



# Subapplication Development Hazard Mitigation Assistance grants

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Pre-Disaster Mitigation (PDM)

Flood Mitigation Assistance (FMA)

# Letter of Intent

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## Plans or Project Applications for PDM or FMA

- Contact information – a jurisdiction that adopted the approved mitigation plan
- Summarize Scope of work
- Budget estimate and match source
- Management costs up to 5%
- Identify where project exists in currently approved mitigation plan
- Environmental Historical Preservation concerns or assistance request
- For Plan applications only: identify if multi-jurisdiction & participating jurisdictions
- Authorized signature

## IOEM review

- Reply letter will confirm eligibility and give application instructions

# Subapplications - Plans or Projects

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## Common Application Elements

- Scope of work - Who, What, When, Where, Why
- Schedule - Pre-award through Closeout
- Budget - Pre-award Costs, Budget Categories
- Environmental Historical Preservation
- Assurances and Certifications
- Attachments

# Project Types

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- PDM or FMA eligible plan or project
- PDM or FMA Advanced Assistance - planning project to develop mitigation strategies, analyze alternatives, obtain data to prioritize, and develop complete future application
- FMA Community Flood Mitigation Project
- PDM Resilient Infrastructure Project
- PDM Multi-State or Multi-Tribal mitigation activity

