FEMA

MITIGATION INTERIM POLICY
MRR-2-07-1

I. TITLE:

Hazard Mitigation Assistance for Safe Rooms

II. DATE OF ISSUANCE: March 7, 2008

III. PURPOSE:

Provide guidance on the use of Hazard Mitigation Assistance (HMA) funding for extreme wind mitigation activities including safe rooms under the Pre-Disaster Mitigation program (PDM) and the Hazard Mitigation Grant Program (HMGP). This policy will ensure national consistency in the use of mitigation funds for the construction or retrofit of residential, non-residential, or community safe rooms for the primary hazard mitigation purpose of immediate life safety protection against extreme wind hazards for a limited at-risk population that cannot evacuate out of harm's way prior to an event.

For the purposes of HMA, the term "safe room" only applies to:

- tornado residential, non-residential, and community safe rooms; and
- hurricane community safe rooms; as well as
- combined tornado and hurricane community safe rooms.

IV. SCOPE AND APPLICABILITY:

PDM

This policy applies to PDM projects for which the application period opens on or after the date of this policy.

HMGP

This policy applies to HMGP projects for which funding is made available pursuant to a major disaster declared on or after the date of this policy.

However, States may request that this policy apply to all HMGP projects submitted during the application period but not yet approved, for disasters declared before the date of this document. States seeking this option will contact their Regional Administrator with a written request specifying the disaster(s) for which they are requesting this policy apply.

V. AUTHORITY:

Sections 203 (PDM) and 404 (HMGP) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5133 and 5170c.

VI. BACKGROUND:

The Stafford Act authorizes FEMA to provide funding for the purpose of reducing or eliminating risks to life and property from hazards and their effects. Mitigation grant program regulations and guidance that implement these authorities identify various types of hazard mitigation projects or activities that meet this purpose and may be eligible for funding. These projects represent a range of activities that protect structures, the contents within those structures and/or the lives of their occupants.

Wind mitigation projects for the primary hazard mitigation purpose of structural and building envelope protection are eligible activities under HMA programs. These projects are intended to reduce or eliminate damage to the structure and its contents, and to ensure continuation of facility function. Examples include window protection and roof protection activities. These wind mitigation projects may apply to residential and non-residential buildings, including public and commercial facilities. In some cases these projects may afford some limited ancillary life safety protection. However, neither the structures nor the hazard mitigation activities are designed to a level intended to protect lives during an extreme wind event.

Extreme wind mitigation projects including residential, non-residential, and community safe rooms for the primary purpose of immediate life safety protection are also eligible activities under certain HMA programs. In extreme wind events such as hurricanes, the general population is expected to leave the area of anticipated immediate impact and seek shelter outside the at-risk area. However, some people such as responders and those physically unable to leave the area remain in harm's way. Therefore, for hurricane threats, FEMA will only consider funding extreme wind mitigation projects that are designed for a specific population that cannot remove themselves from harm's way during a land-falling hurricane. In extreme wind events such as tornados, the threat posed affords little to no warning to allow the general population to leave the area of immediate impact and therefore they must seek immediate life safety protection. This limits the potential occupancy of tornado residential, nonresidential, and community safe rooms to onsite occupants only, or those within close proximity.

In order to provide immediate life-safety protection during extreme wind events a structure has to meet design criteria intended for this specific purpose, which are higher than design criteria for structure and building envelope protection. In some cases, these projects also afford some ancillary level of structural and building envelope protection to reduce or eliminate damage to

the structure and its contents and to ensure continuation of facility function; however, the primary hazard mitigation purpose of these projects is event-only life safety protection from immediate impact of extreme wind events as they occur.

HMA is not available for general population shelters, including evacuation or recovery shelters intended to provide services and housing for people leaving the anticipated impact area of an extreme wind event, or because their homes have been damaged or destroyed by extreme wind events, fire, disasters, or catastrophes. Such general population shelters are not intended to sustain the extreme wind event and are not routinely required to satisfy the higher design criteria consistent with hazard mitigation residential, nonresidential, and community safe rooms as established in FEMA Publications 320 and 361. In addition, the hazard mitigation time of protection for safe rooms is to provide 2 hours for tornado events and 24 hours for hurricane events. These time periods also differentiate hazard mitigation event-only safe rooms from longer-term evacuation and recovery shelters.

VII. POLICY:

FEMA will consider an extreme wind event mitigation activity consisting of the retrofit or construction of a residential, nonresidential, or community saferoom (single- or multi-use) to be an eligible project type for HMA grant awards as follows:

- where it provides immediate life-safety protection in the target area of impact of a striking hurricane and/or tornado; and/or
- where it is designed only to the extent it is necessary for the limited population that must remain in the impact strike area during a hurricane; and
- to the extent it is necessary for the limited time period that a hurricane and/or tornado event is occurring; and
- where the mitigation measure is consistent with the identified risk to be mitigated; and
- where the mitigation measure is constructed with criteria recognized by FEMA and verified by a relevant design professional; and
- where allowable safe room project costs are directly related to and necessary for the primary purpose of providing immediate life safety protection to the limited population required to remain in the impact zone during an extreme wind event; and
- where adequate operations and maintenance planning are demonstrated; and
- where other general HMA program conditions are demonstrated, as shown in HMA program-specific guidance.

