Motter Avenue Area Community Flood Mitigation Project

Subapplicant information

Name of federal agency
FEMA

Type of submission
Application

FREDERICK, CITY OF

101 N COURT ST
FREDERICK, MD 21701 United States

State	DUNS #	EIN #
MD	619357650	526000789

Subapplicant type
Local Government

Is the subapplicant subject to review by Executive Order 12372 Process?

(●) Yes - This Pre-application/application was made available to the Executive Order 12372 Process for review on:
Enter date: 11/18/20

( ) No, Program is not covered by E.O. 12372.

( ) No, Program has not been selected by state for review.

Is the subapplicant delinquent on any federal debt?

( ) Yes

(●) No

Contact information

Subrecipient Authorized Representative (SAR)

Gerry Kolbfleisch

gkolbfleisch@cityoffrederickmd.gov

Point(s) of contact

Zachary Kershner

Director of Public Works

Email

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Primary phone

3016001404

Work

Additional phones

2404092570

Mailing address

140 West Patrick Street

Frederick MD 21701

Community

Please provide the following information. If the Congressional district number for your community does not display correctly, please contact your State NFIP coordinator.

Add Communities

Please find the community(ies) that will benefit from this mitigation activity by clicking on the Find communities button. If needed, modify the Congressional District number for each community by entering the updated number under the U.S. Congressional District column for that community. When finished, click the Continue button. NOTE: You should also notify your State NFIP coordinator so that the updated U.S. Congressional District number can be updated in the Community Information System (CIS) database.

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
FREDERICK, CITY OF	021	240030	Y	7	6,8

Mitigation plan

Please provide your plan information below.

Is the entity that will benefit from the proposed activity covered by the current FEMA approved multi-hazard mitigation plan in compliance with 44 CFR Part 201?

◉ Yes

Please provide plan detail

Plan name

Frederick County Hazard Mitigation Plan

Plan type

Local Multi-Hazard Mitigation Plan

Plan approval date

04/18/2017

Proposed activity description

The Motter Avenue Area Community Flood Mitigation aligns with Project PO1 in the Frederick County Hazard Mitigation Plan: Implement mitigation projects that will result in protection of public or private property from natural hazards, including flood diversion and stormwater management (see page 99 of Attachment A).

Please provide any additional comments below (optional).

Attachments

Attachment A. Frederick County Hazard Mitigation Plan

Scope of work

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location)

Motter Avenue Area Community Flood Mitigation Project

Activities

Primary activity type

Flood control

Primary sub-activity type

Community flood control

Secondary activity type (Optional)

Geographic areas description

The Motter Avenue Area Community Flood Mitigation project aims to implement the safe conveyance of stormwater to reduce the risk of flooding to property and infrastructure near the YMCA of Frederick County, along Mews Place. The “YMCA Flooding Area” is the primary area at risk of flooding within an approximately 352-plus acre drainage basin in the headwaters of the Park Branch watershed in Frederick, MD. The stormwater system in this location ultimately outfalls to Mononcacy Village Park at East Street. This 352 acre drainage basin is generally bound by East Street up to 14th Street on the east, 14th Street on the north, 7th Street Shopping Center and portions of College Estates Subdivision on the west, and 7th Street on the south (see Figure 1.2 on page 9 of Attachment B for geographic context). The Community Flood Mitigation project is fully located within the YMCA Flooding Area, which is bounded by Motter Avenue to the west, 8th Street to the south, East Street to the east, and 12th Street to the north (see Figure 5.7 on page 54 of Attachment B for map of project elements). Repeated localized flooding has occurred in the project area, including a destructive flooding event in May of 2018.

Community lifelines

Primary community lifeline

Safety and security

Primary sub-community lifeline

Community safety

Secondary community lifeline (Optional)

Food, water, shelter

Secondary sub-community lifeline

Shelter

Tertiary community lifeline (Optional)

Hazardous material

Tertiary sub-community lifeline

HAZMAT, pollutants, contaminants

Hazard sources

Primary hazard source

Flooding

Secondary hazard source (optional)

Is this a phased project?

- ○ Yes
- ◉ No

Are you doing construction in this project?

