MARTIN COUNTY LOCAL MITIGATION STRATEGY

Martin County Public Safety Complex | Fire Rescue Administration
Emergency Operations Center
800 SE Monterey Road, 2nd Floor, Stuart, FL 34994
Quarterly Meeting
Wednesday, February 19, 2025 | 2:30PM

MINUTES

1. Welcome and Roll Call

2. Approval of Minutes
   Motion to approve minutes: Bob Daniels
   Second: Patrick Gleason
   All in favor.

3. FDEM Update, Angie Odell
   - *NOFOs are out for last year's storms – Debbie, Helene, Milton*
   - *Check for total county allocations*
   - *Helene and Milton information will be sent out soon for allocations, requesting we provide the percentage number for allocation to Elevate Florida.*
   - *Utilize the money for generators or wind retrofits for critical facilities – add generators to any wind retrofit projects, it will make the BCA better*
   - *Flood risk reduction projects – provide documentation on how the project will mitigate risk (traffic analysis, roads that need constant repair after flooding). Example of cost-effective project is dredging canals (not for maintenance, but for additional increased capacity), increase capacity/size of pipes*
   - *Beach stabilization projects – beach renourishment, installation of erosion prevention mechanisms for saving properties*
   - *Watershed grant open until next Friday.*
   - *Plans assessments or studies qualify under HMGP for future mitigation projects*
   - *No longer accepting paper applications for grants, only through DEMES*
   - *FDEM will send common missing documentation for grant application*
   - *Contact info:*
     Angie Odell, Mitigation Planning Manager
     Florida Division of Emergency Management
     angie.odell@em.myflorida.com
     850-524-7438

4. Old Business
   a. Local Mitigation Strategy Plan update
      - *The list is not a wish list of projects.*
      - *The scoring subcommittee will be meeting to go over the current project list and reaching out to everyone who has projects on the list.*
      - *The proposal form, scoring form, and project list information will be consistent across all documents.*
      - *New requirements for providing proof of documentation for implementation.*
      - *New section added and scored for timeline and implementation of a project.*

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- *Scoring subcommittee will ask everyone to update cost estimates in anticipation of NOFOs from Debby, Helene, and Milton.*
- *Sewall's Point has concern for length of time projects take and does not want to see the project fall off the list. No projects will be taken off the list without justification.*
- *The project list will be updated with new fields that are required from FEMA (timeline of implementation, funds, etc.)*
- *Stuart is tapping into various funding streams to update projects – BRIC, Resilient Florida, etc.*

5. New Business
    a. Steering Committee primary and alternate members
        - *The Committee discussed new members and updated the primary and secondary contacts as follows.*

Name	*Agency*	*Type*	*Notes*
George Dzama	*MC Public Works*	*Primary*	*No change*
Jim Gorton	*MC Public Works*	*Alternate*	*No change*
Bob Daniels	*Sewall's Point*	*Primary*	*Changed from alternate*
Joe Capra	*Sewall's Point*	*Alternate*	*Changed from primary*
Derek Ortado	*Stuart*	*TBD*	
Ben Hogarth	*Stuart*	*TBD*	*New member*
John Duchock	*Jupiter Island*	*Primary*	*No change*
Kim McLaughlin	*Jupiter Island*	*Alternate*	*New member*
TBD	*Ocean Breeze*	*Primary*	*George to reach out to town*
TBD	*Ocean Breeze*	*Alternate*	
Patrick Nolan	*Indiantown*	*Primary*	*Changed from alternate*
Taryn Kryzda	*Indiantown*	*Alternate*	*Changed from primary*
Tracey Miller	*MC School District*	*Primary*	*New member*
TBD	*MC School District*	*Alternate*	
Christina Proulx	*Cleveland Clinic*	*Primary*	*No change*
TBD	*Cleveland Clinic*	*Alternate*	
Patrick LaConte	*Non-Profit*	*Primary*	*No change*
Mike Readling	*Non-Profit*	*Alternate*	*New member*
Patrick Gleason	*Business/Industry*	*Primary*	*No change*
TBD	*Business/Industry*	*Alternate*	*George to confirm*
Alex Hamilton	*Member of the Public*	*Primary*	*George to confirm*
Keith Holman	*Member of the Public*	*Alternate*	*George to confirm*

- *The members voted on chair and co-chair for the LMS Subcommittee*
    - *John Duchock was nominated to chair by George Dzama, seconded by Patrick LaConte. All in favor. Motion passed.*

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- *George Dzama was nominated to co-chair by Bob Daniels, seconded by Patrick Nolan. All in favor. Motion passed.*

6. Insurance update
   N/A

7. Open forum
   - *Amy Eason is working on the Watershed Plan that complies with FEMA for CRS (Community Rating System). Due to funding availability, each watershed is treated separately. Requested a letter in support of the plan to be signed by the LMS Chair. The plan will need to be adopted by the LMS Committee.*
     - *Motion to support the Watershed Plan by Patrick LaConte, seconded by Bob Daniels. All in favor. Motion passed.*

8. Adjourn
   Motion to Adjourn: Bob Daniels
   Second: George Dzama
   All in favor. Meeting adjourned at 3:54 pm.

   Attachments:
   - *Sign in sheets*
   - *State ENG review common missing info*
   - *Mitigation Grants eligible Projects and Application Pitfalls*
   - *Signed Watershed Planning Initiative letter of support*

Meeting minutes prepared by: Amy Heimberger Lopez, Martin County Emergency Management

STATE ENGINEERING REVIEWS
Application Common Missing Information
Last Update 1-16-2025

Generator Applications

1. Clearly identify the respective service populations of all assets and/or facilities. Supporting documentation must be provided to substantiate all reported values, and it must come from the appropriate department/agency head. For example- the service population for a wastewater lift station should come from the local utilities' director or person in an equivalent role. The population served by a particular fire station should come from the chief firefighter or person in an equivalent role, etc.
2. When applicable, the annual operating budgets for critical facilities must be clearly identified with backup documentation such as a copy of the approved budget, a financial statement or a statement from the respective department/agency head.
3. When applicable, the number of employees that work at a critical facility must be identified, in a memo forma or a statement from that particular department/agency head. This value should consider only the number of employees that are physically present and working in the facility every day.
4. The existing source of backup power for all assets and/or facilities in each application must be described; the age, capacity, and condition the existing backup power infrastructure must be explained, as well as any other reasoning for why it needs to be replaced with the proposed project. If there is no existing source of backup power, that must be clearly identified.
5. All technical components of the new, proposed generators must be clearly identified; capacity, whether a new Automatic Transfer Switch (ATS), enclosure, fuel tank will be included, whether a new concrete pad or any other means of elevation will be constructed, etc.
6. If the proposed generator location is in a Special Flood Hazard Area (SFHA), the sub applicant must acknowledge that the project will be in compliance with the applicable building codes, NFIP, and FFRMS regulations
7. The preliminary project budget must have all of the previously mentioned elements of the project captured and calculated correctly with installation costs and contingency costs included.
8. Provide documentation for how the total project cost was found (ex. Itemized budget from a similar project signed by the engineer/estimator that created it, vendor quotes, original itemized budget for the project that is submitted signed by the engineer/estimator that created it, etc.)
9. For projects at fire stations only,
    a. Whether the facility provides EMS services must be determined, and such determination must be provided by the chief firefighter.

b. If the respective fire station were to be out of service, the nearest alternate station must be identified, including whether it provides EMS services, by the chief firefighter.