# Projects

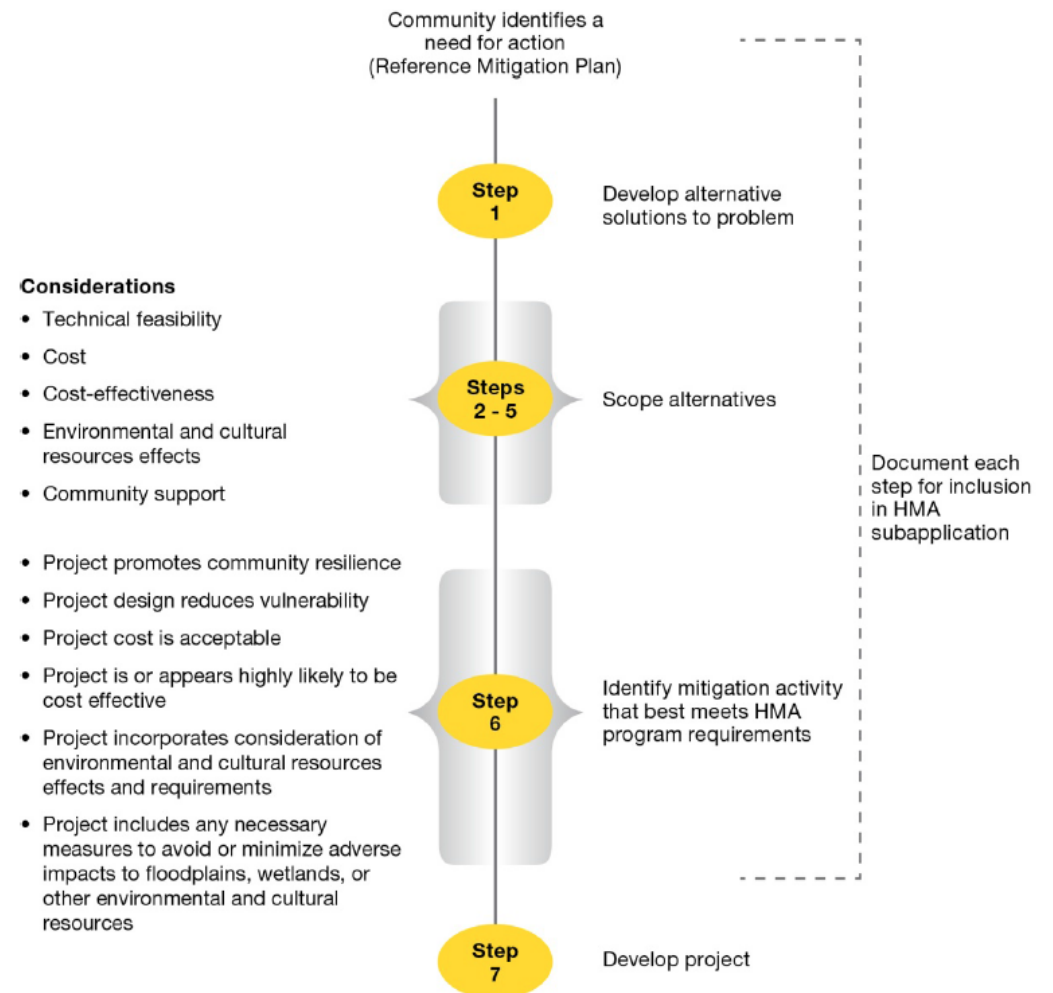
## Team Project Scoping

- Identify problem
- Alternative solutions - 3 minimum
- Scope alternatives
- Community Support
- Technically feasible
- Cost effective
- EHP considerations

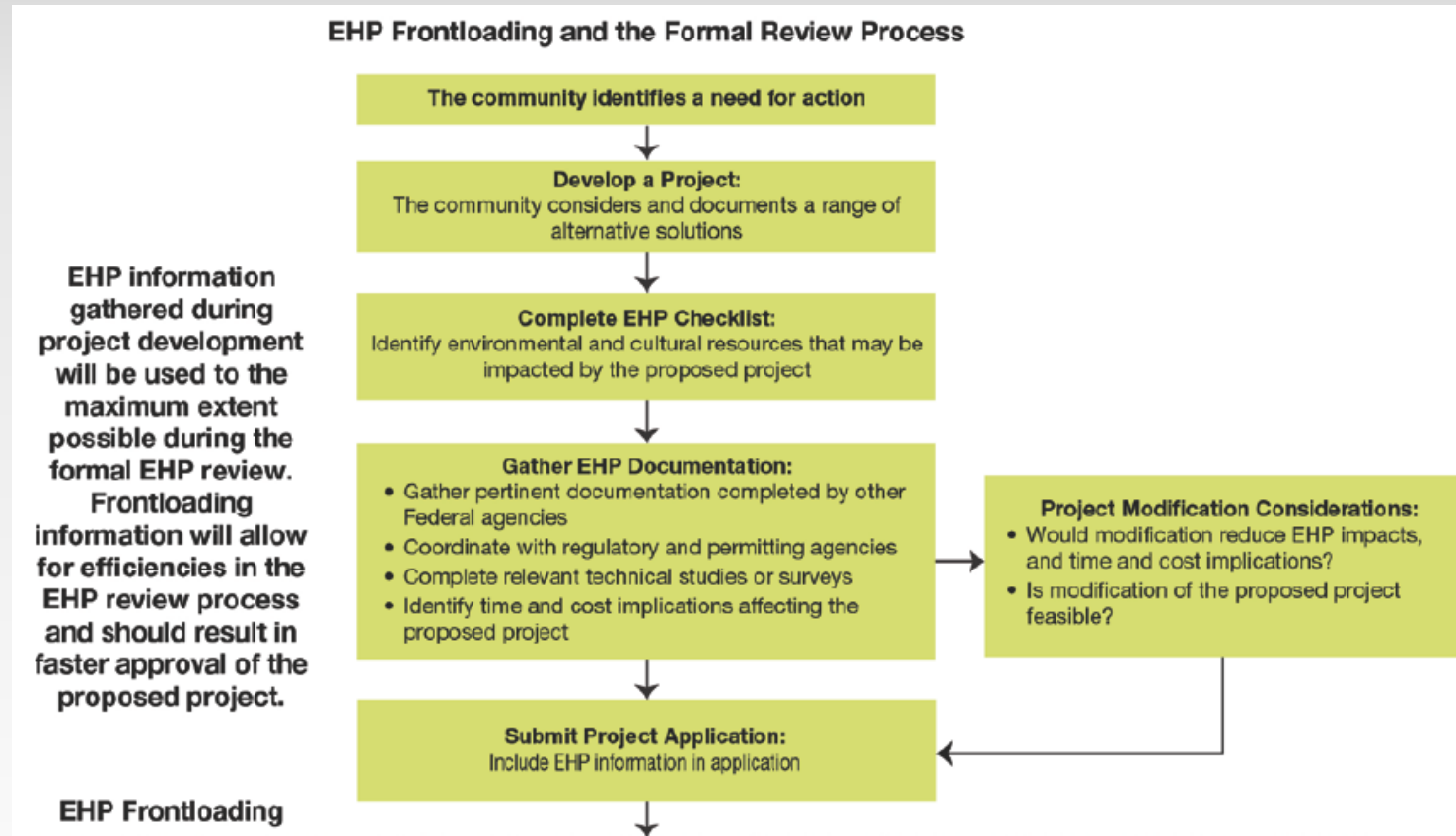
Team assignments:

