

APPENDIX 5

Coordination of Local Mitigation Planning

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A.5a: New York State Mitigation Planning Standards



NYS Office of Emergency Management Hazard Mitigation Planning Standards

Dear Hazard Mitigation Partner:

Congratulations on taking the first steps to create or update a multi-hazard mitigation plan for your community! Based on New York State's disaster history, the State Office of Emergency Management (State OEM) recommends your mitigation plan consider incorporating the standards below from the earliest planning phases.

PLEASE NOTE: These will be "required actions" for any hazard mitigation plan developed with funds administered by State OEM and will be part of all contracts executed with grant recipients after October 15, 2012. All grantees are encouraged to include this information in their "Request for Proposals" and to provide it to their consultants before planning begins in earnest.

1. Counties and communities should invite (at a minimum) the following stakeholders when initiating the planning process and identifying strategies and specific projects:
 - County Hazard Mitigation Coordinators and Floodplain Professionals
 - County Emergency Managers
 - County Planners & GIS staff
 - County Soil & Water Conservation Districts
 - Regional & Metropolitan (Transportation) Planning Organizations
 - Delaware and Susquehanna River Basin Commissions (if applicable)
 - Local Hazard Mitigation Coordinators and Floodplain Managers
 - Local Code Enforcement Officials
 - Local Emergency Management (Emergency Manager, Fire & Police Chiefs)
 - Local Planners and planning consultants (if applicable)
 - Local Engineers and engineering consultants (if applicable)
 - Local Public Works or Highway Superintendents

Inviting and encouraging participation of the local officials noted above is the best way to ensure success in the planning phases that develop a community's mitigation strategies and identify its specific projects. Plans developed without the participation of land use or community planners, and DPW officials, engineers, or others personally familiar with past damages to local infrastructure are less likely to contain viable, innovative or useful projects.

The goal is to include the widest range of organizations and stakeholders to develop a hazard mitigation plan that best suits your community's unique needs. **Plans developed with State OEM-administered funds must document that the stakeholders above were invited to participate at each phase, and whether they did or not.**



2. As part of the analysis of critical facilities, counties and communities should identify mitigation strategies and projects for any such facility that has ever sustained flooding, even if it is not located in a 100-year floodplain on a current (adopted) or draft FEMA Flood Insurance Rate Map (FIRM). Per FEMA's Part 9 regulations, critical facilities as defined by FEMA should be protected to a 500-year flood event. Identified projects should include the information described in 5a below. If mitigation projects have already been performed to address or reduce previous flooding, with or without FEMA assistance, the plan should also analyze these and document:

- the original problem and the estimated annual damages;
- the project, its cost, and the damages avoided since implementation;
- other option(s) considered, their estimated costs, why they were deemed not feasible;
- how well the project performed in subsequent events, if your basic assumptions were accurate, and what you'd change if you were doing it again;
- social, economic or environmental considerations that support/challenge the project.

Critical public facilities include those for police, fire protection/emergency services, medical care, education, libraries, utilities and other essential community services, the administrative and support facilities essential to their operation (as defined by FEMA), as well as major communication centers and facilities designed for bulk storage of chemicals, petrochemicals, hazardous or toxic substances or floatable materials (as defined by NYS DEC).

Critical private non-profit (PNP) facilities include those for fire protection/emergency services, medical care, education, utilities, child care facilities, alcohol and drug rehabilitation facilities, custodial care, homeless shelters, libraries and other facilities that provide health and safety services of a governmental nature. Communities may also want to analyze risks to major employers and assess the economic impact of prolonged down-time due to disasters.

The goal is to ensure that critical facilities remain accessible and functional before, during and after disasters to meet the community's continuity of government (COG) and continuity of operations (COOP) needs, and to support important emergency, response, government and sheltering functions. Plans developed with State OEM-administered funds must document that proposed (or already implemented) projects will protect critical facilities to a 500-year flood event or the actual worst-damage scenario, whichever is greater.

3. Counties and communities containing a 100-year floodplain on either a current (adopted) or draft FEMA Flood Insurance Rate Map (FIRM) should identify:
- a. Sites for the placement of temporary housing units to house residents displaced by disaster. This can be an existing mobile home park, public or private land or parkland, or a site easily convertible to accept the temporary housing units, which, per the New York State Uniform Fire Prevention and Building Code, must have floor assemblies placed no less than 2' above the Base Flood Elevation (i.e., of the 100-year flood level). If sites are in a neighboring community, they should be discussed with that community and consistent with its mitigation and emergency plans, evacuation routes, etc.
 - b. Potential sites within the community suitable for relocating houses out of the floodplain, or building new houses once properties in the floodplain are razed. The exploration should identify all suitable sites currently owned by the jurisdiction, and potential sites under private ownership that meet applicable local zoning requirements and floodplain laws.