Flood Risk Reduction Applications

1. Project Cost
    a. Provide documentation for how the total project cost was found (ex. Itemized budget from a similar project signed by the engineer/estimator that created it, vendor quotes, original itemized budget for the project that is submitted signed by the engineer/estimator that created it, etc.)
2. Historical Damages
    i. Roads/Bridges
        a. Provide documentation for the estimated one-way traffic trips (ex. Signed memo on letterhead from the traffic department of the entity's traffic study, a pdf that shows the ADT from FDOT's Florida Traffic Online Web Application Florida Traffic Online, a memo that shows the calculation based on the BTS Average Weekday Household Vehicle Trip Map Average weekday household vehicle trips by U.S. Census Tract (per day) Bureau of Transportation Statistics, etc.)
        b. Provide a map that indicates the detour route with the mileage and time shown (ex. Screenshots from Google Maps, Bing Maps, etc.)
        c. Provide documentation for historical road closures (ex. News articles, signed memo on letterhead from the traffic department, etc.)
        d. Provide documentation for historical road repairs (ex. News articles, signed memo on letterhead from the traffic department, etc.)
    ii. Buildings
        a. Provide a copy of any damage claims for properties benefitting directly from the project.
        b. Provide documentation for how the documented losses (in $) were found (ex. Signed memo from an engineer or from the building department that indicates the total amount of damages and an Excel file that includes all the addresses of the properties that had damages)
    iii. Emergency Costs
        a. Provide documentation that explains what the expense and the total cost (ex. Invoices for repairs, signed memo on letterhead from the correct department, employee timesheets, etc.)
    iv. Critical Facilities/Utilities
        a. Provide documentation for the respective service populations of all assets and/or facilities. Supporting documentation must be provided to substantiate all reported values, and it must come from the appropriate department/agency head (ex. Service population for a wastewater lift station should come from the local utilities director or person in an

equivalent role, the population served by a particular fire station should come from the chief firefighter or person in an equivalent role, etc.)

b. The annual operating budget for critical facilities must be clearly identified (ex. financial statement submitted by the respective department/agency head)
c. Provide the number of employees that work at a critical facility (ex. Signed memo on letterhead submitted by the respective department/agency head). This value should consider only the number of employees that are physically present and working in the facility every day.
d. Provide documentation for the number of days impacted by the storm event (ex. Signed memo on letterhead from the respective department/agency head)

v. Professional Expected Damages
   a. Provide a copy of the damage calculations (before and after mitigation) signed and sealed by the engineer. All supporting documentation used to find the values must be included (ex. H&H study, building replacement values from the property appraiser, per diem rates used to find displacement costs, FDOT standards for road closures and damages, etc.)
vi. Stabilization Projects
   a. Provide a documentation for the estimated current erosion rate per year, estimated feet of erosion for total failure, the expected reduced erosion rate after mitigation, and the anticipated damages if total loss occurs (ex. Historical records, historical images, signed memo on letterhead by an engineer).
vii. Non-Phased Projects
   a. Provide the 100% design drawings for submission.
   b. Provide a complete detailed budget reflecting the activities from final designs.
   c. Provide a copy of the completed Hydraulic and Hydrologic study (H&H).
   d. Provide a copy of the damage calculations (before and after mitigation) signed and sealed by the engineer. All supporting documentation used to find the values must be final and included (ex. H&H study, building replacement values from the property appraiser, per diem rates used to find displacement costs, FDOT standards for road closures and damages, etc.)
   e. Provide a map of nodes.

Wind Retrofit Applications (includes Code Plus and Safe Room)

1. Project Cost
   a. Provide documentation for how the total project cost was found (ex. Itemized budget from a similar project signed by the engineer/estimator

that created it, vendor quotes, original itemized budget for the project that is submitted signed by the engineer/estimator that created it, etc.)

b. Code plus projects also must state the cost to build up to code, the cost to build above code, and the delta between the two.
c. For safe rooms, the budget should include the cost of a peer review.

i. Wind Retrofit
   a. Annual Operating Budgets should be provided for facilities that are not hospitals, fire departments, or police stations. The annual operating budget should include backup documentation such as a financial statement or submitted by the respective department/agency head.
   b. Provide the number of people served for applications retrofitting hospitals, fire departments, or police stations with source documentation. Additionally, for police stations and fire stations provide the number of employees that serve the critical facility during blue skies, in a memo format, or a statement from that department/agency head. Also include the number of employees that would serve the same population if the facility could not operate due to disaster. This value should only consider the number of employees that are physically present and working in the facility every day.
   c. Provide the wind speed that the building will protect against for the applicable risk category. If you are unsure of risk category, use this website as a reference. The project must conform with the design criteria found in ASCE 7 standards. For the risk category at the address of the proposed project, please confirm that the design will conform to the wind speed according to the latest versions of ASCE 7 (ASCE 7-16 and ASCE 7-22). See hazards website (https://ascehazardtool.org) for applicable wind speed for the location.
   d. Please confirm that the roof (if not included in the SOW) and all other openings such as vents, louvers, and exhaust fans, not included in the scope of work are already protected to withstand the current wind speed based on ASCE 7-16 or 7-22 requirements in the area and are in accordance with current/effective code requirements and local standards. It's important to understand that retrofitting one element of a building without accounting for wind vulnerabilities in the non-retrofitted elements can lead to ineffective mitigation. The intent of a wind retrofit project under the HMGP is to ensure that the entire building envelope will achieve the target performance level to reduce the risk of building and content damage from wind events. If needed, we suggest consulting with your building official for assistance in this matter.
   e. Be aware a wind assessment is required to identify and address building vulnerabilities. This can be completed after the award but must be submitted within 12-months. The cost of the structural assessment should be included in your project cost.

f. Under the Hazard Mitigation Grant Program (HMGP), a wind retrofit project is only intended to protect the building envelope and the building contents. Wind retrofit projects are not evaluated by the criteria contained in the standards of FEMA P-361 Safe Rooms for Tornadoes and Hurricane Guidance; therefore, they do not provide "near-absolute protection" to building occupants during a high wind event. Please confirm that you understand that the structure may have vulnerabilities due to age, design and location that may result in damage to the structure from wind events even after completing an erosion wind retrofit project funded under HMGP.

ii. Saferoom
   a.
   b. Indicate the type of safe room you are proposing (hurricane or tornado safe room).
   c. Provide the safe room occupancy number with a general description of the occupants (who will be using this safe room)
   d. State whether the safe room will be multipurpose (provide a normal daily use) or single use (only used as a safe room).
   e. Please include a schematic that shows where the safe room will be located.
   f. The cost estimate should only include eligible costs. The easiest way to determine eligible costs is to review the HMA guidance documents. If the cost isn't listed as eligible, consider whether it is being used to help further protection or serve human life safety.
   g. The safe room proposal must provide back up power, back up water, and back up sewage.
   h. Note that the purpose of a saferoom is to protect human lives. Saferooms to protect equipment or property are not eligible.
   i. Note that the maximum usable size of the saferoom recommended is 40 sq.ft. per person.

