

Annex F: Plan Implementation

Contents of this Annex

F.1 Project Website On-line Tool (work-in-progress)

Note to Draft NJ4 HMP Reviewers: The contents of Annex F in the April 17, 2015 Draft NJ4 HMP submittal consists of excerpts from content that will be added to the Project Website and maintained indefinitely.

Consistent with Mitigation Measure M-1 in all the NJ4 HMP Appendices, this information and resource base will be linked to the County OEM websites and where possible, links will also be established from and to the municipal OEM websites.

The intent is to create a way to provide consistent information about risk and mitigation to any interested party within the region without each jurisdiction having to maintain its own resource library. The website content will be updated periodically to make sure information about grant programs and risk information is as current as possible.

The first excerpt is the content of the initial webpage, an outline with dropdown menus from which all other information will be accessed. The other excerpts are highlighted on the initial outline and are representative of the depth and breadth of information that will be available.

Work-in-progress includes developing the cross linkages between hazards, projects, and funding sources so interested parties can enter the information base from different directions but still connect with all relevant data..

Draft

This page is intentionally blank.

Mitigation Plan for Four New Jersey Counties On-line Funding Resource Information

Taking a hazard mitigation project from paper to implementation requires a meaningful strategy, strong cooperation between government agencies, and effective stakeholder and public engagement. In setting priorities for projects to pursue, it's important to consider which projects will have real impacts and are attainable, not just those projects that are eligible for funding under the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance (HMA) programs. Limited and competitive funding in the annual grant programs (Pre-Disaster Mitigation and Flood Mitigation Assistance), and Hazard Mitigation Grant Program (HMGP) funding available only after presidentially declared disasters can mean missed opportunities for implementing projects that reduce risk.

Communities can start by considering mitigation actions that require little or no federal funding to be implemented. Building codes, land use management, and public outreach campaigns are all effective means of reducing risk. Implementing these measures may require cooperation between departments – for example, coordinating between Emergency Management officials and the Safety & Permits department to implement freeboard elevation requirements. Or it could mean establishing partnerships with non-governmental organizations to distribute public information on low cost retrofit measures to address minor flooding. Such actions can have real impacts while communities work to secure federal or state funding for other hazard mitigation projects.

Limited in-house resources in local government agencies can require outside technical assistance. Local colleges can provide planning or GIS assistance. Nonprofits, foundations, and professional organizations dedicated to hazard mitigation, resilience, and climate adaptation can provide resources, research, and in some cases, direct assistance to implement projects. Exploring outside technical resources and establishing relationships with these organizations can expand the capabilities of local government agencies with limited staff or in-house capabilities.

Maintaining strong relationships with neighboring communities is critical when implementing hazard mitigation projects. Hazards cross municipal boundaries and certain projects, such as major flood risk reduction measures and drainage improvements, will require multi-jurisdictional implementation. Furthermore, coordinating with other municipalities on data acquisition and management initiatives and public outreach campaigns allows communities to combine resources and meet shared goals to reduce risk in their region.

Mitigation Plan for Four New Jersey Counties On-line Funding Resource Information

This on-line tool provides information on mitigation measures and possible funding mechanisms. In order to utilize this tool you can search by hazard, mitigation measure, or funding type. Select one of the three drop-down menus below to begin.

Hazards

Coastal Erosion and Sea Level Rise

Dam Failure

Drought

Earthquake

Extreme Temperatures–Cold & Hot

Flood

High Wind

Geologic Hazards

Levee Failure

Severe Weather - Summer

Severe Storm–Winter Weather

Wildfire

Work-in-Progress

Mitigation Plan for Four New Jersey Counties On-line Funding Resource Information

Mitigation Measures

Outreach and Education Activities and Programs

- Public Outreach and Education
- Special Interest Outreach and Education

Data Acquisition and Management Activities and Programs

- Critical Facility Evaluation
- Hazard Identification and Risk Assessment

Capabilities and Coordination Activities and Programs

- Plan Maintenance
- Plan Integration
 - Emergency Operations Plans
 - Master Plans and Land Development Regulations
 - Floodplain Management Programs
 - Other Planning Initiatives
- Information Technology
- Equipment