SOW, Schedule, Cost, EHP, BCA

**Figure 3: General Steps in Project Scoping Process**



# EHP Frontloading



# Project Documentation

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- Decision making Process
- Damage History
- Property/Facility Data
- Engineering Feasibility
- Cost-Effectiveness - BCA version 6

<https://www.fema.gov/media-library/assets/documents/179903>

# FEMA JOB AIDS

<https://www.fema.gov/media-library/assets/documents/102051>

## Information for Hazard Mitigation Assistance Reviews

### JOB AID: FLOOD DIVERSION AND STORAGE



Flood Diversion and Storage (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk as well as facilitating groundwater recharge/seepage.

The purpose of this Job Aid is to help communities applying for Hazard Mitigation Assistance (HMA) grants to comply with the technical feasibility and effectiveness, and environmental and historic preservation (EHP) requirements of the application. This Job Aid provides a checklist of information required by FEMA to determine grant eligibility and to complete a thorough review of the application. FEMA must review all applications to ensure that proposed activities comply with all applicable statutory, regulatory, and programmatic requirements. Therefore, certain information must be provided with the grant application for FEMA to make an eligibility determination. Early submission of accurate and complete information by the applicant will facilitate FEMA's review process and the release of HMA funds.

For more information, Applicants and Subapplicants are encouraged to refer to the Job Aid Supplements and FEMA's HMA Guidance.

PROPERTY INFORMATION	with App.	Pre-Award
	Submittal	
■ Provide a vicinity map with address and project boundaries	X	
■ Identify project location by latitude and longitude in decimal degrees	X	
■ Provide site photographs	X	
■ Provide current property ownership information, including any easements or covenants	X	
■ Discuss watershed development plans/future land use plans	X	
■ Provide a copy of the flood insurance rate map (FIRM) showing project location	X	
■ Include geologic and hydrogeologic information (e.g., aquifer types, aquifer and vadose zone characteristics, subsurface homogeneity/heterogeneity, hydrologic conductivity, transmission rates, storage coefficients, water temperatures). Include copies of investigation reports.	X	
■ Indicate current land use types (e.g., residential, commercial, etc.) on and near the project site	X	
■ Show on a map all existing surface water bodies, stormwater structures, floodplains, wetlands, woodlands, and riparian habitat information. Indicate which bodies of water (e.g., river, stream, wetland, or pond) are located within 200 feet of the project.	X	
■ Provide historic stream flow, stage, and water quality data (for subsurface, surface, reclaimed water). Discuss the potential ecologic effects due to water quality and provide documentation from completed studies.	X	
■ Include a state or local topographic map where available, otherwise provide a USGS topographic map of the project site		X
■ Include the National Resources Conservation Service soil map for the project site		X
■ Identify permitting requirements, relevant federal and local ordinances. Include status of permit applications, copies of permits obtained.		X
■ Include an underground utilities map or show locations of underground utilities on the project site map		X

SCOPE OF WORK	with App.	Pre-Award
	Submittal	
■ Provide a narrative description of the project scope of work	X	
■ Indicate if any property will be acquired, modified, and/or demolished for the project and show the locations on a map	X	



# FEMA Publications

<https://www.fema.gov/hazard-mitigation-assistance-publications>

## Hazard Mitigation Assistance Publications

This page hosts all Hazard Mitigation Assistance (HMA) documents by eligible project activity. The information will be updated as new documents are created or as outdated documents become archived. For reference as to what activities are eligible, please visit the [eligible activities chart](#).