Accordingly, this policy establishes the following eligibility parameters for HMA safe room projects:

- eligible activities,
- design standards,
- period of protection,
- population protected,
- allowable costs,
- operation plan, and
- maintenance plan.

A. Eligible Activities and Design Standards.
Extreme wind mitigation project activities for the design and construction of new safe rooms, as well as for the design and retrofitting of existing buildings or portions thereof for the primary hazard mitigation purpose of providing event-only life safety protection from tornado and/or hurricane hazards, are eligible for HMA funding consideration. These mitigation activities are available to residential, commercial, and public structures. In all cases these projects must result in a completed safe room constructed with criteria recognized by FEMA and verified by a relevant design professional.

Eligible safe room HMA activities are limited to:

- tornado residential, non-residential, and community safe rooms; and
- hurricane community safe rooms; as well as
- combined tornado and hurricane community safe rooms.

Hurricane safe rooms for residential structures are not eligible for hazard mitigation assistance.

To qualify for HMA funding, a tornado residential, non-residential safe room, or a tornado community safe room provides event-only life safety protection when it complies with FEMA recognized design and construction criteria, codes, or standards. Any safe room designed to a lower design criteria, and hence, providing a lower level of protection, results in a greater degree of risk than is acceptable to FEMA and is, therefore, not eligible for HMA funding. FEMA recognizes acceptable life safety protection for safe room occupants if project application documentation shows that the safe room project meets or exceeds the criteria set forth in the applicable publications or standards listed below:

- FEMA Publication 320 *Taking Shelter from the Storm: Building a Safe Room Inside Your House;*
- FEMA Publication 361 *Design and Construction Guidance For Community Shelters;*

- The *Association Standard for the Design, Construction and Performance of Storm Shelters*, from the National Storm Shelter Association (NSSA); or
- The *Standard on the Design and Construction of Storm Shelters* (ICC-500), A consensus standard from the International Code Council (ICC) and the NSSA (currently available as a published consensus draft with a final version anticipated in April 2008).

To qualify for HMA funding, a hurricane community safe room or a combination tornado and hurricane community safe room provides event-only life safety protection when it complies with FEMA recognized design and construction criteria, codes, or standards. FEMA recognizes acceptable life safety protection for hurricane or tornado/hurricane community safe room occupants if project application documentation shows that the community safe room meets or exceeds the criteria set forth in either of the two publications or standards listed below. Any hurricane community safe room or a combination tornado and hurricane community safe room designed to a lower design criteria, and hence, providing a lower level of protection, results in a greater degree of risk than is acceptable to FEMA and is, therefore, not eligible for funding under FEMA's hazard mitigation assistance programs:

- FEMA Publication 361 *Design and Construction Guidance For Community Shelters*; or
- The *Association Standard for the Design, Construction and Performance of Storm Shelters*, from NSSA.

As described above, ICC-500 is acceptable for use in designing tornado safe rooms. However, FEMA is reviewing the ICC-500 standard for use as design criteria for hurricane community safe room projects under PDM and HMGP. The review of this document should be completed in April 2008 and may result in an update to FEMA-361 and this policy.

B. Population Protected and Period of Protection.

To be eligible for funding under HMA, FEMA will only consider safe room projects that provide life safety protection to a specific population facing the immediate threat of impact from a land-falling hurricane or a strike from a tornado.

FEMA will only consider HMA applications for safe room projects that identify the safe room population facing an imminent threat against either or both tornado or hurricane hazards. This is the population that the applicant will identify and quantify so the size and anticipated population of the safe room may be verified during the grant review process. This is demonstrated by risk analysis information such as that developed as part of a mitigation plan or evacuation plan.

For tornado residential and nonresidential safe rooms, this population is typically the family or group of families that live in the dwelling or dwellings served by the safe room, or workers that are provided access to a safe room at their place of business.

For tornado or tornado/hurricane community safe rooms, this population is comprised of individuals that must stay in the area that may be impacted by the extreme wind hazard (such as emergency workers and responders), and individuals who cannot otherwise safely evacuate on their own (such as those physically unable, the elderly, *etc.*) from the path of a hurricane or tornado.

The applicant will demonstrate consideration of at least the following components in determining eligible safe room population:

- population protected within the area at risk of impact by either or both tornado or hurricane hazards;
- warning capabilities, logistics, and operations components that support basic safe room functions;
- travel times for the population to be protected to reach the safe room, such that people are not exposed to additional risk when moving to the protected area; and
- hazard mitigation time of protection: 2 hours for tornado and 24 hours for hurricane;
- relationship of the population to be protected to State or local emergency evacuation requirements.