Mitigation Projects

- Back-up Emergency Power
- Property Protection
 - Hardening Critical Facilities and Infrastructure
 - Private and Public Property Flood Mitigation
 - Private and Public Property Wildfire Mitigation
- Drainage and Stormwater Management System Improvements
- Natural Resources Protection
- Warning Systems
- Security Systems

Mitigation Plan for Four New Jersey Counties On-line Funding Resource Information

Funding Sources

Local Funding Options

- Capital Improvement Programs
- Permits, Fees, and Developer Contributions
- Force Account / In-Kind Services
- Individual Participation
- Public-Private Partnerships

State Grants and Assistance

- New Jersey Forest Fire Services
 - Community Wildfire Hazard Mitigation Assistance Program
- New Jersey Department of Environmental Protection
 - Blue Acres Program
 - Green Acres Program
- New Jersey Department of Transportation
- New Jersey State Police, Office of Emergency Management
- New Jersey Geological and Water Survey
- New Jersey Department of Environmental Protection

Foundations

- Local
 - Public Service Electric and Gas Company Foundation
- Regional
 - Community Foundation of New Jersey
 - Fund for New Jersey
- National
 - ADP Foundation
 - Campbell Soup Foundation
 - Geraldine R. Dodge Foundation

Federal Grants and Assistance

- Department of Homeland Security
 - Staffing for Adequate Fire and Emergency Response
 - Fire Prevention and Safety Grant Program
 - Community Assistance Program State Support Services Element
- Federal Emergency Management Agency
 - Hazard Mitigation Grant Program
 - Pre-Disaster Mitigation
 - Flood Mitigation Assistance
 - Public Assistance
 - Emergency Management Performance Grant Program
 - Fire Management Assistance Grants
 - Risk Mapping, Assessment, and Planning
 - Building Science Branch

Mitigation Plan for Four New Jersey Counties On-line Funding Resource Information

- U.S. Department of Housing and Urban Development
 - Community Development Block Grants Disaster Recovery Assistance
- U.S. Department of Commerce
 - National Oceanic and Atmospheric Administration
 - New Jersey Sea Grant Consortium
 - Resilient Communities and Economies
 - StormReady Program
 - Bay Watershed Education and Training (B-WET)
 - Environmental Literacy Grants
 - Economic Development Administration
 - Public Works and Economic Adjustment Assistance Programs
 - Planning and Local Technical Assistance Programs
- U.S. Department of Agriculture
 - Emergency Watershed Protection – Recovery
 - Emergency Watershed Protection – Flood Plain Easement
 - Rural Community Development Initiative
 - Community Forest and Open Space Program
 - Rural Business Enterprise Grants
 - Rural Economic Development Loan and Grant
 - Community Facility Grant
 - Emergency Community Water Assistance Grants
 - Housing Preservation Grants
 - Emergency Conservation Program
 - Emergency Forest Restoration Program
- U.S. Department of Energy
 - Weatherization Assistance Program
- U.S. Army Corps of Engineers
 - Flood Risk Management Services Program
 - Planning Assistance to States
 - Silver Jackets
- U.S. Environmental Protection Agency
 - Environmental Education Local Grants Program
 - Healthy Watersheds Consortium Grant Program
 - Urban Waters Grant Program
 - National Estuary Program

Technical Assistance

- Professional Associations
- University Centers
- National Programs and Models
 - National Firewise Communities Program

Work-in-Progress

This page is intentionally blank.

Hazards

Coastal Erosion and Sea Level Rise

Coastal erosion is a dynamic process that is constantly occurring at varying rates along the coasts and shorelines of the United States. Numerous factors can influence the severity and rate of coastal erosion including human activities, tides, the possibility of rising sea levels, and the frequency and intensity of hurricanes. Strong storms and hurricanes can erode large sections of coastline with a single event. The process of coastal erosion results in permanent changes to the shape and structure of the coastline. Human activities, such as poor land use practices and boating activities, can also accelerate the process of coastal erosion.