The goal is to provide more immediate short-term and long-term housing options to residents in flood-prone homes, to continue their active involvement in their neighborhoods, schools or places of worship, and to avoid or reduce personal hardship and impacts to the local economy and tax base. Plans developed with State OEM-administered funds must identify potential sites and any pre-disaster actions required to make them viable, and include a letter from the local floodplain administrator listing any actions required to ensure conformance with the NYS Uniform Fire Prevention and Building Code, the applicable local floodplain law, etc.

4. Communities with residential neighborhoods or critical facilities [see 2 above] that have been flooded, inundated, or isolated by water, even if they are not located in a 100-year floodplain on a current (adopted) or draft FEMA Flood Insurance Rate Map (FIRM), should develop evacuation routes and procedures (or analyze/update current evacuation routes and shelter procedures based on recent flooding) and identify shelters, including provisions for a range of medical needs, accommodation for pets, and compliance with the Americans with Disabilities Act (see www.ada.gov).

The goal is to protect residents and minimize stress and personal hardship during disasters. Plans developed with State OEM-administered funds must identify evacuation routes and shelters (or refer back to such components in an existing valid plan), any pre-disaster actions required to make them viable, evidence of coordination with adjoining communities, and a project lead/point of contact and timetable for implementing new items or revisions.

5. Counties and communities should incorporate the following items and features in the strategies and projects sections of their plans:
 - a. The Plan should include all mitigation projects on the community's wish list, even those that may not meet FEMA eligibility or Benefit-Cost Analysis requirements, since funding should be sought from multiple sources to achieve a community's mitigation goals most quickly. Each project identified should include a brief description of:
 - the problem and the estimated annual damages;
 - the preferred option, its estimate cost, and the estimated annual damages that will be avoided if it is implemented;
 - how the proposal might be eligible under grant criteria other than mitigation (e.g., coastal, sustainability or climate change initiatives, brownfield funds);
 - other option(s) considered, their estimated costs, and their challenges or why they were deemed not feasible;
 - the social, economic or environmental considerations that support/challenge it;
 - any steps that need to be taken (e.g., engineering studies) before the project can be implemented, the person(s) or organization(s) with lead and supporting roles in completing those steps, and an estimated timetable for completion.

The goal is to have all the community's projects in one place to easily and quickly identify viable candidates when grants are available from FEMA and other private, local, State or Federal agencies. Plans developed with State OEM-administered funds must use the attached template prepared by FEMA Region II as a starting point for developing a format to describe the projects identified in individual communities.



- b. The Plan should include a list of potential local, State and Federal funding sources that apply to the projects identified as well as public-private partnerships worth pursuing. This should include a brief description of the programs and links to webpages for those opportunities. (N.B.: lack of an identified funding source or program should not prevent a project's inclusion in a community's list of possible mitigation actions.)

The goal is to link identified projects with viable funding sources, and not to rely solely on the availability of FEMA funding, making implementation that much more likely. **Plans developed with State OEM-administered funds must include this list, which must incorporate active web links to the appropriate agency page.**

- c. The Plan should include a section that documents previous mitigation projects completed by the county or the jurisdiction within community's borders, whether funded locally or by private, state or federal agencies and organizations. Each project should include a brief description of:

- the original problem and the estimated annual damages;
- the project, its cost, and the damages avoided since implementation;
- the other option(s) considered, their estimated costs, and their challenges or why they were deemed not feasible;
- how well the project performed in subsequent events, if your basic assumptions were accurate, and what you'd change if you were doing it again;
- the social, political or environmental considerations that supported/challenged the proposal, and the stakeholders, approaches and other factors that contributed to its successful implementation.

The goal is to provide a context for the community's projects, to act as a source of ideas for mitigation projects and evaluate the accuracy of assumptions and engineering solutions to inform future, similar projects, and to support future mitigation planning and its coordination with other planning, zoning and environmental procedures within the community. **Plans developed with State OEM-administered funds must use the attached template prepared by FEMA Region II as a starting point for developing a format to describe its communities' already-completed projects.**

6. Jurisdictions should also take into account how climate change may affect their vulnerability to the following hazards, specifically the increased frequency of occurrence and/or severity for: Flooding, Wildfire, Drought and Extreme Temperatures.

If it is determined that climate change is likely to increase the frequency or severity of a specific hazard, jurisdictions should identify how they will adapt to or mitigate for these issues. Counties and communities with coastal property should also analyze their vulnerability to sea level rise.