To be considered, HMA applications for safe room projects will demonstrate design for life safety protection for a duration related to the specific period of onset for the tornado event and/or for the hurricane event. The hazard mitigation time of protection for safe rooms, consistent with the ICC-500 standard requirements, is to provide 2 hours of protection for tornado events and 24 hours of protection for hurricane events.

C. Allowable Costs.

Allowable costs for HMA safe room projects are those project components such as design and building costs directly related to and necessary for the primary purpose of providing immediate life safety protection to the limited population that must remain in the impact area during an extreme wind event. This includes projects for safe rooms that are either retrofits of existing facilities or new construction projects, and applies to both single and multi-use facilities.

FEMA will only consider as eligible costs those that are consistent with FEMA approved performance criteria (FEMA 320, 361, NSSA, ICC-500), which generally includes:

1. Design activities;

2. Site preparation and building foundation materials and construction;
3. Structural systems capable of resisting the design wind loads (including roof decking and roof support structures);
4. Protective envelope components such as:
   - walls, ceiling/roof systems and doors; and
   - other retrofit hardening activities that meet FEMA approved performance criteria; and
5. Functional components such as:
   - permanent electrical lighting, ventilation, heating/cooling, toilets and hand-washing facilities consistent with FEMA approved performance criteria; and
   - signage, emergency communications equipment, back-up power generation for the safe area; and
6. Operations and Maintenance Plan development.

Project components not directly related to the hazard mitigation purpose of event-only life safety protection for the limited population as described in this policy are not eligible for funding consideration. Similarly, project components not consistent with FEMA approved performance criteria (FEMA 320, 361, NSSA, or ICC-500) are not eligible for funding consideration. Therefore, FEMA will not fund the cost of any functionality or outfitting not directly required to meet FEMA approved performance criteria. Ineligible non-mitigation components include items such as auditorium seating, sports equipment, furniture, interior or exterior decorative elements and fixtures, floor treatments, *etc.*

Costs associated with the applicant's determination of safe room population to be protected as described in Section B above are not eligible for funding consideration. In addition, costs associated with the operation and maintenance of safe rooms are not eligible for funding consideration.

In general FEMA may allow hazard mitigation funding consideration for all necessary code-required mitigation-related project components. However, in the case of retrofits, pre-existing conditions of code non-compliance that local or State officials are obligated to remedy are not eligible for hazard mitigation funding consideration.

D. Operations and Maintenance Plan.

To be considered for funding, HMA community safe room projects will include a draft operations and maintenance plan at the time of application. This information will demonstrate that the requested community safe room will be operated and maintained to achieve the proposed hazard mitigation. FEMA will only consider draft operations and maintenance plans that are consistent with criteria available in FEMA Publication 361

Design and Construction Guidance For Community Shelters Chapter 9 and the samples provided in Appendix C.

Subgrantees will provide a final operations and maintenance plan to the grantee prior to performing any retrofit or construction activities as part of the funded project. The grantee will provide the final plan to FEMA after they have affirmed its general consistency with FEMA 361 criteria. FEMA will then review the final plan and determine if it is consistent with FEMA 361 criteria. Grantees may only approve the start of subgrantee retrofit or construction activities after they receive FEMA's determination of the plan's general consistency with FEMA 361 criteria.

E. Other general requirements
Mitigation activities must adhere to all other PDM or HMGP statutes, regulations, and requirements that apply to this funding category, including: Sections 203 and 404 of the Stafford Act; Hazard Mitigation Grant Program (44 CFR Subpart N); Mitigation Planning (44 CFR Part 201); Floodplain Management and Protection of Wetlands (44 CFR Part 9); Environmental Considerations (44 CFR Part 10), Uniform Administrative Requirements (44 CFR Part 13); Floodplain Management (44 CFR Part 60) other applicable federal environmental and grants management laws as well as applicable program guidance.

VIII. ORIGINATING OFFICE:

Mitigation Directorate (Risk Reduction Division Grants Policy Branch)

IX. SUPERSESSION:

This policy supersedes previous mitigation policies and guidance related to this subject including:

- HMGP Memorandum: July 12, 1999, From: Michael J. Armstrong, Associate Director for Mitigation; Subject "Cost Effectiveness of Residential Safe Room Projects;"
- HMGP Memorandum: September 1, 2000, From: Michael J. Armstrong, Associate Director for Mitigation; Subject "Standards for FEMA funding of high wind and tornado shelters and facility retrofits;"
- HMGP Memorandum: January 10, 2001, From: Michael J. Armstrong, Associate Director for Mitigation; Subject "Funding Criteria for the Construction or Retrofit of Community Shelters and Safe Rooms;"
- HMGP Memorandum: July 12, 2001, From: Roberts F. Shea, Acting Administrator Federal Insurance and Mitigation Administration; Subject "Clarification of Funding Criteria for the Construction or Retrofit of Community Shelters and Safe Rooms;"

- HMGP Email: September 7, 2006, From: Michael Grimm, Deputy Director Risk Reduction Division; Subject "HMGP projects involving Public Shelters."

X. REVIEW DATE:

Not later than three years from date of publication.

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Mitigation

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