Looking for additional documents? Please visit the [Hazard Mitigation Assistance Collection of Documents](#) page.

➤ [Expand All Sections](#)

➤ [Acquisition](#)

➤ [All Hazards](#)

➤ [Earthquake](#)

➤ [Elevation](#)

➤ [Flood Projects \(All Flood Based Activities Are Grouped Here\)](#)

➤ [Hazard Mitigation Planning](#)

➤ [Miscellaneous / Other](#)

➤ [Mitigation Reconstruction](#)

FINAL

Task Order: HSF60-16-J-1424

## Supplemental Guidance For Conducting a Benefit-Cost Analysis (BCA) for a Floodwater Diversion and Storage Project

### 1. Purpose

According to the FY2016 Pre-Disaster Mitigation (PDM) program Notice of Funding Opportunity (NOFO), Climate Resilient Mitigation Activities are eligible for PDM funding. The NOFO lists the Floodwater Diversion and Storage (FDS) project type as one of these eligible project types. Because the benefits that could be applicable to an FDS project have not yet been incorporated into the BCA Tool, this document was developed to assist users of FEMA's BCA Tool in performing a benefit cost analysis for an FDS project. The process for conducting a BCA may involve inputting data in existing data fields in the BCA Tool, using a FEMA-created spreadsheet, and/or calculating losses manually and then entering them into new loss category fields in the BCA Tool.

### 2. Floodwater Diversion and Storage Project Type

Every year, communities face significant damages from flooding. A mitigation project that diverts floodwaters from a stream, river, or other body of water into a wetland, floodplain, canal/ditch, pipe, or other conduit (e.g., tunnels, wells) and stores them in reservoirs, floodplains, wetlands, or other storage facilities allows for a controlled release to reduce the peak flows and velocities to mitigate flooding. Managing floodwaters through diversion, storage, and infiltration also can replenish water supply aquifers through groundwater recharge, which can increase the baseflow and enhance usable water supply to mitigate the effects of drought. A floodwater diversion project also can help maintain healthy ecosystems.

### 3. BCA Tool Modules Used to Conduct a BCA

The first step in completing a cost effectiveness analysis for an FDS project is to determine the type of damages and losses that would be mitigated by the proposed project. Then determine which module of the BCA Tool should be used to conduct the BCA.

- Use the **Flood Module** if all of the following conditions are met:
  - The proposed project will lower flood levels to existing, floodprone structures.
  - Structure-specific data are available, such as the square footage and first floor elevation for each structure.
  - A detailed study of the effectiveness of the proposed project has been completed, such as a hydrology and hydraulics ("H&H") study. Such a study will identify how much the proposed project would reduce the flood depths for each structure.
- Use the **Damage Frequency Assessment (DFA) Module** if the proposed project would result in mitigating any of the following categories of losses:

March 24, 2016

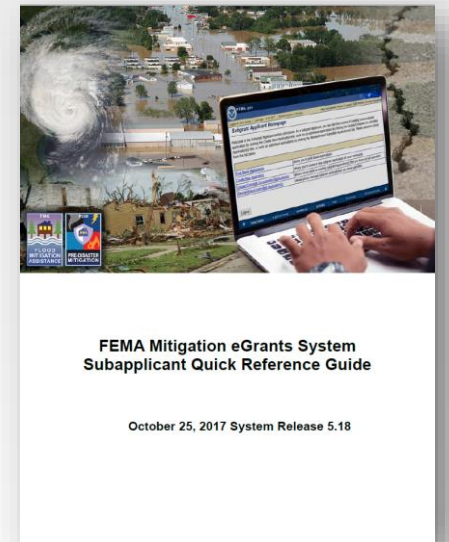
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# eGrants