- ◉ Yes
- ○

Population affected

17%

Detail/description of stated percentage

There are 17 directly residences directly impacted by the proposed mitigation. The average household size in Frederick County according to the census is 2.67. Therefore, there are 45 residents directly impacted by the drainage improvement. In addition, YMCA members and program participants will be affected by the proposed mitigation. The YMCA of Frederick County serves over 12,000 members and over 30,000 program participants on an annual basis. During previous storms, the facility was completing closed for renovations, impacting members and participants. Assuming all members are impacted by the closure, the total population affected is at least 12,045 (excluding thousands of YMCA program participants impacted). The City of Frederick population is estimated at 72,244. Therefore, the percentage population affected is at least 17%.

Provide a clear and detailed description of your proposed activity

The Motter Avenue Area Community Flood Mitigation Project will reduce residential property damage and risk of flood-related injury in the YMCA Flooding Area in Frederick, MD.

Runoff generated from impervious surfaces during intense storm events in the City of Frederick overwhelms deficient stormwater infrastructure and causes flooding, resulting in loss of property, infrastructure disruptions, and threats to public safety. Property owners within the City of Frederick have experienced substantial flooding during larger storm events in recent years, particularly in areas of the City developed prior to the enactment of modern stormwater management regulations.

During major storm events in September 2015 and May 2018, inadequate stormwater infrastructure led to extensive property damage, road closures, and health threats for Frederick residents. Across the City, the 2018 flooding caused more than $6 million in damage to public infrastructure, $31.2 million in structural damage, and $7 million in property loss. See Attachment C. Stormwater & Sewer Backup Properties for a map of impacts of the May 2018 flood.

The Motter Avenue Area was particularly badly affected by the two recent floods. Water rushing down an exterior staircase during the 2015 flood caused $1.6 million in damage to the YMCA facility at 1000 N Market St, after which the YMCA purchased exterior doors and built stone walls to prevent repeat damage. However, during the 2018 flood, water rushed up through the sewer system, inundating the basement with an estimated 10 feet of water and causing over $1.3 million in damage to the building. Since the time of this study, the YMCA has added flood gates and other protections, significantly reducing the flood risk to the YMCA. However, the YMCA improvements do not change the hazard to the surrounding residential properties, which remain at risk for repeat damages in future flood events. Some houses on Motter Avenue flooded twice in the 2018 flood—once when water poured in from outside, then again the next morning when the city's overburdened stormwater system backed up. According to OpenFEMA data on FIMA NFIP Redacted Claims, sixteen separate loss claims were filed within the study area following the 2018 flood.

Following the 2018 flood, the City of Frederick Public Works Department requested the assistance of the Planning Division, U.S. Army Corps of Engineers (USACE), Baltimore District, to complete a flood resiliency study for areas prone to stormwater and urban riverine flooding (see Attachment B). This 2020 City of Frederick Flood Resiliency study provides the City with a plan for reducing the risk of flooding to property owners and critical roadways. The study identified the following issues with the project area stormwater system that contribute to high flood risk of the YMCA Flooding Area: inadequate "trunk line" stormwater pipe size, undersized secondary stormwater pipes, lack of capacity of the stormwater ponds, and deficient stormwater quantity management for impervious areas in the watershed. The study assessed five measures aiming to increase subsurface stormwater system capacity and surface drainage, considering the projected reduction in flood risk and cost of each measure.

With $533,519 in FEMA Community Flood Mitigation funds and $177,840 in local match, the City of Frederick will implement the USACE's recommended mitigation for addressing flood risk in the YMCA Flooding Area. The Community Flood Mitigation project include:

(1) Installing of a parallel trunk line along the existing trunk line using approximately 1,680 feet of 60" diameter pipes starting from Mews Lane north of East 9th Street all the way to the system outfall.
(2) Replacing the existing pipes located at the south parking lot of the YMCA with approximately 95 feet of larger 36" diameter pipes.
(3) Adding three new 4-ft by 2-ft grate inlets to the low points in the south parking lot of the YMCA that will be connected to the existing system using a new drainage line of approximately 68 feet of 36" diameter pipes.