The goal is to plan for and accommodate climate change and sea level rise to protect residents, avoid or reduce damage to property and public infrastructure, and reduce personal hardship. **Plans developed with State OEM-administered funds must include this information within their discussion of these hazards and must contain strategies and projects to address them.**



7. Draft plans should be placed on an existing county/community website, or one created for the purpose of soliciting comments, for 30 days or the time prescribed by local law, whichever is greater. The webpage should identify the name, mailing address, day phone and/or e-mail address for the person responsible for receiving and reviewing comments on the draft hazard mitigation plan. The final plan should also be placed on an existing county/community website, or one created for the purpose of educating the public about the community's mitigation initiatives, and should contain the contact information specified above for the person responsible for maintaining the plan and answering questions about it once it has been adopted.

The goal is to educate the public about how mitigation can both save lives and avoid repetitive property damage in times of diminishing local infrastructure budgets. Plans developed with State OEM-administered funds must be posted (draft plan during the public comment period, and final adopted versions after adoption) and must include the specified contact information.

8. For plans developed with State OEM-administered funds: final payment will occur only after 50% of the participating jurisdictions have adopted the FEMA-approved plan and provided adoption resolutions to State OEM. For county-led hazard mitigation planning efforts, the county must be one of the adopting jurisdictions.

Some of the standards listed above may be considered Response activities that do not meet the formal definition of Mitigation actions. They also may not be eligible for grant assistance under FEMA's hazard mitigation programs, and they will not "count" toward the strategy development or project identification that's required of participants in the mitigation planning process: communities must still identify projects that meet the traditional definition of mitigation for each natural hazard analyzed in their local plans.

However, these will be "required actions" for any mitigation plan developed with funds administered by State OEM, and part of all contracts executed with our grant recipients after October 15, 2012.

Questions? Contact the Hazard Mitigation Section at 518-292-2304 or NYSOEMHazMit@dhses.ny.gov.

Other Resources

The following online resources may also be helpful as you begin the mitigation planning process:

- [Mitigation Planning](#)
- [2008 Local Multi-Hazard Mitigation Planning Guidance](#)
- ["New" 2011 Local Mitigation Plan Review Guide](#) - Use this review guide & tool as FEMA will use it to review plans exclusively, beginning October 1, 2012 - see "fact sheet" below for details.
- [Fact Sheet - "New" 2011 Local Mitigation Plan Review Process](#)
- NYS Sea Level Rise Task Force materials and findings: www.dec.ny.gov/energy/25794.html.
- ["Hazard Mitigation: Integrating Best Practices into Planning"](#) by the American Planning Association (Planning Advisory Service Report Number 560).
- ["Disaster Resilience: A National Imperative"](#) by the Committee on Increasing National Resilience to Hazards and Disasters, the Committee on Science, Engineering, and Public Policy, and The National Academies: www.nap.edu/catalog.php?record_id=13457.

10/15/12



Action Title:	
Your Plan Name	
Your Community Name	
Community Action Number	
Risk	
Hazard(s) Addressed	
Risk Finding	
Action - description	
Action Category	
Action Type	
Action Description	
Existing, Future &/or N/A	
Action - evaluation	
Risk Reduction (losses avoided)	
Technical	
Political	
Legal	
Environmental	
Social	
Administrative Capability	
Local Champion	
Other Community Objectives	
Implementation	
Priority	
Local Planning Mechanism	
Responsible Party & Partners	
Cost Estimate	
Potential Funding Sources	
Time Line	
Progress	
Action Progress Status	



Floodproof Structures	
Your Plan Name	County A Hazard Mitigation Plan
Your Community Name	Village E
Community Action Number	Village E#1
Risk	
Hazard(s) Addressed	Flood
Risk Finding	Property damage of about \$100,000 per year. Business interruptions an average of 5 days per year.
Action - description	
Action Category	Structure/Infrastructure projects
Action Type	Floodproofing
Action Description	Floodproof 10 businesses in the downtown area
Existing, Future &/or N/A	Addresses existing structures
Action - evaluation	
Risk Reduction (losses avoided)	City's cost to repair flooded properties reduced by 90%; approximate saving of \$10,000 per year.
Technical	Technically feasible. Flooding problem in downtown area solved for the long-term; community's problem of business interruption solved.
Political	- More than half the members of the City Council are opposed to buy-outs; it might be easier to get their support for an alternative to buy-outs. - Will help improve CRS rating in the long term (so entire community's flood insurance premium will be reduced).
Legal	ok
Environmental	No adverse environmental effects
Social	ok
Administrative Capability	Need at least 3 people to administer (after technical assistance from the State)
Local Champion	Possibly from business community
Other Community Objectives	ok
Implementation	
Priority	High
Local Planning Mechanism	
Responsible Party & Partners	Village E (Public Works)
Cost Estimate	Floodproofing cost = \$10,000 X 10 = \$100,000
Potential Funding Sources	HMGP, RFC, SRL and FMA. For 25% local match, in-kind services.
Time Line	1 year
Progress	
Action Progress Status	New action proposed in 2012