Infrastructure Retrofit Applications

1. Project Cost
   a. Provide documentation for how the total project cost was found (ex. Itemized budget from a similar project signed by the engineer/estimator that created it, vendor quotes, original itemized budget for the project that is submitted signed by the engineer/estimator that created it, etc.)
2. Provide a clear explanation of the type of infrastructure being retrofitted.
3. Historical Damages
   i. Critical Facilities/Utilities
      a. Provide documentation for the respective service populations of all assets and/or facilities. Supporting documentation must be provided to substantiate all reported values, and it must come from the appropriate

department/agency head (ex. Service population for a wastewater lift station should come from the local utilities director or person in an equivalent role, the population served by a particular fire station should come from the chief firefighter or person in an equivalent role, etc.)

b. Provide the annual operating budgets for critical facilities must be clearly identified (ex. financial statement submitted by the respective department/agency head)
c. Provide the number of employees that work at a critical facility (ex. Signed memo on letterhead submitted by the respective department/agency head). This value should consider only the number of employees that are physically present and working in the facility every day.
d. Provide documentation for the number of days impacted by the storm event (ex. Signed memo on letterhead from the respective department/agency head)

iii. Professional Expected Damages
   a. Provide a copy of the expected impact days (before and after mitigation) signed and sealed by an engineer.
   b. Power Utility

iv. Provide either historical or professional expected damages.
   2. Professional expected damages must be signed and sealed by an engineer for 3 scenarios (Tropical storm, Cat 1-2, and Cat 3-5) before and after mitigation.
   3. Historical damages should be supporting documentation that includes the customers affected in the affected area of the application, with the number of outage days.

v. Provide the service population.

Elevation Applications (includes Mit. Rec)

1. Applications should include a copy of elevation certificate if available.
2. When project cost estimates are developed by the sub-applicant (not a certified contractor), budget narratives should be included.
3. If available, include historical damage images properly labeled with the date of the event.
4. Cost estimates are often incomplete. Consider all potential costs, such as structural assessments, permit requirements for elevation certificates, soil studies, etc.
5. Provide complete statements of the problem to understand the flood risks experienced by the structure
6. Provide a scope of work detailing the required project activities.
   i. Regular elevation
      a. Be aware a structural assessment is required to demonstrate the proposed structures are structurally sound and capable of being elevated safely. This can be completed after the award but must be submitted within 12-months. The cost of the structural assessment should be included in your project cost.

b. Cost estimates should include the cost of obtaining a final elevation certificate.
c. When requesting a platform lift (for ADA accessibility), provide a physician's note.
d. Include proposed foundation type for the elevation to be completed.
e. Exterior finishes (particularly stucco) on foundations, are not eligible unless required by local/EHP ordinances.
f. Indicate the proposed elevation to raise the structure to.

ii. Mitigation Reconstruction

a. Be aware a structural assessment is required to demonstrate the proposed structure cannot be elevated. This can be completed after the award but must be submitted within 12-months. The cost of the structural assessment should be included in your project cost.
b. Be aware no new construction is allowed in the V Zone or floodway.
c. New structure size must not exceed 10% than original structure's foundation.

Acquisitions

1. Provide support documentation showing fair market value (not equal to the building replacement value).
2. Provide a clear plan or cost estimate for demolition and debris removal. For instance, accessory structures, septic tanks and pools are often not considered.

Mitigation Grants:

Eligible Projects and Application Pitfalls

Mitigation Bureau
Florida Division of Emergency Management

2024

Introductions

Laura Dhuwe

Bureau Chief - Mitigation

Agenda

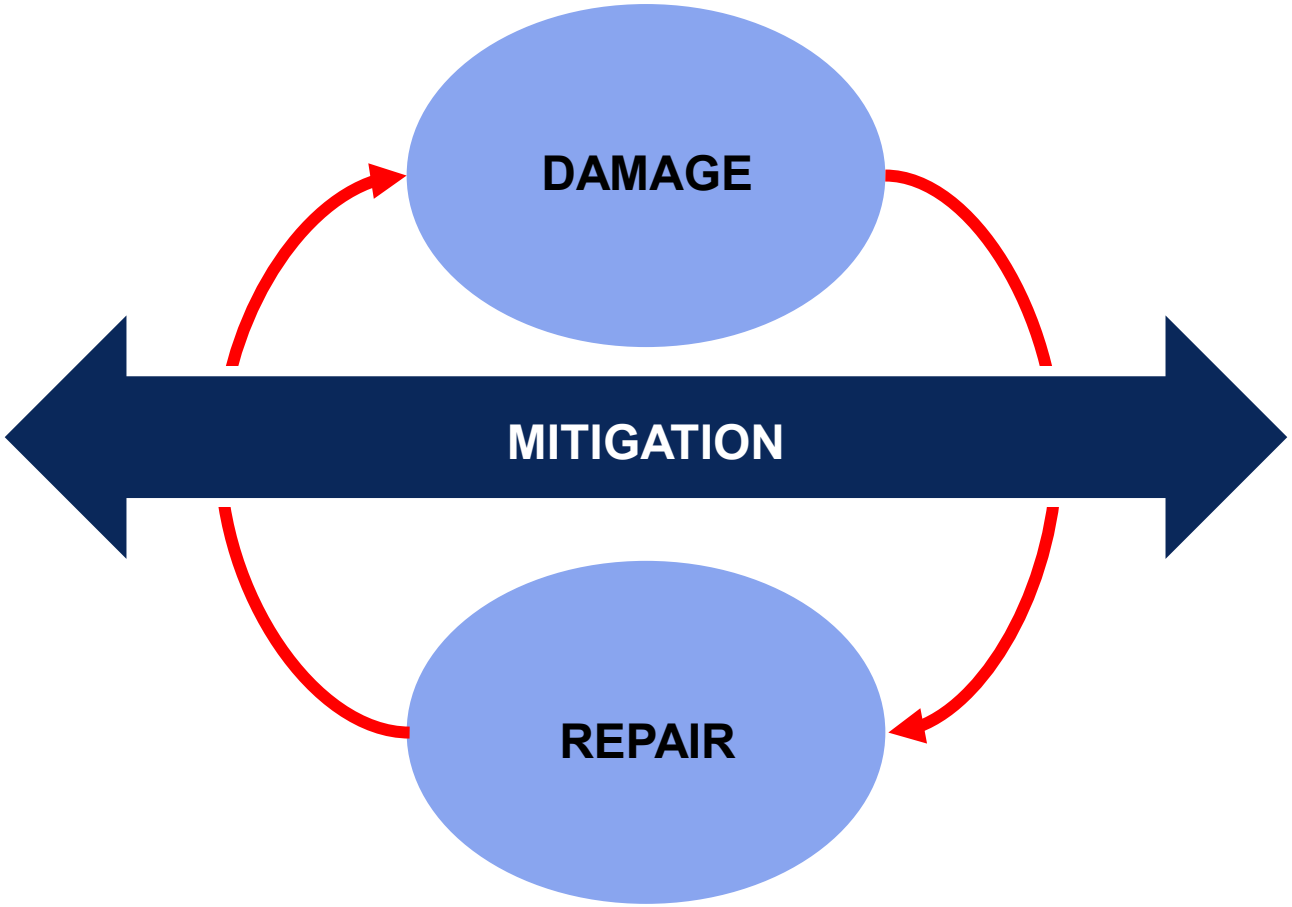
- Introductions
- Common Eligible Project Types
- Common Application Pitfalls
- Common Pitfalls and Best Practices: Specific Project Types
- Application Best Practices: All Project Types
- Final Takeaways
- Activity