Global sea level is the average height of all the Earth's oceans. "Global Sea Level Rise" refers to the increase currently observed in the average global sea level, which is primarily attributed to changes in ocean volume due to two factors: ice melt and thermal expansion. Long-term variations in sea level occur over various time scales, from months to several years, and may be repeatable cycles, gradual trends, or intermittent anomalies. Seasonal weather patterns, variations in the Earth's declination, changes in coastal and ocean circulation, anthropogenic influences (such as dredging), vertical land motion, and the El Niño Southern Oscillation are just a few of the many factors influencing changes in sea level over time. When estimating sea level trends, a minimum of 30 years of data are used in order to account for long-term sea level variations and reduce errors in computing sea level trends based on monthly mean sea level. Accounting for repeatable, predictable cycles, such as tidal, seasonal, and interannual variations allows computation of a more accurate long-term sea level trend.

For additional information about coastal erosion and sea level rise, visit the National Oceanic and Atmospheric Administration's (NOAA) coastal hazards page at: <http://oceanservice.noaa.gov/hazards/natural-hazards/>.

Additional resources include:

- Region II – Coastal Analysis and Mapping, <http://www.region2coastal.com/bestdata>
- National Climate Assessment, <http://nca2014.globalchange.gov/>
- Intergovernmental Panel on Climate Change, <http://www.ipcc.ch/>
- NOAA Tidal Gauges, <http://tidesandcurrents.noaa.gov/>
- NOAA Digital Coast, <http://coast.noaa.gov/slr/>
- USGS Sea Level Rise, <http://cegis.usgs.gov/>
- Surging Seas, <http://sealevel.climatecentral.org/>
- Rutgers NJ Flood Mapper. <http://slrviewer.rutgers.edu/>
- Jacques Cousteau NERR, <http://jcnerr.org/>
- New Jersey Department of Environmental Protection Climate Change, <http://www.nj.gov/dep/sage/climate-energy.html>
- Northeast Regional Climate Center, <http://www.nrcc.cornell.edu/>
- Atlantic Oceanographic and Meteorological Laboratory, <http://www.aoml.noaa.gov/>
- Center of Excellence for Geospatial Information Science: Sea Level Rise – SLR New Jersey Animation, <http://cegis.usgs.gov/video/30m/NewJerseySLR.swf>

Mitigation Opportunities for Coastal Erosion and Sea Level Rise include:

- Outreach and Education Activities and Programs
- Hazard Identification and Risk Assessment
- Master Plans and Land Development Regulations
- Property Protection
- Drainage and Stormwater Management System Improvements
- Natural Resources Protection

Work-in-Progress

This page is intentionally blank.

Mitigation Measures
Emergency Back-up Power

An emergency power supply system, commonly referred to as “back-up generators”, consists of an engine-driven generator connected to a system of conductors, disconnecting and over-current protection devices, transfer switches, supervisory and support devices (including fuel storage), as well as in some cases, the load terminals of the transfer equipment. Back-up generators can either be permanently fixed on site (standby), or can be utilized as needed (portable) by facilities which have the appropriate connections installed. Back-up power systems must maintain access to fuel in order to be able to be operational.

Specific project types include:

1. Back-up Emergency Power Generator
2. Back-up Emergency Fuel Supply

Work-in-Progress

Mitigation Measures Emergency Back-up Power

Back-up Emergency Power Generator

Generators can either be portable or standby. Portable Generators¹ significantly vary in type, fuel sources, and capacity. Most emergency mobile power systems operate on diesel and/or liquefied natural gas fuel. Diesel serves as a cheaper and safer option for mobile power systems when compared to the volatility and price of gasoline. Power ratings for single phase mobile power systems range from 1000 watt to 60kW² or more, and fuel tank size is relative to the projected run times for a generator operating at 50% load.

Standby generators are stationary applications that range in capacity to support emergency power needs of homes, small businesses, and industry. Standby generators come in single phase and three phases with power ratings ranging from 120/240V to 100kW or more. Fuel source options include diesel, gasoline, and natural gas.³

Voltage for generators designed to supply smaller facilities, e.g., homes and small businesses, typically are configured to supply 120/240V however, range from single to three- phase systems.

The National Fire Protection Association (NFPA) provides a standard for back-up generators, "NFPA 110-Standard for Emergency and Standby Power Systems."⁴ Power systems addressed by the standard include transfer equipment, controls, supervisory equipment, power sources, and all related electrical and mechanical auxiliary and accessory equipment needed to supply electrical power to the load terminals of the transfer equipment. The standard provides requirements for emergency and standby power system installation, maintenance, operations, and testing.