Acquire Repetitive Loss Properties	
Your Plan Name	County A Hazard Mitigation Plan
Your Community Name	Village B
Community Action Number	Village B#1
Risk	
Hazard(s) Addressed	Flood
Risk Finding	12 Repetitive Loss Properties located in a neighborhood with combined losses of \$4.3 million over past 30 years.
Action - description	
Action Category	Structure/infrastructure projects and planning mechanisms
Action Type	Acquisition
Action Description	Acquire 12 of the Repetitive Loss Properties in neighborhood A
Existing, Future &/or N/A	Existing structures and future development
Action - evaluation	
Risk Reduction (losses avoided)	Removes flooding problem. May not pass benefit-cost analysis (BCA)
Technical	ok
Political	Potential effect on tax base. Support from residents for this voluntary program.
Legal	ok
Environmental	Adjacent to park so open space created can be used to extend park.
Social	ok
Administrative Capability	ok
Local Champion	no
Other Community Objectives	Supports open-space preservation
Implementation	
Priority	High
Local Planning Mechanism	Modify comprehensive plan and zoning to identify land as open space during next scheduled updates.
Responsible Party	Village B (Planning Department)
Cost Estimate	\$ 4.2 million
Potential Funding Sources	HMGP, RFC, SRL and FMA. For 25% local match, in-kind services, village open-space fund, Community Development Block Grant (CDBG) and NFIP Increased Cost of Compliance (ICC).
Time Line	3 years
Progress	
Action Progress Status	Ongoing. Obtained HMGP grant and acquired 5 of 12 flood-prone properties to date. See Progress Report for more information.



Acquire Repetitive Loss Properties - Short BCR	
Your Plan Name	County A Hazard Mitigation Plan
Your Community Name	Village B
Community Action Number	Village B#1
Risk	
Hazard(s) Addressed	Flood
Risk Finding	12 Repetitive Loss Properties located in a neighborhood with combined losses of \$4.3 million over past 30 years.
Action - description	
Action Category	Structure/infrastructure projects and planning mechanisms
Action Type	Acquisition
Action Description	Acquire 12 of the Repetitive Loss Properties in neighborhood A
Existing, Future &/or N/A	Existing structures and future development
Action - evaluation	
Benefits	Removes flooding problem. Support from residents for this voluntary program. Adjacent to park so open space created can be used to extend park.
Costs	Monetary cost, potential effect on tax base, may not pass benefit-cost analysis (BCA)
Implementation	
Priority	High
Local Planning Mechanism	Modify comprehensive plan and zoning to identify land as open space during next scheduled updates.
Responsible Party	Village B (Planning Department)
Cost Estimate	\$ 4.2 million
Potential Funding Sources	HMGP, RFC, SRL and FMA. For 25% local match, in-kind services, village open-space fund, Community Development Block Grant (CDBG) and NFIP Increased Cost of Compliance (ICC).
Time Line	3 years
Progress	
Action Progress Status	Ongoing. Obtained HMGP grant and acquired 5 of 12 flood-prone properties to date. See Progress Worksheet for more information.



A.5b: NYS FY 2013 Unified HMA Program Announcement

FY 2013 UNIFIED HAZARD MITIGATION ASSISTANCE (HMA) PROGRAM

DATE ANNOUNCED: August 29, 2013

FUNDS AVAILABLE FOR: Implementing Hazard Mitigation Projects

The New York State Division of Homeland Security and Emergency Services (DHSES) is pleased to announce the availability of Federal Emergency Management Agency (FEMA) FY 2013 Unified Hazard Mitigation Assistance (HMA) Program grants to qualified sub-applicants in New York State. This program is available only to qualified local and state government agencies and authorities. Individuals, businesses, or private non-profits (PNPs) are not eligible applicants and cannot apply.

What is the Unified HMA Program?

The Unified HMA Program consolidated the deadlines and many of the procedures for four earlier FEMA mitigation grant programs run annually and not tied to Presidential declarations. The Biggert-Waters Flood Insurance Reform Act of 2012 further revised the Unified HMA, leaving 2 non-disaster programs:

- Pre-Disaster Mitigation Program (PDM) to support planning and address all-hazards;
- Flood Mitigation Assistance Program (FMA) to address flooding.

These funds *are not* part of New York's response to Superstorm Sandy, including the Hazard Mitigation Grant Program (HMGP) announced on June 10, 2013 with Letters of Intent (LOIs) due August 1, 2013.