What is mitigation?

Actions taken to reduce or eliminate long-term risk to people and property.

What Does Mitigation Do?

Mitigation breaks the cycle of disaster, damage, reconstruction and repeated damage



On average,

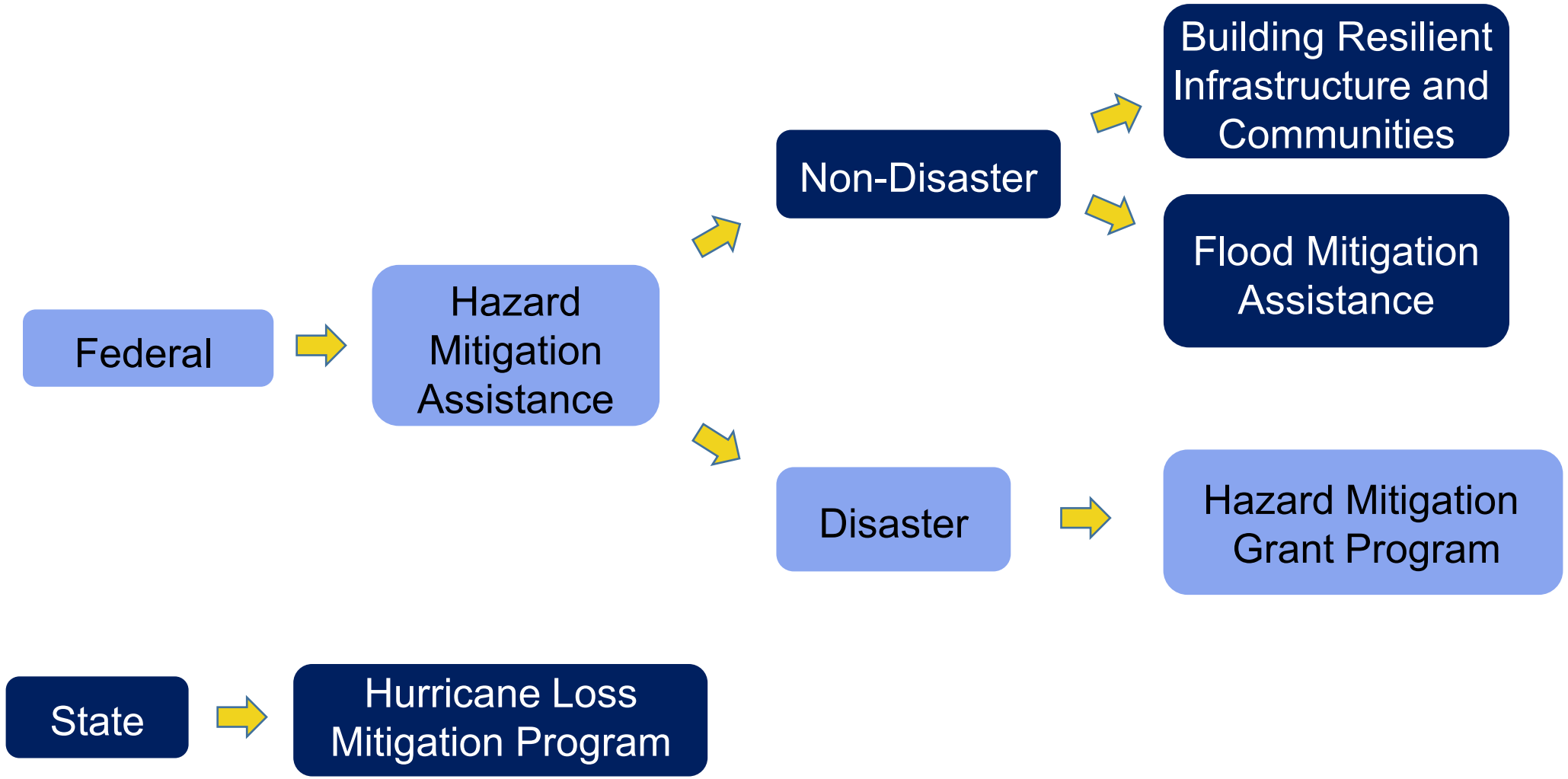
$1 spent on **HAZARD MITIGATION**

provides the **NATION** approximately **$6 IN FUTURE BENEFITS**

Source: National Institute of Building Sciences, Mitigation Saves Report

Common Eligible Mitigation Project Types

Mitigation Bureau Grant Programs



Eligible Project Activities

Project Type	HMGP	BRIC	FMA	HLMP*
Acquisition	✓	✓	✓	
Aquifer Recharge, Storage and Recovery	✓	✓	✓	
Bypass Pump	✓	✓		
Code Plus	✓	✓		
Dry Floodproofing (Non-Residential)	✓	✓	✓	
Elevation	✓	✓	✓	
Extreme Heat	✓	✓		
Flood Risk Reduction	✓	✓	✓	✓
Generator	✓	✓		
Infrastructure Retrofit	✓	✓	✓	

**The Hurricane Loss Mitigation Program (HLMP) is the only state-funded grant program*

Eligible Project Activities

Project Type	HMGP	BRIC	FMA	HLMP*
Mitigation Reconstruction	✓	✓	✓	
Other	✓	✓	✓	✓
Post-Wildfire Soil Stabilization	✓	✓		
Safe Room (Hurricane or Tornado)	✓	✓		
Secondary Power Source	✓	✓		
Stabilization	✓	✓	✓	
Structural Retrofit	✓	✓	✓	
Warning System	✓	✓		
Wet Floodproofing (Non-Residential)	✓	✓	✓	
Wildfire Mitigation	✓	✓		
Wind Retrofit	✓	✓		✓

Other Eligible Project Activities

Grant Program	List of "Other" Eligible Activities
Hazard Mitigation Grant Program (HMGP)	• Wastewater Treatment Plant Relocation
Building Resilient Infrastructure & Communities (BRIC)	• System Retrofit • Resilient Infrastructure
HMGP Post-Fire	• Defensible space measures • Ignition-resistant construction • Hazardous fuels reduction • Slope stabilization or post-wildfire flood reduction
Hurricane Loss Mitigation Program (HLMP)*	• Public Building Hardening • Tree Trimming and Removal • Mitigation Inspections

Acquisition

Property acquisition is the purchase of an existing at-risk structure to convert the land to open space.