NFPA 110 categorizes emergency power supply systems into the three categories as shown in the table below:

NFPA 110 Categories

NFPA Category	Description
Class	Defined by the minimum number of hours the generator set can operate at its rated load without refueling ⁵ . The most common back-up power systems are Class 48 and Class 72. Selection of Class should take into consideration past outage records and fuel delivery issues due to weather, shortages, and other geographic/environmental obstacles. Storage tanks providing fuel to emergency power supply systems must be sized to meet Class requirements. ⁶
Type	Maximum time, in seconds, from a power disruption until the standby generator is supplying power which corresponds to the amount of time the load terminals of the automatic transfer switches (ATS) can be without acceptable electrical power (i.e. Type 10 systems operate as an alternate power source within 10 seconds).
Level	Level of equipment installation, performance, and maintenance requirements. Level 1 is most stringent and imposed when failure of the standby system could result in loss of human life or serious injury and requires additional generator features. Level 2 is used when failure is less critical to life and safety and the jurisdictional authority shall permit a higher degree of flexibility than that provided by a Level 1 system.

¹ <http://www.powercomplete.com/Generators/MobileGenerators/MobilePowerSystems.s.html>

² <http://www.electricgeneratorsdirect.com/power/extra-large-emergency-portable-generators.html>

³ <http://www.electricgeneratorsdirect.com/power/commercial-standby-generators.html>

⁴ National Fire Protection Administration. "Standard for Emergency and Standby Power Systems, 2013 Edition" Document Scope. (2012)

⁵ Brown, Bill, "Emergency and Standby Power Systems" Section 10, http://static.schneider-electric.us/assets/consultingengineer/appguidedocs/section10_0307.pdf, accessed on July 31, 2012

⁶ National Fire Protection Administration. "Standard for Emergency and Standby Power Systems. 2013 Edition" Annex A4.2

Mitigation Measures

Emergency Back-up Power

NFPA 2011 also includes standards relative to maintenance and testing of emergency systems. To comply with NFPA 2011, all emergency power supply systems with ancillary equipment, including transfer switches, are required to be tested weekly and exercised under load at least monthly, for a minimum of 30 minutes. The NFPA standard also requires exercising of circuit breakers annually, with more frequent exercising required for breakers in excess of 600 volts that must be exercised every six months and tested every two years under simulated overload conditions. Level 1 emergency power supply systems must be tested for at least four hours, at least once every 36 months.⁷ Specific requirements for maintenance and testing include the presence of a witness, the maintenance of a written record, and testing under maximum load conditions.

Another consideration is switching devices. Critical loads from the normal utility must be transferred to the standby power source by means of a switch. An automatic transfer switch is self-acting equipment for transferring one or more load conductor connections from one power source to another and are available in ratings from 30-50 A, and up to 600V. This type of switch is a common means of transferring critical loads to the emergency/standby power supply. Automatic switches consist of a switching means and control system capable of sensing the normal supply voltage and switching over to the alternate power source upon failure of the normal power source.

Other load transfer mechanisms include electrically operated circuit breakers, bypass/isolation switches, manual switches, and static transfer switches. Bypass/isolation switches are utilized to bypass other transfer switches and connect the source directly to the load and allow isolation of the transfer switch for maintenance.⁸

Manual Transfer Switches (MTS) are generally the least expensive and least complicated of the two types of transfer switches. MTS requires manual start and shut down of the generator. Manual transfer switches come in various sizes and different configurations to support specific emergency power generation systems. Both portable and stationary generators may use manual transfer switch equipment.

Automatic Transfer Switches (ATS) monitor the power supplies and automatically switch from the normal (utility) supply over to the generator supplied power source in the event of a power outage. ATS equipment may have different control and alarm features. An ATS, with built in logic, monitors the utility power, senses any power disruptions, and switches to an alternate power source.

Some ATS equipment is equipped to start and stop the generator according to predetermined maintenance schedules. This assures the back-up generator works properly and is tested regularly. In the event of a utility power failure, it is common for an ATS to automatically start back-up generators and transfer the facility's power source from the utility to the generator. When utility power is reestablished, the ATS will automatically transfer back to the normal supply and shut the generator down.