Information is available from our Regional Offices, on our website www.dhSES.ny.gov and on FEMA's website at <http://www.fema.gov/hazard-mitigation-assistance>. Please note the Guidance is effective for all Hazard Mitigation Grant Program (HMGP) activities for disasters declared on or after the July 12, 2013, and for the Programs opened with this announcement.¹

State Priorities

The State will accept applications for projects mitigating Severe Repetitive Loss (SRL) properties, as determined by FEMA and the National Flood Insurance Program (NFIP). Please note communities or counties without a valid all-hazards mitigation plan cannot apply for this grant cycle. These priorities

¹ Page numbers used in this notice refer to FEMA's "Hazard Mitigation Assistance Unified Guidance" document, which remains valid for this year's grant cycle and can be found on DHSES's website, with this mailing, and on FEMA's website at <http://www.fema.gov/library/viewRecord.do?id=7851>.



were established to maximize funding, and because the State has recently offered several opportunities for communities to create or update all-hazards plans and access grants for flood-damaged properties:

- DHSES processed \$3.5 million in grants supporting planning efforts covering 13.4 million people in its Irene and Lee HMGP cycle, and offered planning grants again in its Sandy HMGP;
- Since 2012, New York State offered acquisition and elevation grants in its combined Irene and Lee HMGP cycle (closed), the still-open NY Rising Program (www.NYSANDYHELP.ny.gov and 1-855-NYS-SANDY), and the \$16 million Mohawk Valley, Niagara County and 2013 Upstate Flood Recovery Program (<https://flood2013.aidrc.com/> and 888-769-7243), also still open.

More importantly, FEMA has cut the application development period from 180 to 90 days, and advised its priorities will focus on SRL program activities, which offer Federal reimbursement up to 90% (compared to the normal 75%) because the appropriated funding is smaller than in years past.

The State will also prioritize the acquisition of properties substantially-damaged by flooding after the LOI window closed on its last HMGP cycle August 1, 2013. (Substantial damage determinations must be made by the local administrator with jurisdiction under a local floodplain law.)

Important Requirements

Subapplicants should carefully review the following sections of FEMA's "Hazard Mitigation Assistance Unified Guidance" document

- "Additional Program Information" (Guidance pg. 3), which explains the document's format;
- Funding limits for the Programs (Guidance pp. 39 -41);
- Program requirements (Guidance pp. 87 and 89);
- Eligible activities (Guidance pp. 22-29), including activities that are eligible only when included as a functional component of eligible mitigation activities (Guidance pg. 12);
- Ineligible activities (Guidance pg. 28 and 30). Please read this carefully.

Eligible Activities

Per FEMA's guidance, the following are examples of eligible activities at SRL properties:²

- Acquisition and demolition or relocation of structures, with the conversion of underlying property to deed-restricted open space;
- Elevation of existing structures to at least the Base Flood Elevation (BFE) or an Advance Base Flood Elevation (ABFE) or higher. (New York State requires BFE plus two feet.)
- Dry floodproofing (historic structures only);
- Minor and localized flood reduction projects.

How to Apply

² Please note: All properties must be National Flood Insurance Program-insured at the time of application. The State will not accept applications for mitigation reconstruction projects.



Please note: The State is handling its registration process differently for this grant cycle.

Only SRL communities designated by FEMA are eligible to apply, and proposed activities must mitigate SRL properties within those communities with current National Flood Insurance Program (NFIP) policies. A list of SRL communities is included with this announcement and on the DHSES website www.dhSES.ny.gov/oem/mitigation/, as is the LOI that must be used for eligible sub-applicants with SRL properties to register.

Eligible sub-applicants will be notified of the application process. Applications must be filed using FEMA's electronic grants (*e-Grants*) system located at <http://www.grants.gov/>. After completing the pre-registration process, sub-applicants must notify DHSES to have their access validated. Sub-applicants will have to provide DHSES with an original and two paper copies of any supporting documentation that cannot be electronically attached to the e-Grant application.

Important 2013 Deadlines

September 6 @ 5:00 pm: Applicants must submit LOIs

October 4 @ 11:59 pm: Complete applications must be submitted via FEMA's eGrants system.

October 18: DHSES must submit its applications to FEMA via eGrants.

Information Dissemination

To disseminate program information to the widest possible eligible audience, DHSES has placed program information on its website and disseminated it to County Emergency Managers, Mitigation Coordinators and Planners, as well as regional and metropolitan planning organizations, soil and water conservation districts, and other mitigation stakeholders and partners.

If you have questions or need further information, please visit www.dhSES.ny.gov/oem/mitigation or telephone DHSES's Mitigation Section at (518) 292-2304.



A.5c: HMA Planning Activity Application, Evaluation, and Ranking System**NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES
STATE HAZARD MITIGATION OFFICE****PLANNING ACTIVITY APPLICATION EVALUATION AND RANKING SYSTEM FOR PRE-
DISASTER MITIGATION (PDM), FLOOD MITIGATION ASSISTANCE (FMA), AND
HAZARD MITIGATION GRANT PROGRAM (HMGP)****I. Requirement for Planning Activity Application Evaluation and Ranking**

The Robert T. Stafford Act, as amended by Public Law 106390, October 30, 2000, Section 203 Pre-disaster Hazard Mitigation Sub-Section (d) State Recommendations- (C) Criteria, references use of criteria established in sub-section (g) in determining awards for assistance (Allocation of Funds). In summary, the criteria includes; extent & nature of hazards to be mitigated, degree of commitment, contribution to mitigation goal/priorities of State & similarly, consistent with own plan, consistent with other assistance provided by this Act, extent of eligible activities produce meaningful /definable outcomes are clearly define, maximize net benefits to society, extent to which assistance funds activity in small impoverished communities, and such other criteria the President establishes.