- Consider pre-calculated benefits
  - $360k for acquisitions
- Intended to eliminate 100% damages
- Restores floodplain
- Land will be deed restricted in perpetuity
- Be aware of the HMA requirements and allowable cost

Code Plus

Code plus project is a wind retrofit project designed to exceed local codes and requirements to achieve a greater level of protection.

- Usually for new construction
- Designs must exceed local wind speed requirements
- Programs pays only the difference

Elevation

Structure elevation is the physical raising and/or retrofitting of an existing structure.

- Consider pre-calculated benefits
  - $228k for elevations
- Evaluate feasibility
  - Can the structure be elevated?
- Multi-hazard approach recommended
- Be aware of the HMA requirements and allowable cost when building your cost estimate

Floodproofing

Dry floodproofing techniques are applied to keep structures dry by sealing the structure to keep floodwaters out.

- Intended to provide maximum protection from flood to structures
- Mostly designed to provide 500-year protection
- Be aware of FEMA's requirements

Flood Risk Reduction

Flood risk reduction projects are designed to lessen the frequency of flooding or depth of flood water.

- Stormwater Diversion and Storage (ponds, lift stations, piping, upgrades, etc)
- Floodplain Stream Restoration
- Culverts
- Seawalls
- Road Elevation
- Other localized flood control projects

Infrastructure Retrofit

Infrastructure retrofit projects are actions to increase the resilience and mitigate the impacts of natural hazards while increasing the resilience of critical functions.

- Intended to avoid utility losses
- Allows community to recover faster
- Level of protection must provide protection to the 500-year event

Mitigation Reconstruction

Mitigation reconstruction is the construction of an improved, elevated structure where an existing structure is not structurally sound enough to be elevated.

- Consider pre-calculated benefits
  - $228k for elevations
- Provide documentation indicating a regular elevation cannot be completed.
- Be aware of the grant eligible activities and maximum federal cost-share cap

Safe Room

Safe room projects are designed and constructed to provide immediate life-safety protection for people in public and private structures from severe wind events, including hurricanes and tornadoes.

- Must comply with FEMA P-361/FEMA P-320
- Primarily intended to protect the lives of first responders
- Safe rooms are NOT to serve as long-stay shelters
- Review guidance and be aware of allowed activities

Secondary Power Source

Secondary power sources increase power system resilience and mitigate the impacts of natural hazards while increasing the resilience of critical functions.

- Generators
- Batteries
- Solar panels
- Diesel bypass pumps
- Other power source systems
- <u>Only for critical facilities and infrastructure</u>

Stabilization

Stabilization projects reduce risk to structures or infrastructure from erosion and landslides by installing geosynthetics, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with riprap and other means of slope anchoring.

- Bank or soil stabilization
- Intended to protect from catastrophic damages due to erosion
- Dredging is not considered and stabilization option an represents a maintenance project ineligible under mitigation

Wind Retrofit

Retrofits are modifications to existing structures to reduce or eliminate the risk of future damage and to protect inhabitants.

- Systemic protection to the entire building must be provided
- Consider pre-calculated benefits for residential and not residential buildings

Wildfire Mitigation

Wildfire mitigation projects mitigate at-risk structures and associated loss of life from the threat of future wildfire.

- Intended to protect nearby structures
- Defensible space
- Ignition-resistant building material
- Fire suppression systems
- Fuels reduction/vegetation management
- Post-wild flooding prevention and sediment reduction measures
- Prescribed burning is an ineligible activity

Warning System

Warning systems projects include equipment and systems to warn people about natural hazards such as earthquakes, tornadoes, wildfire, tsunamis and flash floods.

- Intended to monitor locations at risk to allows staff to act on time
- Prevents loss of service for large areas
- SCADA systems
- Flood prevention sensors

Common Pitfalls and Best Practices: Specific Project Types

Acquisition, Elevation, & Mit. Recon.

Common Pitfalls:

Acquisition

- Unsupported fair market value – not equal to building replacement value (BRV)

Elevation

- Lack of documentation verifying elevation feasibility for older buildings

Mitigation Reconstruction

- $220,000 federal share cap – local cost share feasibility
- New structure size is 10% greater than original structure
- Proposing to do reconstruction in the V Zone or floodway

Acquisition, Elevation, & Mit. Recon.

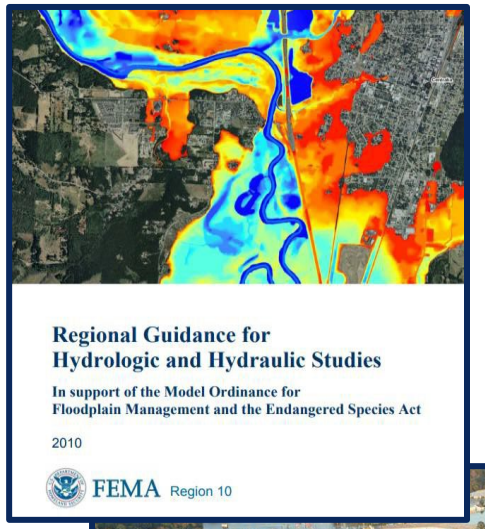
Best Practices:

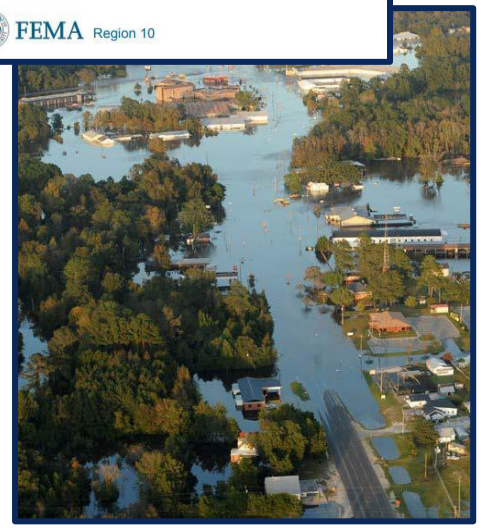
- Clearly identify the flood risk
  - Flood data should only come from one source
  - Provide multiple flood claims for each structure
  - Properly document the lowest floor elevation (LFE)
- Ensure proper application of Benefit-Cost Analysis (BCA) efficiencies
  - If using Pre-Calculated Benefits (PCB), have all requirements been met?
  - Clearly identify project location
  - If using substantial damage waiver approach, provide proof of substantial damage
- Clearly state accordance with the Federal Flood Risk Management Standard (FFRMS)