By adding an additional 60” parallel pipe, the trunk lines will be able to convey more stormwater from upstream drainage areas to the system outfall without overland flow surcharge. By adding more inlets, surface runoff will discharge into the trunk line more efficiently. The mitigation project will reduce the flood risk in the YMCA Flooding Area by nearly 4 feet of flooding, from 5.6 feet to 1.7 feet for the 10-year, 24-hour storm. This measure will also eliminate surface flooding in the YMCA Flooding Area for a 2-year, 24-hour storm, and reduce flood depths during a 100-year, 24-hour storm, from 7.0 feet to 4.5 feet.

How will the mitigation activity be implemented?

To implement the Motter Avenue Area Community Flood Mitigation project, Frederick Public Works Department staff will develop, issue, and publicize a design-build RFP in accordance with local and federal procurement requirements to select a contractor. The City will select the best value contractor within four months of grant award. The contractor will finalize engineering, design, and permitting for the mitigation project within 8 months of contracting. The contractor will complete construction of the parallel trunk line, pipe replacement, installation of new grate inlets, and connection of inlets to the existing stormwater system within 18 months of completing design and engineering. The project team will offer quarterly project updates to Motter Avenue Area residents and businesses and will provide quarterly opportunities for public input on the project.

Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.):

Hydrologic and hydraulic modeling from the USACE 2020 City of Frederick Flood Resiliency Study demonstrate that the proposed mitigation will be effective in decreasing the flood risk by reducing damage to property and preventing flood-related injury and loss of life in the Motter Avenue Area. Data from the existing stormwater system survey was input into XPSWMM (Version 2014) to complete stormwater quantity modeling in an event-based environment. Once a calibrated XPSWMM model was developed that accurately depicted flooding conditions in the study area, the model was run for several design storms, including: the 50-percent annual chance storm (2-year, 24-hour storm); the 10-percent annual chance storm (10-year, 24-hour storm); and the 1-percent annual chance storm (100-year, 24-hour storm).

The study includes preliminary schematics (page 50) and design and engineering (page 54) for the parallel trunk line and additional inlets near the YMCA. Modeling demonstrates that the proposed mitigation will significantly reduce flooding within the YMCA Flooding Area during a 10-year, 24-hour storm (from 5.6 feet to 1.7 feet) with a comparatively lower cost and higher feasibility than other measures. This measure will also eliminate surface flooding in the YMCA Flooding Area for a 2-year, 24-hour storm, and reduce flood depths during a 100-year, 24-hour storm (from 7.0 feet to 4.5 feet). See pages 56-57 for 10-year and 100-year storm XPSWMM modeling for the mitigation.

Who will manage and complete the mitigation activity?

The City of Frederick Public Works Department will manage and complete the mitigation activity. Zack Kershner, Director of Public Works, will serve as the Project Director. As Project Director, Mr. Kershner will lead the RFP process to procure the contractor, oversee all construction activities, coordinate project partners, and provide progress updates to City leadership, residents, and local businesses. The City will select the best value contractor to construct the project. The grant will be administered by the City’s

Finance Department. Public Works staff will work with Finance Department staff to ensure all reporting requirements are met on-time.

Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?

The Motter Avenue Area Community Flood Mitigation Project will reduce flood risk in the YMCA Flooding Area. The contributing factors resulting in the flooding within the YMCA Flooding Area include inadequate "trunk line" stormwater pipe size near the YMCA, inadequate secondary stormwater pipe sizes, stormwater ponds located in the watershed have an emergency spillway that dump right back into a system that is full of capacity, and the lack of stormwater quantity management for impervious areas in the watershed that were constructed prior to stormwater management regulations. The proposed mitigation will address these factors, significantly reduces flooding during a 10-year, 24-hour storm (from 5.6 feet to 1.7 feet); eliminating flooding surface flooding in the YMCA Flooding Area for a 2-year, 24-hour storm; and reducing flood depths during a 100-year, 24-hour storm, (from 7.0 feet to 4.5 feet). Residual flood risk will include any event greater than the designed 100-year level of protection.

Reducing flooding will substantially lower the risk for repeat damages to the properties in the YMCA Flooding Area, which were severely damaged in September 2015 and May 2018. Reducing flooding will also prevent roadways from being impacted as they were in 2018, when emergency services were disrupted and over 75 people were rescued from cars stuck in high water in Frederick County.