Specific Projects Include:

- Upgrade wiring to allow for generator hookup
- Purchase tow for mobile generator

⁷ Kraft Power Corporation, "NFPA 110 Pertaining to Generator Systems Level 1 and 2", (2008)

⁸ Brown, Bill, "Emergency and Standby Power Systems" Section 10, http://static.schneider-electric.us/assets/consultingengineer/appguidedocs/section10_0307.pdf, accessed on July 31, 2012

Mitigation Measures Emergency Back-up Power

Back-Up Emergency Fuel Supply

Generators can be powered by various sources including diesel engines, gasoline engines, and natural gas:

- Diesel engines are the most common choice for reciprocating engine generators, due to the cost of the diesel engines as compared to other forms of power and the relative ease of application.
- Gasoline engine generator sets are also available and are generally less expensive than diesel generator sets, but suffer from disadvantages of higher operating costs, greater fuel storage hazards, and shorter fuel storage life as compared to diesel.
- Diesel engines can also run on natural gas, although for maximum efficiency, specially tuned engines for natural gas use are available.

The turbine generator is a viable alternative options to the three types mentioned above. The turbine generator is natural gas powered, lighter in weight, runs more quietly, and generally requires less cooling and combustion air which results in lower installation costs. However, turbine generators are more expensive and require more starting time; normally 30 seconds, as opposed to 10-15 seconds required for diesel powered generators.⁹

Specific projects include:

- Increasing fuel storage capacity

⁹ Brown, Bill, "Emergency and Standby Power Systems" Section 10, http://static.schneider-electric.us/assets/consultingengineer/appguidedocs/section10_0307.pdf, accessed on July 31, 2012

Funding Sources / Federal Grants and Assistance Federal Emergency Management Agency (FEMA)

FEMA provides funding for mitigation activities following a disaster declaration and through its annual grant programs.

Grant programs include:

1. Unified Hazard Mitigation Assistance
2. Public Assistance
3. Emergency Management Performance Grant Program
4. Fire Management Assistance Grants

FEMA participates in the Partnership for Sustainable Communities with the Environmental Protection Agency, the Department of Transportation, and the Department of Housing and Urban Development. In the past, pilot programs have been funded through this partnership, including efforts at Plan Integration with a focus on sustainability, but incorporating hazard mitigation as a component. There are no grants at this time, but information can be found at: <http://www.sustainablecommunities.gov/partnership-resources>

FEMA also provides technical assistance, and occasionally resources and/or funding through the following:

1. Risk Mapping, Assessment, and Planning
2. Building Science Branch

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Unified Hazard Mitigation Assistance

The Hazard Mitigation Assistance (HMA) programs include both post-disaster grant funding, and yearly programs, depending upon congressional allocations. The State is the applicant for all HMA programs, with local governments serving as the sub-applicants.

Grant programs include:

1. Hazard Mitigation Grant Program
2. Pre-Disaster Mitigation
3. Flood Mitigation Assistance



There are cost sharing requirements for all of the grant programs, which are outlined in the table below:

Programs	Mitigation Activity (Percent of Federal/Non-Federal Share)	Recipient Management Costs (Percent of Federal/Non-Federal Share)	Subrecipient Management Costs (Percent of Federal/Non-Federal Share)
HMGP	75/25	100/0	—/— ⁽¹⁾
PDM	75/25	75/25	75/25
PDM – subrecipient is small and impoverished community	90/10	75/25	90/10
PDM – Tribal Recipient/subrecipient is small and impoverished	90/10	90/10	90/10
FMA – insured properties and planning grants	75/25	75/25	75/25
FMA – repetitive loss property⁽²⁾	90/10	90/10	90/10
FMA – severe repetitive loss property⁽²⁾	100/0	100/0	100/0

(1) Subapplicants should consult their State Hazard Mitigation Officer (SHMO) for the amount or percentage of **HMGP** subrecipient management cost funding their State has determined to be passed through to subrecipients.

(2) To be eligible for an increased Federal cost share, a FEMA-approved State or Tribal (Standard or Enhanced) Mitigation Plan that addresses repetitive loss properties must be in effect at the time of award, and the property that is being submitted for consideration must be a repetitive loss property.