Flood Risk Reduction

Common Pitfalls:

- Unclear scope of work (SOW)
- Project does not address upstream and downstream impacts
- Hydrologic and hydraulic (H&H) results are based on a study that includes improvements other than the proposed project
- Regional estimates are used instead of best available, site-specific data
- Lack of supporting documentation for historical damages, downtimes and/or recurrence intervals (RIs)
- After-mitigation damages not included/inconsistent with level of protection in SOW

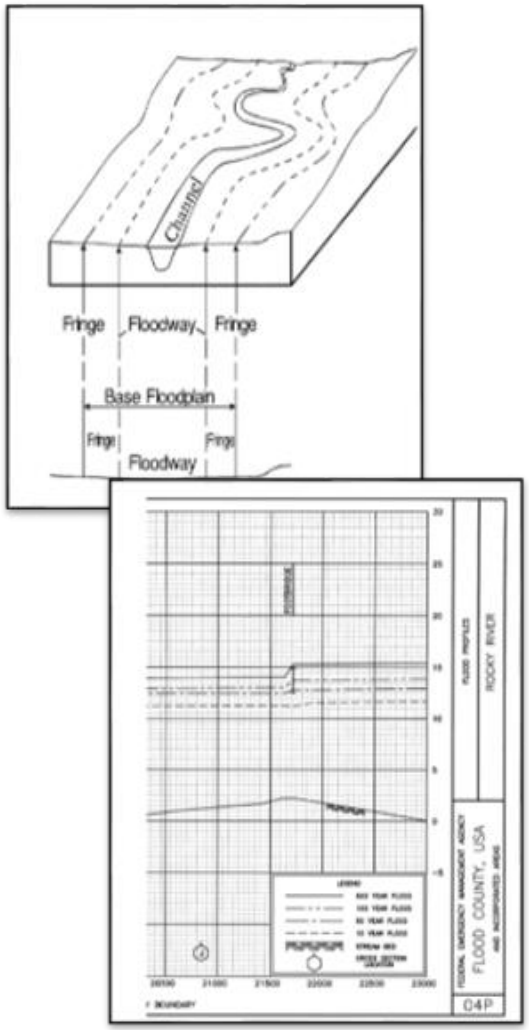




Flood Risk Reduction

Best Practices:

- Include pre- and post-project H&H data
  - Address water surface elevations for multiple recurrence intervals (RIs)
  - Document lowest floor elevations (LFE) for all structures (or elevation of vulnerable infrastructure – roads)
- Use reputable RI sources
- For coastal projects, identify nearest coastal transect to project site
- Use best available data
- Clearly define the level of protection
- Identify if a Conditional Letter or Map Revision/Letter of Map Revision (CLOMR/LOMR) is required



Energy Resiliency and Generators

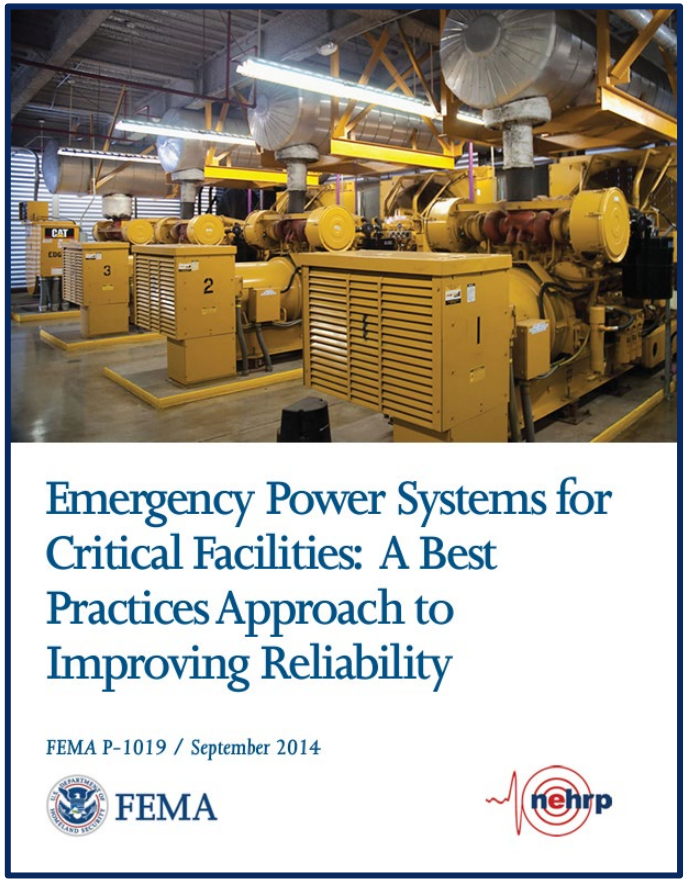
Common Pitfalls:

- Lack of documentation/explanation to support recurrence intervals (RIs) and loss of function impacts
- After-mitigation damages not included
- Lack of explanation regarding basis for required emergency power generation capacity
- Incorrect service type for loss of function

Energy Resiliency and Generators

Best Practices:

- Ensure emergency power needs are critical facilities
- Complete and multi-hazard solution
  - Account for required equipment
  - Account for protection of equipment under multi-hazards
- Describe conditions of existing electrical infrastructure and how proposed equipment will connect to it
- Establish clear basis for risk
  - Probability (recurrence interval)
  - Exposure (loss of function impact)
- Provide documented occurrences of loss of function



Safe Room

Common Pitfalls:

- Overestimating the number of safe room occupants in the Benefit-Cost Analysis (BCA)
  - Think of the location and the number of people in the area that can reach the safe room
  - Identifying the potential protected occupants from a 0.5-mile radius instead of the 0.5-mile travel distance (for tornado safe rooms)
  - Safe room does not meet the minimum space per occupant requirement
  - Including future student enrollment for schools without providing adequate documentation
- Use of historical damages module for safe room BCA
- Proposing to retrofit existing structures to be safe rooms without documenting feasibility
- Insufficient planning factors or logistics for large occupancy safe rooms
  - Examples: parking spaces, usable area
  - No documentation indicating existing residential road network can handle sudden influx of traffic

Safe Room

Best Practices:

