will this item require any form of licensing?	Yes
Will this item require on-going maintenance? Please describe the maintenance required along with an estimate for these costs?	Routine maintenance for each hardware device is recommended twice per year. Each device continually reports data that flags failures. Devices can be damaged during large flood events, vehicle accidents, or vandalism that may require more frequent maintenance. The annual maintenance cost of the proposed entire system is estimated in the attached life-cycle cost spreadsheet.
How will this item be funded when the grant ends?	The maintenance of the system will be funded through the Williamson County Road and Bridge Department and OEM.
What is the overall budgetary impact? (i.e. revenue generation, expense reduction, etc.)	There may be cost savings due to the reduction in high water rescues. It is not anticipated that the Flood Monitoring System will generate any revenue.
Please identify any additional equipment needed/required (now or in the future) should the grant/asset be awarded.	If the County wishes to perform the on-going maintenance, it may be necessary to purchase the proper equipment including dedicated pickup truck, device specific calibration tools, hand tools, water tank for testing/flushing devices, workspace plus storage.

What is the cost and frequency to maintain/update the additional equipment?	The annual maintenance cost of the proposed entire system is estimated in the attached life-cycle cost spreadsheet.
What is the impact of this grant application on other internal/county departments?	Emergency Medical Services will greatly benefit from the Flood Monitoring System. Drivers that use low water crossings may benefit from the warnings provided during flood events. The additional rainfall and stream data collected throughout the County may be helpful to make informed decisions for future County and City bridge projects.
If yes, what is the estimate of that license fee?	
If yes, what is the estimate of insurance coverage?	
Will a replacement be requested from general funds when useful life has been exhausted? (OR)	Yes
If yes, how much is the match amount?	10%
ID	62
Version	7.0
Attachments	False
Created	9/30/2020 11:22 AM
Created By	Vicky Edwards
Modified	10/1/2020 8:34 AM
Modified By	Vicky Edwards