II. Planning Activity Application Evaluation and Ranking Methodology

Given the potential number of planning applications likely to be submitted by eligible applicants for the Pre-Disaster Mitigation (PDM), Flood Mitigation Assistance (FMA), and Hazard Mitigation Grant Program (HMGP) funding, it is imperative that the applications be evaluated and ranked using an objective methodology. The methodology to be used entails the selection of activity and application evaluation and ranking criteria as identified above from the Stafford Act. It also establishes assignment of weights - based on importance - to each criterion and the scoring of each criterion as presented in the planning activity application. The product of the criteria weights and the criteria scores for the plan application being evaluated will provide weighted scores. The sum of the weighted scores will be used towards the planning application final score. The final score that is used for ranking purposes will be the total sum of a review board members scores.

Prior to submission to the Project Review Board (PRB), project applications are first reviewed by NYSDHSES Mitigation Section staff for completeness. All planning activity applications reviewed by the PRB are also checked to insure that the proposed activity conforms with Federally established eligibility criteria. Eligibility criteria as described in the Stafford Act, and supporting documents such as 44 CFR, Chapter 1 Part 201 Mitigation Planning, Subpart N, Hazard Mitigation Grant Program, Section 206, and the implementing regulation for the Flood Mitigation Assistance program. In particular the applications



should be clear that mitigation plan development will follow Disaster Mitigation Act (DMA) 2000 criteria.

III. How to Use the Planning Activity Ranking Form

1. Assign a score to the evaluation and rating criteria for each planning activity application using a scale of 0 to 10, with 0 being assigned to criterion that is not applicable to the activity or not addressed at all, even though required, and 10 being assigned to a criterion that is addressed in an excellent manner.
2. Multiply the criterion weight by the criterion score to obtain a weighted score for each evaluation and rating criterion.
3. Add all weighted scores to obtain a Total Weighted Score for each applicant. This will comprise the activity application score for use in establishing a prioritized list that will be submitted to FEMA for review and approval.



A.5d: FEMA Mitigation Policy – FP-108-024-01

 FEMA MITIGATION POLICY – FP-108-024-01
I. TITLE: Consideration of Environmental Benefits in the Evaluation of Acquisition Projects under the Hazard Mitigation Assistance (HMA) Programs
II. DATE OF ISSUANCE: JUN 1 8 2013
III. POLICY STATEMENT: FEMA will allow the inclusion of environmental benefits in benefit-cost analyses (BCA) to determine cost effectiveness of acquisition projects.
IV. PURPOSE: The purpose of this policy is to identify and quantify the types of environmental benefits that FEMA will consider in the BCA for acquisition projects.
V. SCOPE AND APPLICABILITY: This policy applies to the Pre-Disaster Mitigation (PDM) and the Flood Mitigation Assistance (FMA) Programs for which the application period is open on or after the date of this policy and to the Hazard Mitigation Grant Program (HMGP) for major disasters declared on or after the date of issuance of this policy. Further, the policy only applies to property acquisitions for the purpose of open space and subsequent relocations or demolitions.
VI. AUTHORITY: Sections 203 and 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) (42 U.S. Code [U.S.C.] §§ 5133; 5170c) authorize the PDM Program and HMGP, respectively. Section 1366 of the National Flood Insurance Act of 1968 (NFIA), as amended by the Biggert-Waters Flood Insurance Reform Act of 2012, (42 U.S.C. § 4104c) authorizes the FMA Programs. Regulations that implement the HMGP can be found at Title 44 Code of Federal Regulations (CFR) §§ 206.430–206.440. The FMA Program regulations can be found at Title 44 CFR Part 79. Regulations for property acquisition and relocation for open space can be found at Title 44 CFR Part 80. General requirements for BCA can be found in the Office of Management and Budget's (OMB) Circular A-94, <i>Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs</i> .





FEMA

MITIGATION POLICY – FP-108-024-01

VII. OBJECTIVE:

The objective of this policy is to incorporate environmental benefits into the BCA used to demonstrate cost effectiveness for acquisition projects funded by FEMA's HMA Programs.

VIII. DEFINITIONS, ABBREVIATIONS, AND FORMATTING:

Benefit-Cost Analysis: A quantitative procedure that assesses the cost effectiveness of a hazard mitigation measure by taking a long-term view of avoided future damages as compared to the cost of a project.