- State that safe room will be designed/constructed in accordance with FEMA standards
  - FEMA P-361/FEMA P-320Include conceptual floor plan
  - Identify usable/unusable areas, restrooms with fixtures, mechanical/electrical/plumbing rooms and emergency power systems
- Provide support documentation
  - For safe room type, location, total gross area, total usable area, period of occupancy, design wind speed, protected population and where they are coming from
- Use an internal pressure coefficient of +/-0.55 as best practice
- Clearly define criteria for rebate and expected number of participants
  - For safe room rebate programs
- Include draft operations and maintenance (O&M) plan or statement that find O&M plan will be provided at project closeout

Slope Stabilization

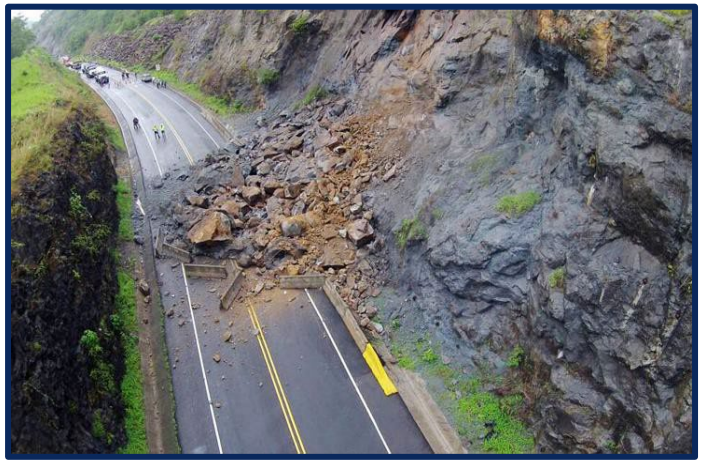
Common Pitfalls:

- Project description does not specify what will be protected
  - Projects must propose to protect/reduce risk to lives or property
  - If structures not acquired, scope of work (SOW) must address how they will be protected
- Incorrect application of imminent failure
  - Recurrence intervals (RIs) based on estimated time to imminent failure must be supported by documentation (engineer's report and/or statement)
- Incorrect/unsupported RIs
  - If RIs based on historical damages, analysis duration must be documented
  - For non-imminent failure, if the RI is less than the Project Useful Life, software interprets this as the slope and will fail multiple times instead of from one catastrophic failure

Slope Stabilization

Best Practices:

- Use landslide acquisition Benefit-Cost Analysis (BCA) module for acquisition of structures at risk of imminent failure
  - Document building replacement value (BRV)
- For slope stabilization projects, utilize the imminent failure methodology if applicable
- Provide documentation to support the estimated impact days with loss of function
- After-mitigation damages should represent residual risk (probability and expected damages of a future slope failure)



Wind Retrofit

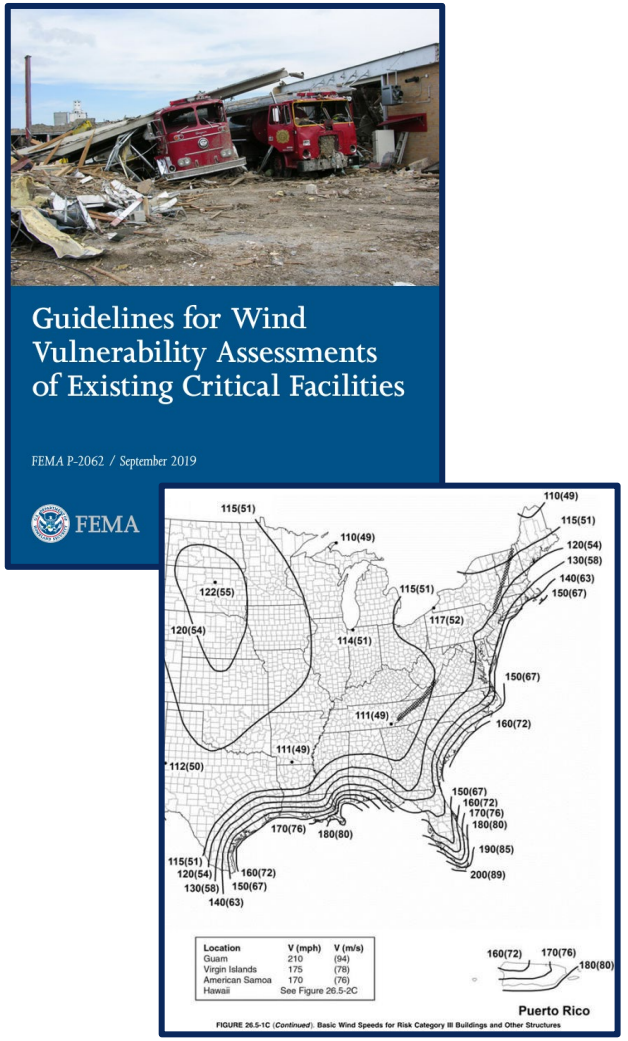
Common Pitfalls:

- Using impact protective systems with known vulnerabilities
  - Such as screens and films
- Project does not address all known building vulnerabilities
  - Example: Addressing only the windows and doors, but not the other building components (roof and/or load path)
- Using precalculated benefits when scope of work does not include all items required by the PCB memorandum (for non-residential buildings)
- Insufficient documentation for annual operating budget, building replacement value (BRV), and/or loss of function in the BCA

Wind Retrofit

Best Practices:

- Confirm roof, building envelope, and structural systems can resist current code-level wind speeds
- Provide a wind vulnerability assessment report indicating components in need of a wind retrofit
- Verify that impact-protective systems are rated to wind speeds and missile impacts for building type/location
- Specify process for inspecting and certifying retrofit
- Provide documentation for building properties before and after mitigation
- Leverage opportunities for pre-calculated benefits



Wildfire Mitigation

Common Pitfalls:

- Implementing ignition-resistant construction without defensible space measures
- Number of vulnerable structures and location of structures within project are not clearly defined
- Using a higher than appropriate project useful life (PUL) if implementing multiple mitigation actions
- Applying ecosystem services benefits when not applicable to project

Wildfire Mitigation

Best Practices:

- Provide documentation from qualified source for non-default burn recurrence intervals and other benefits if included
  - Example: fire suppression costs, timber value, infrastructure value
- Include information on treatment area and proximity to other structures
  - Provide maps showing clear project site boundaries and benefitting structures
- Clearly describe the radius of defensible space that will be provided, if applicable
- Include maintenance costs and clearly describe maintenance activities and how costs are determined
- For combined mitigation actions, clearly indicate which structures are receiving or being protected by each type of mitigation

Extreme Temps – Cooling/Warming Centers

Common Pitfalls:

- Not accounting for dual probability of power outage and extreme temperature event in back-up power projects
- Not considering how vulnerable populations can access the facility
- Using historical health risk data that does not clearly identify temperature-related health impacts

Best Practices:

- Consider other sheltering benefits besides life-safety benefits
- Document sheltering capacity for heat/cold sheltering events
- Apply conservative assumptions when estimating life-safety benefits