Th addition of the parallel trunk line will cause increased flows at the outflow. The existing-conditions 10-year, 24-hour peak flow at the outfall, with only the 78" pipe in place, is 447 cfs. When the 60" parallel line is added, the peak flow will increase by 28-percent, to 572 cfs. The HEC-RAS model from the *Preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Frederick County, Maryland, September 28, 2018* was used in order to assess the potential increases in 10-year flood elevations as a result of this measure. It was determined that 10-year flood elevations will increase by 0.1-0.4 feet in Monocacy Village Park; however, this slight increase will only impact open space, with no residential or commercial buildings, or roadways, being impacted by the 28-percent flow increase.

When will the mitigation activity take place?

The Motter Avenue Area Community Flood Mitigation Project will be completed within 36-months of grant award. The project team will develop and release the RFP for the contractor within the first two months of award, completing the procurement process within four months of the award date. The contractor will work with City staff to finalize design, engineering, and permitting for the mitigation within the first year following grant award. Construction will begin in the second year of the grant period and last a total of 18 months. Throughout the project, City staff will engage the public through progress updates, input opportunities, and distribution of educational information.

Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?

Five mitigation alternatives were considered to address in the flooding risk in the YMCA Flooding Area through to 1) decreasing the amount of surface runoff reaching the YMCA and 2) increasing both subsurface stormwater system capacity and surface drainage. The following five measures were analyzed and compared in terms of effectiveness of reducing flood risk (as compared with 5.6 ft maximum flood depth during a 10-year, 24-hour storm) and construction cost (with maintenance and utility impacts being similar for all measures):

(1) Stormwater Detention in Watershed (3.2 ft maximum flood depth; cost not estimated due to inefficacy);
(2) Stormwater Detention Adjacent to YMCA; (ineffective for reducing flood depth; $2,700,000 estimated cost);
(3) Increase Trunk Line Size and Additional Inlets near YMCA (1.7 ft maximum flood depth; $3,500,000 estimated cost);
(4) Parallel Trunk Line and Additional Inlets near YMCA (1.7 ft maximum flood depth; $713,000 estimated cost); and
(5) Parallel Pipe System Along East 9th Street and North East Street (1.1 ft maximum flood depth; $5,100,000 estimated costs).

See "Table 5.2 Comparison of Measures for YMCA Flooding" on page 53 of Attachment B.

Although Measure #5 would achieve the highest reduction in the flood depth in the YMCA Flooding Area, the measure requires the costly construction of a new line along East 9th Street and N. East Street, making the measure infeasible. The proposed pipes would need to be 84" in diameter, which would necessitate concrete pipes, and exceed the maximum pipe size that can be installed with trench boxes. Additionally, sections of the pipe would need to be buried 20-feet below ground at the deepest section.

Therefore, Measure #4 (the proposed Community Flood Mitigation) reduces flooding within the YMCA Flooding Area during a 10-year, 24-hour storm with a comparatively lower cost and was recommended as the preferred measure.

Please identify the entity that will perform any long-term maintenance and provide a maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?

The City of Frederick Public Works Department will perform long-term maintenance. Maintenance will include clearing debris and litter from the inlets, especially within the YMCA Flooding Area, as well as use of a vacuum truck to clean the lines when sediment accumulates. Routine maintenance includes checking and clearing of storm drain inlets and outfalls prior to storm events as well as post-event checks of the stormwater system. Any and all repairs necessary to ensure the continued efficacy of the proposed improvements would be completed in a timely manner so as to minimize potential future flood risks. DPW staff and equipment dedicated to performing these maintenance activities are funded through a stormwater fee charged by the City to all property owners which ensures a steady revenue stream to guarantee continued funding. Annual maintenance costs including staff time and equipment are estimated at $15,000/year.

Additional comments (optional)

Attachments

Attachment B. USACE Motter Avenue Flood Study

Schedule

Specify the work schedule for the mitigation activities.

Add tasks to the schedule

Please include all tasks necessary to implement this mitigation activity; include descriptions and estimated time frames.

Task 1 Name	**Start Month**	**Duration (in Months)**
Issue Request for Proposals (Contractor)	1	2
Task Description		
The project team will develop, issue, and publicize an RFP for a contractor to undertake construciton and installation of the proposed mitigation.		

Task 2 Name	**Start Month**	**Duration (in Months)**
Select Contractor	2	4
Task Description		
The City of Frederick will evaluate the contractor bids and select the best value bid.		