Benefit-Cost Ratio (BCR): A numerical expression of the cost effectiveness of a project calculated as the net present value of total project benefits divided by the net present value of total project costs.

Environmental Benefits: Environmental benefits are direct or indirect contributions that ecosystems make to the environment and human populations. For FEMA BCA, certain types of environmental benefits may be realized when homes are removed and land is returned to open space uses. Benefits may include flood hazard reduction; an increase in recreation and tourism; enhanced aesthetic value; and improved erosion control, air quality, and water filtration.

Greatest Savings to the Fund (GSTF) Methodology: The GSTF methodology measures the expected savings of a mitigation project over a specific time period, such as 30 years. This methodology is based on actual National Flood Insurance Fund (NFIF) losses for severe repetitive loss properties.

Green Open Space: Green open space is land that does not directly touch a natural body of water such as a river, lake, stream, creek, or coastal body of water.

HMGP 5-percent Initiative: Some mitigation activities are difficult to evaluate using FEMA BCA methodologies. Up to 5 percent of the total HMGP funds may be set aside by the Grantee to pay for such activities.

Property Acquisition and Structure Demolition: The voluntary acquisition of an existing at-risk structure and, typically, the underlying land, and conversion of the land to open space after the demolition of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.

Property Acquisition and Structure Relocation: The voluntary physical relocation of an existing structure to an area outside of a hazard-prone area, such as the Special Flood Hazard Area (SFHA) or a regulatory erosion zone and, typically, the acquisition of the underlying land. Relocations must conform to all applicable state and local regulations. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.





FEMA

MITIGATION POLICY – FP-108-024-01

Riparian Area: The land that directly abuts a natural body of water such as a river, lake, stream, creek, or coastal body of water.

Special Flood Hazard Areas (SFHAs): The land in the floodplain within a community subject to a 1-percent or greater chance of flooding in a given year. An area having special flood, mudflow, or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map (FIRM) (e.g., Zones A and V).

Substantial Damage Waiver Policy: For acquisition and structure demolition or relocation projects only, structures identified in a riverine SFHA on the current effective FIRM and declared by a local authority having such jurisdiction to be substantially damaged by flooding, property acquisition and structure demolition or relocation is considered cost effective and a BCA is not required to be submitted for the structure.

IX. POLICY DETAILS:

A. Background

Statutes that authorize mitigation programs (FMA at 42 U.S.C. 4104e, PDM at 42 U.S.C. 5133, and HMGP at 42 U.S.C. 5170c) require that FEMA provide funding for mitigation measures that are cost effective or are in the interest of the NFIF. FEMA has specified minimum project criteria via regulation (44 CFR 79 and 44 CFR 206.434), including that Applicants must demonstrate mitigation projects are cost effective. The determination of cost effectiveness is typically demonstrated by the calculation of the BCR, or the division of the net present value of the benefits by the net present value of the costs. Projects where benefits equal or exceed costs are considered cost effective.

To assist States and local communities, FEMA has developed a toolkit that standardizes the evaluation of cost effectiveness and quantifies the financial and social benefits of a proposed mitigation activity. Typical mitigation project benefits are derived from avoided damage to structures and contents, avoided deaths and injuries, and avoidance of other quantifiable losses that a mitigation project can significantly reduce or eliminate.

To integrate environmental benefits into the BCA Toolkit, it was important to determine which mitigation activity would best achieve these benefits. One prime example is property acquisition. Acquisition projects are funded by the FEMA's FMA, HMGP, and PDM Programs to mitigate flood hazards. To date, 38 percent of all HMA funds have been allocated for acquisition-related activities.

The inclusion of environmental benefits in the evaluation of acquisition projects supports the use of ecosystem-based management, which is encouraged by the Federal Insurance and Mitigation Administration (FIMA) and the U.S. Army of Corps of Engineers as part of the Federal Interagency Floodplain Management Task Force. In this context, incorporating environmental





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benefits into the overall quantification of project benefits for acquisition projects supports FEMA's mission of risk reduction, environmental compliance, and the preservation of the natural and beneficial functions of the floodplain.

FEMA collaborated with private, public, and academic sectors to develop an Environmental Benefits Analysis Report (EBAR), which identifies benefits produced by deed-restricted open space. The EBAR contains peer-reviewed academic journal articles, agency analysis, and private studies examining the economic value provided by lands both inside and outside the SFHAs. These studies provide a sound basis for generating economic values useful to FEMA. The results of the EBAR were used to develop FEMA's quantification of environmental benefits for open green space and riparian areas in the BCA Toolkit.

Regional variations in dollar values as well as differences in rural and urban areas were considered, but it was concluded that normalizing the environmental benefits through the value transfer method used in the BCA Toolkit was appropriate. While there will be a need in the future to re-study both green open space and riparian environmental benefits, FEMA believes the economic valuation used in the EBAR and in this policy are reasonable to be included in a BCA.