Common Application Pitfalls

Common Application Pitfalls

- **Unclear or incomplete scope of work (SOW)**
  - Project description does not clearly state the problem the project is attempting to mitigate
  - SOW conflicts with industry standards
- **Unclear conformance with program requirements**
  - Compliance with Hazard Mitigation Assistance (HMA) Program and Policy Guide
  - Compliance with BRIC and FMA program requirements
  - Eligible/ineligible costs
  - Project does not conform with minimum design standards
    - American Society of Civil Engineers (ASCE) 24 (structure elevation requirements)
    - FEMA P-361/ICC 500 (properly sized safe room)
- **Insufficient documentation**
  - Lack of technical data and/or preliminary engineering design
  - Unclear level of protection
  - Assumptions not clearly supported

Common Application Pitfalls

- **Application inconsistencies**
  - Conflicts within application sections
  - Conflicts between application and Benefit-Cost Analysis (BCA)
- **Cost estimate issues**
  - Incomplete, unreasonable, or unsupported
- **Issues with documentation of building/infrastructure features**
  - Building-specific information
    - Building type, use, occupancy, lowest floor elevations, building area, etc.
  - Infrastructure capacity
  - Population served
- **DEMES issues**
  - Waiting to register in DEMES and complete/submit the subapplication

Application Best Practices: All Project Types

Application Best Practices

- Reference minimum design criteria and ensure SOW is consistent with criteria
- If engineering/surveying documents are available, include stamped/sealed reports, plans, figures and/or data
- If preliminary design is not started, describe performance-based design measures, level of protection desired, and expected benefitting area
  - Example: *"Project will be designed to [describe level of protection, XYZ industry standard]. Upon completion of project, the benefitting area will be to protect [ABC]."*
- Make sure the "Phased Project" box is checked if you intend to submit a phased project
- Consider program priorities, Notice of Funding Opportunity (NOFO)
  - Building Resilient Infrastructure and Communities/Flood Mitigation Assistance

Application Best Practices

- Consider that mitigation actions addressing multiple hazards may provide greater benefits
- Leverage opportunities to incorporate nature-based solutions or green infrastructure into project scope of work, design documents, and budget
  - Indicate in FEMA GO (BRIC/FMA)
- Consider opportunities to incorporate system-based mitigation

Final Takeaways

Final Takeaways

- Ensure proposed activities are eligible
- Plan ahead – have required documentation ready
- Monitor changes in policy
- Follow application directions carefully
- Organization and accuracy are key!

Activity

Scenario 1

A city wants to use the HMGP to purchase a generator for their EOC to replace their current one.

The replacement would be the same capacity. However, the current one is nearing the end of its useful life.

Does this sound eligible?

Scenario 1 – Result

An EOC is a typical type of critical facility and therefore would be able to have a stand-alone generator project.

A good rule for mitigation is that the project must show some increased level of protection. The age of the existing generator must also be taken into consideration.

This would be considered an eligible project type as an ageing generator is an important problem to solve. Having a generator fail is the same as not having one, therefore the mitigation is justified.

Scenario 2

A home-owner wants to do a mitigation reconstruction to elevate their home that was previously damaged.

Working with their city, they include plans to also expand the footprint of their property and to move the structure to another part of their land, in addition to the elevation.

Does this sound eligible?

Scenario 2 – Result

The project type is eligible.

Mitigation reconstruction has certain restrictions that need to be taken into consideration, including the footprint of the new structure and its location.

This project would not be eligible as written and would need to be reworked to move forward, given the program restrictions.

Scenario 3

A city wants to do a wind retrofit on their city hall in the form of impact resistant glass.

The City wants to complete the project in phases, with the first phase mitigating half the windows with BRIC funds and the second phase covering the rest using an upcoming appropriation.

Does this sound eligible?

Scenario 3 – Result

The project type is eligible.

Some of the openings will be mitigated using BRIC funds, but it does not completely mitigate the structure within the scope of the project.

This would not be eligible as any project funded under the HMA programs must be a complete project fully executed within a single period of performance.

Scenario 4

County wants construct a saferoom for their first responders to be housed during a high wind events.

The structure will be a multi-purpose facility that will have non-emergency uses throughout the year when there is not an active event.

Does this sound eligible?

Scenario 4 – Result

The project type is eligible.

So long as the saferoom is designed for those first responders, the additional uses for the structure during blue skies is fine.

This would be an eligible project, although certain costs outside of the saferoom construction may not be covered and would need to be discussed ahead of time with FDEM.

Scenario 5

A county submits an application through DEMES with a clear scope of work.

The budget looks detailed, but the line items don't correlate to the activities in the scope of work.

The supporting documentation consists of outdated quotes from another similar project previously submitted under the HMGP.

Scenario 5 – Result

A clear scope of work gives us insight into what you're doing, but also how we can best help solve your problem with you.

A clear budget is needed at application and should line up with the scope of work.

Estimates should be up to date and relevant to the project being submitted. Even though the estimates were from a similar project, it's not acceptable to copy/paste to another project.

Scenario 6

A city submits and application for a localized flood mitigation project to install culverts.

The application appears to be solid with adequate supporting documentation.

The section for “population served” seems high and, after checking, looks to be the population of the city itself.

Scenario 6 – Result

The project type is eligible.

A solid application helps tremendously in speeding up review times as it reduced the need for requests for information (RFI).

However, little this like a throwaway estimate on the population served can result in an RFI to get the correct number.

Questions?

MARTIN COUNTY

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EDWARD V. CIAMPI	Commissioner, District 5	WEBSITE	www.martin.fl.us

January 31, 2025

Mrs. Laura Dhuwe
Acting State Hazard Mitigation Officer
Florida Division of Emergency Management
2555 Shumard Oak Blvd.
Tallahassee, FL 32399

RE: Watershed Planning Initiative Letter of Support and Acknowledgement

Dear Mrs. Dhuwe:

The Martin County Local Mitigation Strategy (LMS) Working Group acknowledges and supports Martin County's pursuit of FDEM's Watershed Planning Initiative to develop and implement a Watershed and Stormwater Master Plan for the South Fork of the St. Lucie River, Roebuck Creek, and Fern Creek Sub-watersheds. These efforts align with our locally adopted LMS Goals and Objectives and the State Hazard Mitigation Plan Goals and Objectives in accordance with 44 CFR 201.6.

Upon completion of Martin County's Watershed and Stormwater Master Plan for the South Fork of the St. Lucie River, Roebuck Creek, and Fern Creek Sub-watersheds, the LMS agrees to adopt this plan as an annex to Martin County's LMS.

We acknowledge that the LMS Working Group is not required to make any determinations related to funding for the Watershed Planning Initiative.

For further information or inquiry, please contact me at 772-463-2837 or gdzama@martin.fl.us.

Sincerely,

George Dzama, PE
Public Works Deputy Director
Martin County LMS Chair