Work

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Each of the grant programs has very specific guidance regarding project eligibility, but an overview of eligible project types by program is provided in the table below:

Eligible Activities	HMGP	PDM	FMA
1. Mitigation Projects	✓	✓	✓
Property Acquisition and Structure Demolition	✓	✓	✓
Property Acquisition and Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓
Dry Floodproofing of Non-residential Structures	✓	✓	✓
Generators	✓	✓	
Localized Flood Risk Reduction Projects	✓	✓	✓
Non-localized Flood Risk Reduction Projects	✓	✓	
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-structural Retrofitting of Existing Buildings and Facilities	✓	✓	✓
Safe Room Construction	✓	✓	
Wind Retrofit for One- and Two-Family Residences	✓	✓	
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildfire Mitigation	✓	✓	
Post-Disaster Code Enforcement	✓		
Advance Assistance	✓		
5 Percent Initiative Projects	✓		
Miscellaneous/Other ⁽¹⁾	✓	✓	✓
2. Hazard Mitigation Planning	✓	✓	✓
Planning Related Activities	✓		
3. Technical Assistance			✓
4. Management Cost	✓	✓	✓

⁽¹⁾ Miscellaneous/Other indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

The 2015 HMA Guidance incorporates a new project type, Miscellaneous/Other, which is intended to allow sub-applicants to request funds for projects which do not fit neatly within the existing project types, but are not HMA prohibited activities. FEMA is encouraging these projects to be focused on climate adaptation and resiliency. Sustainable development practices are also encouraged.

The 2015 Guidance is available at:

- Hazard Mitigation Assistance Guidance (2015)
http://www.fema.gov/media-library-data/1424983165449-38f5dfc69c0bd4ea8a161e8bb7b79553/HMA_Guidance_022715_508.pdf

More information can be found at: <https://www.fema.gov/hazard-mitigation-assistance>

Funding Sources / Federal Grants and Assistance Federal Emergency Management Agency (FEMA)

Hazard Mitigation Grant Program (HMGP)

HMGP provides funds following a Presidential major disaster declaration, allowing communities to implement a range of critical mitigation measures to reduce the risk of loss of life and property from future disasters. The amount of HMGP funding available following a disaster is based upon a sliding scale of the estimated total of Federal assistance. The formula provides for up to 15 percent of the first \$2 billion of disaster assistance, up to 10 percent for amounts between \$2 billion and \$10 billion, and up to 7.5 percent for amounts between \$10 billion and \$35.333 billion.

Each State is required to have an Administrative Plan which details priorities as well as how the grants will be administered.

Eligible activities include: Property Acquisition, Relocation, Structure Elevation, Mitigation Reconstruction, Dry Floodproofing of Historic Structures or Non-residential Structures, Generators, Localized or Non-localized Flood Risk Reduction Projects, Safe Room Construction, Wind Retrofit for Residences, Infrastructure Retrofit, Soil Stabilization, Wildfire Mitigation, Post-Disaster Code Enforcement, Advance Assistance, 5 Percent Initiative Projects, and Miscellaneous.

The 5 Percent Initiative is unique to the HMGP and is designed to allow for funding of projects which reduce risk and are in-line with state and local hazard mitigation priorities, but do not easily pass a formal Benefit Cost Analysis. In order to be eligible, projects must be difficult to evaluate against traditional cost-effectiveness criteria, and must be submitted with a narrative which shows that the project will prevent future damages, loss of life or injuries.

Activities which might funded include:

- The use, evaluation, and application of new, unproven mitigation techniques, technologies, methods, procedures, or products
- Equipment and systems for the purpose of warning citizens of impending hazards
- Purchase of generators or related equipment, such as generator hook-ups
- Hazard identification or mapping and related equipment for the implementation of mitigation activities
- Acquisition of GIS software, hardware, and data whose primary aim is mitigation
- Public awareness or education campaigns about mitigation
- Evaluation of model building codes in support of future adoption and/or implementation

Following a Presidential Major Disaster Declaration, a state can elect to set aside 10 percent for the 5 Percent Initiative, to be used for activities which adopt and promote disaster resistant building codes.