B. Environmental Benefits

Since FEMA has a primary mission to reduce or eliminate future damage from natural hazards where possible, project benefits from acquisitions must be derived primarily from avoided future damage, displacement, and other direct damage. Acquisition-related mitigation activities have proven to be the most effective example of hazard mitigation; therefore, FEMA has incorporated an environmental benefits methodology into its BCA Toolkit for acquisition-related mitigation activities. Acquisition-related activities permanently remove at-risk structures from the most vulnerable areas of the floodplain, thereby eliminating the cycle of damage, reconstruction, and repeat damage. Additionally, the inclusion of environmental benefits into the BCA Toolkit for acquisition-related activities supports floodplain management recommendations to restore and maintain the natural and beneficial functions of the floodplain.

The BCA Toolkit will automatically include environmental benefits for projects calculated to have BCRs of 0.75 or greater using traditional benefits. The environmental benefits for green open space or riparian areas are based on the size (in square feet) of the land (lot) being acquired. The inclusion of environmental benefits into the BCA does not apply to acquisition projects that are approved under the following methodologies:

- The Substantial Damage Waiver policy
- The Savings to the NFIF Methodology (GSTF)
- The HMGP 5-percent Initiative





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Table I shows the types and values of environmental benefits included in the BCA for acquisition-demolition or acquisition-relocation projects:

Table I: Annual Estimated Monetary Benefits per Acre per Year

Environmental Benefit	Green Open Space	Riparian
Aesthetic Value	\$1,623	\$582
Air Quality	\$204	\$215
Biological Control	--	\$164
Climate Regulation	\$13	\$204
Erosion Control	\$65	\$11,447
Flood Hazard Reduction	--	\$4,007
Food Provisioning	--	\$609
Habitat	--	\$835
Pollination	\$290	--
Recreation/Tourism	\$5,365	\$15,178
Storm Water Retention	\$293	--
Water Filtration	--	\$4,252
Total Estimated Benefits	\$7,853	\$37,493

Table II shows total estimated benefits per acre per year and the total estimated benefits per-square-foot for green open space and riparian land use; the benefits can accrue for any lot size. The green open space and riparian values used in this policy are calculated per square foot per year using the OMB-approved 7 percent discount rate applied over the project useful life. The environmental benefits accrue over a projected 100-year lifespan of the acquisition-related activity. For green open space, the accumulated benefit is estimated as \$2.57 per square foot per year. For riparian areas, the accumulated environmental benefit is estimated as \$12.29 per square foot per year.





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Table II: Green Open Space and Riparian Benefits Allowed in the BCA Toolkit

Land Use	Total Estimated Benefits	Total Estimated Benefits (projected for 100 years with 7 percent discount rate)
Green Open Space	\$7,853 per acre per year	\$2.57 per square foot
Riparian	\$37,493 per acre per year	\$12.29 per square foot

C. Limitation

Because the fundamental purpose of the HMA Programs is to reduce future damage to property, environmental benefits are not included in the BCA unless the project BCR is 0.75 or greater. Additionally, the inclusion of environmental benefits in the BCA is limited to acquisition-related activities until further study of other mitigation activities (e.g., detention basins) can be completed.

X. ROLES & RESPONSIBILITIES:

Roles and responsibilities herein for all Federal, Grantee/Applicant, and subgrantee/subapplicant participants are consistent with those outlined in 44 CFR Parts 13, 79, 80 and 206 subpart N (for HMGP Projects), and the HMA Unified Guidance.

XI. MONITORING AND EVALUATION:

The performance of an awarded grant will be monitored in accordance with the financial and performance reporting requirements outlined in 44 CFR Parts 13, 79, 80, and 206 subpart N (for HMGP Projects), as well as the HMA Unified Guidance. In addition, all awarded grants must comply with the administrative and audit requirements of 44 CFR Parts 13 and 206 subpart N (for HMGP Projects), as well as the terms and conditions of the grant award agreement.

XII. RESPONSIBLE OFFICE:

FIMA, Risk Reduction Division, Grants Data Analysis and Tools Branch

XIII. SUPERSESSION:

This policy does not supersede any other policy on this subject.



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XIV. ORIGINATING OFFICE:
FIMA, Risk Reduction Division

XV. REVIEW DATE:
This policy will not automatically expire, but will be substantively reviewed on or before 3 years from the date of issuance.



David L. Miller
Associate Administrator
Federal Insurance and Mitigation Administration

This policy represents FEMA's interpretation of a statute or regulation. The policy itself does not impose legally enforceable rights or obligations but sets forth a standard operating procedure or agency practice that FEMA employees follow to be consistent, fair, and equitable in the implementation of the agency's authorities.