Task 3 Name	**Start Month**	**Duration (in Months)**
Finalize Design, Engineering, & Permitting	5	8
Task Description		
The contractor will work with City staff to finalize all engineering, design, and permitting for the proposed mitigation.		

Task 4 Name	**Start Month**	**Duration (in Months)**
Construction	13	18
Task Description		
With oversight from City staff, the contractor will construct and install the proposed mitigation.		

Task 5 Name	**Start Month**	**Duration (in Months)**
Public Engagement	1	36
Task Description		
Throughout the grant period, City staff will provide progress updates, offer opportunities for input, and distribute educational information about the project.		

Task 6 Name	**Start Month**	**Duration (in Months)**
Reporting	1	36
Task Description		
The Public Works Department will work with the Finance Department to ensure all reporting requirements are fully adhered to in a timely fashion.		

Task 7 Name	**Start Month**	**Duration (in Months)**
Partner Coordination & Project Oversight	1	36
Task Description		
The Project Director will oversee all grant activities, manage the contractor, coordinate with project partners, and direct public engagement efforts		

Estimate the total duration of your proposed activities (in months).

36

Proposed project start and end dates

Start Date (MM/DD/YYYY)

06/01/202

End Date (MM/DD/YYYY)

12/31/202

Budget

Budget cost estimate should directly link to your scope of work and work schedule. You must add at least one item(s) greater than 0 for your cost estimate. As necessary, please adjust your federal/non-federal cost shares, and add the non-federal funding source(s) you are planning to use this project. Once you have completed this section, please click the Continue button at the bottom of this.

Add budget cost types and item(s)

Grand total: $711,358.80

Budget type: Construction

Cost type: Cost estimate *$711,358.80*

Name of Cost Item		Cost Category	Pre-Award?
Engineering & Permitting		Architectural & Engineering Fees	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1	Each	$23,010	$23,010

Name of Cost Item		Cost Category	Pre-Award?
Excavation		Site Work	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
2,096	Cubic Yard	$2.85	$5,973.60

Name of Cost Item		Cost Category	Pre-Award?
Haul Away Existing Piping		Demolition & Removal	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1,518	Cubic Foot	$8.40	$12,751.20

Name of Cost Item		Cost Category	Pre-Award?
Asphalt & Pavement Removal & Disposal		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1,359	Square Yards	$12.90	$17,531.10

Name of Cost Item		Cost Category	Pre-Award?
Asphalt Pavement		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1,319	Square Yard	$48.50	$63,971.50

Name of Cost Item		Cost Category	Pre-Award?
Trench Box		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
46	Day	$180.00	$8,280.00

Name of Cost Item		Cost Category	Pre-Award?
Pipe Bedding		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
226	Cubic Yard	$48.90	$11,051.40

Name of Cost Item		Cost Category	Pre-Award?
60” HDPE Piping		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1,677	Linear Foot	$165.00	$276,705.00

Name of Cost Item		Cost Category	Pre-Award?
Proposed Inlets		Construction	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
10	Each	$5,400	$54,000.00

Name of Cost Item		Cost Category	Pre-Award?
Early Concept Contingency (50%)		Contingencies	N
Quantity	**Unit of Measure**	**Unit Price**	**Unit Total**
1	Each	$230,098	$230,098.00

Program income (optional)

$0

Cost share

Cost share or matching means the portion of project costs not paid by federal funds.

Proposed federal vs. non-federal funding shares
Hazard mitigation assistance (HMA) funds may be used to pay up to 75% federal share of the eligible activity costs. Building Resilient Infrastructure and Communities (BRIC) and small impoverished communities may be eligible for up to 90% federal share. Flood Mitigation Assistance (FMA) and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share.

Is this a small impoverished community? (This determines your federal/non-federal share ratio.)

○ Yes

◉ No

Proposed federal share: **75.00%**

$533,519.

Proposed non-federal share: **25.00%**

$177,839.

Non-federal funding sources here

That portion of the total costs of the program provided by the non-federal entity in the form of in-kind donations or cash match received from third parties or contributed by the agency. In-kind contributions must be provided and cash expended during the project period along with federal funds to satisfy the matching requirements. + Add funding source

Funding source: City of Frederick *100.00%* *$177,839.70*

Funding source

City of Fre

Name of source agency

N/A

Funding amount

$177,839.