More information can be found at: <https://www.fema.gov/hazard-mitigation-grant-program>

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Pre-Disaster Mitigation (PDM)

The PDM program is FEMA's only all hazards, pre-disaster mitigation grant program, which provides funds on an annual basis to implement sustained measures to reduce overall risk to the population and structures from future hazard events. PDM grants are awarded on a competitive basis and Congress allocates the amount of funding available.

Eligible activities include: Property Acquisition, Relocation, Structure Elevation, Mitigation Reconstruction, Dry Floodproofing of Historic Structures or Non-residential Structures, Generators, Localized or Non-localized Flood Risk Reduction Projects, Safe Room Construction, Wind Retrofit for Residences, Infrastructure Retrofit, Soil Stabilization, Wildfire Mitigation, and Miscellaneous.

More information can be found at:

<https://www.fema.gov/pre-disaster-mitigation-grant-program>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Flood Mitigation Assistance (FMA)

FMA is an annual grant program that provides funds for projects that reduce or eliminate flood risk to buildings insured under the National Flood Insurance Program (NFIP). FMA provides planning, project, and management cost grants, and the amount of funding available is allocated by Congress.

FMA now includes the former Repetitive Flood Claims and Severe Repetitive Loss grant programs.

Eligible activities include: Property Acquisition, Relocation, Structure Elevation, Mitigation Reconstruction, Dry Floodproofing of Historic Structures or Non-residential Structures, Generators, Localized or Non-localized Flood Risk Reduction Projects, Infrastructure Retrofit, Soil Stabilization, and Miscellaneous.

More information can be found at:

<https://www.fema.gov/flood-mitigation-assistance-program>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Public Assistance

The Public Assistance Grant Program (PA) is designed to provide assistance to State and local governments so that communities can respond to and recover from Presidentially declared disasters. PA funds can be utilized for debris removal, emergency protective measures, and the repair, replacement, or restoration of damaged publicly owned facilities. PA funds can be utilized to protect the damaged facilities by incorporating mitigation measures during recovery and rebuilding.

PA funds can only be utilized on the damaged elements, but can be combined with HMGP funding to design projects which meet the full range of mitigation needs for a particular facility.

More information can be found at:

<https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Emergency Management Performance Grant (EMPG) Program

Assists state, local, territorial, and tribal emergency management agencies to support the National Preparedness Goal: “A secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk.”

Eligible activities include:

- Development of a Threat and Hazard Identification and Risk Assessment
- Development of hazard mitigation plan
- Whole community engagement/planning

The State serves as the applicant and can make requests on behalf of local emergency management agencies. Only one application is accepted from each state.

More information can be found at:

<https://www.fema.gov/emergency-management-performance-grants-program>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Fire Management Assistance Grants

These grants are available for the mitigation, management, and control of fires on forests or grasslands which threaten sufficient destruction to constitute a potential major disaster. Eligible firefighting costs may include expenses for field camps; equipment use, repair and replacement; tools, materials and supplies; and mobilization and demobilization activities.

More information can be found at:

<https://www.fema.gov/fire-management-assistance-grant-program>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Risk Mapping, Assessment, and Planning (Risk MAP)

The Risk MAP program is designed to provide communities with risk communication tools, education and outreach materials to protect citizens. The program is based upon the notion of community engagement and partnerships towards flood risk reduction. The products produced under Risk MAP are designed to assist communities with decisions regarding investments and priorities under UHMA programs.

Existing Risk MAP tools could be utilized for community education and outreach efforts. Additionally, it may be possible to request non-regulatory products for use in local education and outreach efforts.

More information can be found at:

<https://www.rampp-team.com/nj.htm>

Work-in-Progress

**Funding Sources / Federal Grants and Assistance
Federal Emergency Management Agency (FEMA)**

Building Science Branch

FEMA's Building Science Branch provides technical assistance through the development of guidance, deployment of Mitigation Assessment Teams, technical bulletins, design standards, floodproofing requirements, and other activities.

Tools and resources developed following Hurricane Sandy can be found at:

<https://www.fema.gov/hurricane-sandy-building-science-activities-resources>

More information can be found at:

<https://www.fema.gov/building-science>

Work-in-Progress

Work-in-Progress

This page is intentionally blank.