<https://portal.fema.gov/famsVuWeb/home>

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1. Registration
2. Subapplicant organization
3. Contacts
4. Community
5. Mitigation Plan
6. Scope of Work
7. Schedule
8. Cost Estimate
9. Cost Share
10. Evaluation
11. Assurances & Certifications
12. Comments & Attachments
13. Authorize Access



# eGrants Menus

**Subgrant Applicant Homepage**

Welcome to the Subgrant Applicant section of eGrants. As a subgrant applicant, you can start the process of creating a new subgrant application by clicking the *Create New Application* link; work on un-submitted applications by clicking the *Update/Complete Un-submitted Application(s)* link; or work on submitted applications by clicking the *Revise/Amend Submitted Application(s)* link. Please select an activity from the list below.

<a href="#">Print Blank Applications</a>	allows you to print blank applications.
<a href="#">Create New Application</a>	allows you to create a new subgrant application for your community.
<a href="#">Update/Complete Un-submitted Application(s)</a>	allows you to work on existing subgrant application(s) that you have not yet submitted.
<a href="#">Revise/Amend Submitted Application(s)</a>	allows you to manage subgrant application(s) you have submitted.

[Logout](#)

**Planning Application**  
Sunshine Region Multi-jurisdictional Plan

Application Status

Application 9% complete

This screen shows the Status of the different sections of the full application. If the Status is Incomplete, you may click on the link to complete that section or you may use the menu on the left.

Application Section	Status
<a href="#">Subapplicant</a>	<a href="#">Incomplete</a>
<a href="#">Contact</a>	<a href="#">Incomplete</a>
<a href="#">Community</a>	<a href="#">Incomplete</a>
<a href="#">Mitigation Plan</a>	<a href="#">Incomplete</a>
<a href="#">Scope of Work</a>	<a href="#">Incomplete</a>
<a href="#">Schedule</a>	<a href="#">Incomplete</a>
<a href="#">Cost Estimate</a>	<a href="#">Incomplete</a>
<a href="#">Cost Share</a>	<a href="#">Incomplete</a>
<a href="#">Evaluation</a>	<a href="#">Incomplete</a>
<a href="#">Assurances and Certifications</a>	<a href="#">Incomplete</a>
<a href="#">Comments and Attachments</a>	<a href="#">Complete</a>

[Go Back](#) [Save and Continue](#)

DO NOT SUBMIT APPLICATION TO STOCKPILE!

# Benefit Cost Toolkit Version 6.0

<https://www.fema.gov/media-library/assets/documents/179903>

The screenshot displays the Microsoft Excel interface with the FEMA Benefit-Cost Calculator v6.0.0 embedded within it. The Excel ribbon is visible at the top, with the 'Home' tab selected. The calculator interface is divided into two main sections: a left-hand 'Welcome' section and a right-hand 'Getting Started' section. The 'Welcome' section contains the following text:

**FEMA** Benefit-Cost Calculator v6.0.0

**Welcome**

Benefit-Cost Analysis (BCA) is the method by which the future benefits of a hazard mitigation project are determined and compared to its costs.

The end result is a Benefit-Cost Ratio (BCR), which is calculated by a project's total benefits divided by its total costs.

FEMA requires a BCA to validate cost effectiveness of proposed hazard mitigation projects prior to funding.

For a community and/or property, this tool will assist with:

- Estimating Annual Hazard Risks
- Evaluating Mitigation Cost Effectiveness
- Developing Aggregate Benefit-Cost Models

For more information, including methodologies of the calculation models used in this tool, visit [FEMA BCA Website](#).

**Getting Started**

Click on the "BCA Calculator" button on the ribbon bar.

The 'Getting Started' section on the right features the FEMA logo and the text: "Conduct benefit cost analysis of hazard mitigation projects in 3 simple steps." Below this text is a blue button labeled "OPEN CALCULATOR".

At the bottom of the calculator interface, a ribbon bar is visible with the "BCA V6.0" button highlighted by a red circle. The Excel ribbon also shows the "BCA V6.0" button in the 'ACROBAT' group.

# Questions?

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