% Non-federal share by source: 100.00%
Funding type:

Cash

Date of availability (MM/DD/YYYY)

07/01/202

Fund commitment letter date (MM/DD/YYYY)

11/20/20

Attachments

Attachment D. Itemized Cost Estimate

Attachment E. Local Match Commitment

Cost-effectiveness

How was cost-effectiveness determined for this project?

BCA completed in FEMA's BCA Toolkit

What are the total project benefits? ($)

$3,438,891

What is the total project cost? ($)

$711,358.80

What is the benefit-cost ratio (BCR) of the entire project?

4.31

Was sea level rise incorporated into the flood elevations in the BCA?

No

Were environmental benefits added to the project benefits?

No

Were social benefits added to the project benefits?

No

Does the mitigation measure incorporate nature-based solutions?

No

Environmental/Historic Preservation (EHP) Review Information

Introduction

An environmental/historic preservation review is required for all activities for which FEMA funds are being requested. FEMA will complete this review with the assistance of both the state or tribal government and the local applicant. It is important that you provide accurate information. If you are having problems completing this section, please contact your application point of contact.

A. National Historic Preservation Act - Historic Buildings and Structures

1. Does your project affect or is it in close proximity to any buildings or structures 50 years or more in age?

- (●) Yes
- ( ) No
- ( ) Not known

B. National Historic Preservation Act - Archeological Resources

Does your project involve disturbance of ground?

- (●) Yes
- ( ) No
- ( ) Not known

C. Endangered Species Act and Fish and Wildlife Coordination Act

1. Are federally listed threatened or endangered species or their critical habitat present in the area affected by the project?

- ( ) Yes
- ( ) No
- (●) Not known

2. Does your project remove or affect vegetation?

- (●) Yes
- ( ) No
- ( ) Not known

3. Is your project in, near (within 200 feet), or likely to affect any type of waterway or body of water?

- (●) Yes
- ( ) No
- ( ) Not known

D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)

1. Will the project involve dredging or disposal of dredged material, excavation, adding fill material or result in any modification to water bodies or wetlands designated as 'waters of the U.S' as identified by the US Army Corps of Engineers or on the National Wetland Inventory?

- ○ Yes
- ◉ No
- ○ Not known

E. Executive Order 11988 (Floodplain Management)

1. Does a Flood Insurance Rate Map (FIRM), Flood Hazard Boundary Map (FHBM), hydrologic study, or some other source indicate that the project is located in or will affect a 100 year floodplain, a 500 year floodplain if a critical facility, an identified regulatory floodway, or an area prone to flooding?

- ○ Yes
- ◉ No
- ○ Not known

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?

- ○ Yes
- ◉ No
- ○ Not known

F. Coastal Zone Management Act

1. Is the project located in the state's designated coastal zone?

- ○ Yes
- ◉ No
- ○ Not known

G. Farmland Protection Policy Act

1. Will the project convert more than 5 acres of prime or unique farmland outside city limits to a non-agricultural use?

- ○ Yes
- ◉ No
- ○ Not known

H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)

1. Is there a reason to suspect there are contaminants from a current or past use on the property associated with the proposed project?

○ Yes

○ No

◉ Not known

2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?

○ Yes

◉ No

○ Not known

3. Does any project construction or operation activities involve the use of hazardous or toxic materials?

○ Yes

◉ No

○ Not known

4. Do you know if any of the current or past land-uses of the property affected by the proposed project or of the adjacent properties are associated with hazardous or toxic materials?

○ Yes

○ No

◉ Not known

I. Executive Order 12898, Environmental Justice for Low Income and Minority Populations

1. Are there low income or minority populations in the project's area of effect or adjacent to the project area?

○ Yes

○ No

◉ Not known

J. Other Environmental/Historic Preservation Laws or Issues

1. Are there other environmental/historic preservation requirements associated with this project that you are aware of?

○ Yes

◉ No

2. Are there controversial issues associated with this project?

○ Yes

◉ No

○ Not known

3. Have you conducted any public meeting or solicited public input or comments on your specific proposed mitigation project?

- (●) Yes
- ( ) No

K. Summary and Cost of Potential Impacts

Having answered the questions in parts A. through J., have you identified any aspects of your proposed project that have the potential to impact environmental resources or historic properties?

- ( ) Yes
- (●)

Evaluation

Is the applicant participating in the Community Rating System (CRS)?

- (●) Yes
- ( ) No

Select Rating: 7

Is the applicant a Cooperating Technical Partner (CTP)?

- ( ) Yes
- (●) No

Was this created from a previous FEMA HMA Advance assistance / Project scoping award?

- ( ) Yes
- (●) No

Has the applicant adopted building codes consistent with the international codes?

- (●) Yes
- ( ) No

Year of building code

2015

Please provide the building code.

2015 International Building Code effective on January 1, 2016. See https://codes.iccsafe.org/content/document/542?site_type=public.

Have the applicant's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS)?

- ( ) Yes
- (●) No

Describe involvement of partners to enhance the mitigation activity outcome.

The City will engage residents, businesses, and community groups in project area to help reduce flood risk through publicizing progress updates, soliciting public input, and distributing educational information on the mitigation. The YMCA, which has undertaken significant flood proofing to protect the facility from future damage, is a cooperating partner on the Motter Avenue Community Flood Mitigation project. See Attachment F. Partner Letter for evidence of this partnership. The City partnered with USACE to produce the flood resiliency studies (50% City/50% ACOE). These studies produced updated data for FEMA to enable more detailed floodplain mapping for their use.

Discuss how anticipated future conditions are addressed by this project.

This flood mitigation was designed to protect property and reduce risk for injury within the Motter Avenue Area during future incidents of the 50-percent annual chance storm (2-year, 24-hour storm); the 10-percent annual chance storm (10-year, 24-hour storm); and the 1-percent annual chance storm (100-year, 24-hour storm). The USACE Flood Resiliency Study that recommended the proposed mitigation considered the *City of Frederick Watershed Management Plan* and future conditions associated with Stormwater Best Management Practices (BMPs) proposed in the plan.

Additional Comments

Per the 2016 MEMA Hazard Mitigation Plan, there are 606 active NFIP policies in Frederick County, as well as 25 repetitive loss structures (RL) and 1 severe repetitive loss (SRL) property. Confidential City data indicates that there are currently 227 active policies in the City of Frederick, 1 SRL and 2 RL properties.

Attachments

Attachment F. Partnership Letter

Project location

Provide a detailed description of the proposed project's location.

The proposed Motter Avenue Area Community Flood Mitigation project is located in the City of Frederick in Frederick County, MD. The project area (YMCA Flooding Area) is bounded by Motter Avenue to the west, 8th Street to the south, East Street to the east, and 12th Street to the north. This YMCA Flooding Area is the primary area at risk of flooding within an approximately 352-plus acre drainage basin in the headwaters of the Park Branch watershed. The stormwater system in this location ultimately outfalls to Monocacy Village Park at East Street.

Using Figure 5.5 on page 2 of Attachment E. Project Location Maps for reference, the project will create a parallel system (60” HDPE) along the trunk line starting from Mews Lane north of East 9th Street (Pipe 45-41) all the way to the system outfall (MA); increase sizes of pipes located in the south parking lot of the YMCA (Pipes 40-39 to Pipe 37-36); and adding a new drainage line with three new inlets located at the low points in the YMCA south parking lot.

Latitude

39.4

Longitude

77.4

Attachments

Attachment G. Project Location Maps

Project benefiting area

Provide a detailed description of the proposed project's benefiting area.

The project’s benefitting area includes the area within the footprint of the 2-year, 10-year, and 100-years floods within the YMCA flooding area, as shown in Attachment F. Project Benefitting Area Maps.

Attachments

Attachment H. Project Benefitting Area Maps

Project impact area

Provide a detailed description of the proposed project's impact area.

The project’s impact area includes the upstream and downstream impacts of the proposed mitigation, as shown in Attachment G. Project Impact Area Map.

Attachments

Attachment I. Project Impact Area Map

Project site inventory

Does this project subapplication propose to mitigate a property/structure(s)? (Examples: residential home, commercial building, bridge, fire station, levee, pumping station, wastewater treatment plant, telephone pole, electric line, etc.)

- ○ Yes
- ◉ No