



Section 2: Executive Summary

What's new (summary of updated information) ...

- Format of the disaster history unit included in Section 2.3.3 visually revised
- Table of Contents now linked in. By “control + click” on the page number in the Contents below, the reader will be immediately positioned to the specific section.

The information in this Table of Contents Summary contain a link feature. The reader can be directed to the specific topic by “control + click”.

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2.1: Purpose and Scope

Each year natural disasters cause millions of dollars in damages, but the toll does not end there. The human misery that inevitably follows in the wake cannot be measured in dollars alone. As television footage of a disaster is broadcast to the home of millions of viewers all over the state, three questions are on peoples minds: Can it happen here? Can it happen to me? Can something be done about this?

The answers are yes, yes, and yes. It can happen to you. It can happen in your town, and something is being done. It is called mitigation and the Hazard Mitigation Plan is the cornerstone to reducing New Jersey's vulnerability to disasters. Hazard Mitigation distinguishes actions that have a long-term impact from those that are more closely associated with pre-disaster preparedness, response to an event, and recovery from an incident. Hazard Mitigation is the only phase of emergency management specifically dedicated to breaking the cycle of damage, reconstruction and repeated damage.



Hazard Mitigation focuses on actions that produce successive benefits over time. Local governments engage in hazard mitigation whenever they use their available tools, such as ordinances and building codes, to keep development out of harm's way. Identifying effective mitigation actions depends on the unique characteristics associated with specific hazards.

- Hazard mitigation for **flooding** can involve strengthen floodplain management regulations, identifying opportunities for acquisition of flood prone properties and prioritizing other flood reduction measures.
- Mitigation actions for **coastal areas** at risk from hurricanes may include guiding development away from storm surge zones as well as improving and enforcing building code requirements to strengthen buildings against wind and storm surge damage.
- For **earthquake** hazards, mitigation actions may include structural design standards to allow buildings to withstand ground shaking and soil liquefaction or limiting development in steeply sloped areas subject to landslides.
- For **wildfires**, where suburban development has encroached upon susceptible areas, mitigation actions can include development setbacks, adequate transportation access for emergency vehicles, adequate water supplies and vegetation management.

New Jersey had ten presidentially declared disasters in the past ten years. A full descriptive listing of all presidentially declared disasters is contained in Appendix D. "Human Intervention" will never be able to completely prevent floods, tornadoes, earthquakes, hurricanes and other disasters from threatening the State. However, actions can be taken to reduce – or even avoid – the devastating impacts and rising costs of disasters and the disruption to daily activities. This can be done by planning for and implementing mitigation measures before disasters strike and by making sure that post-disaster recovery efforts include appropriate hazard mitigation measures.

The New Jersey All Hazards Mitigation Plan goes further. The purpose of the plan is to change the way elected officials, community leaders and businesses think about disasters and how they think about their communities. The Plan is a tool to educate emergency managers and to encourage them to look beyond their immediate community. The Plan sets clear goals and time lines that assist state agencies, county governments and municipalities in decision-making. The New Jersey All Hazard Plan encourages the expansion of single purpose disaster recovery and disaster prevention activities into wider opportunities for integrated community-wide planning.

2.2: Requirement for the Plan

The 2011 State of New Jersey New Jersey Hazard Mitigation Plan (HMP) was prepared in compliance with Federal requirements for Standard State Mitigation Plans in the *Stafford Act*. The Stafford Act was amended by the *Disaster Mitigation Act of 2000* (42 U.S.C. 5165). The New Jersey HMP has been prepared in conformance with FEMA regulations at 44 C.F.R. §201.3(c)(1) and §201.4(a) and (d) that require a State Mitigation Plans to be updated and resubmitted to FEMA for approval every three (3) years.

- The State Hazard Mitigation Plan is designed to outline a strategy to reduce risks from natural hazards in New Jersey, and to aid State and local decision makers, budget managers and emergency management officials in developing hazard reduction programs.
- This Plan also establishes the framework for coordination between the Federal Emergency Management Agency (FEMA) and the State Hazard Mitigation Team (SHMT) for hazard mitigation programs.

2.3: Background

On October 20, 2000, the United States Congress passed the Disaster Mitigation Act of 2000, also known as DMA2K. A copy of the Act is included in this Plan as Appendix A. Among its other features, DMA2K established a



requirement that in order to remain eligible categories of federal disaster assistance and grant funds, States and localities must develop and adopt Hazard Mitigation Plans. On February 26, 2002, the Federal Emergency Management Agency (FEMA) published an Interim Final Rule (IFR) that provided the guidance and regulations under which such Plans must be developed. The IFR provides detailed descriptions of both the Planning process that States and localities are required to observe, as well as the contents of the Plan that emerges. It is included as Appendix B.

The 2011 State Hazard Mitigation Plan is the second update. New Jersey officially adopted its initial State Hazard Mitigation Plan in 2005. The State completed an updated Plan in 2008 to meet the requirements of Interim Final Rule Section 201.4(d), which mandates that States update their mitigation Plans every three years "to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities."

Monitoring, evaluating and updating the 2008 Plan was initiated in April of 2009. To meet the April 2011 submission/approval date the 2011 All Hazards Plan will contain information current to May 2010.

Hazard mitigation ensures that fewer New Jersey residents and fewer communities become victims of natural and technological disasters. Hazard Mitigation:

- Is sustained action taken to reduce or eliminate the long-term risk and impact to people and property from natural hazards.
- Results in safer communities that resist becoming victims when disaster strikes.
- Measures and actions reduce risk for individuals, small and large businesses, and critical service locations such as hospitals, public safety facilities and utility stations.

The State Hazard Mitigation Plan demonstrates New Jersey's commitment to:

- Reduce risks from natural hazards;
- Serve as a guide for both State and local decision makers as they commit resources to reducing the effects of natural hazards on lives and property;
- Provide assurances that the State will comply with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 CFR 13.11(c); and
- Amend its Plan whenever necessary to reflect changes in State or Federal laws and statutes as required in 44 CFR 13.11(d)

2.3.1 Coordination with Federal Requirements

44 CFR Part 201, Hazard Mitigation Planning, establishes criteria for State and local hazard mitigation planning authorized by Section 322 of the Stafford Act, as amended by Section 104 of the Disaster Mitigation Act. States are required to have, at minimum, an approved Standard State Mitigation Plan in order to receive disaster funds for State or local mitigation projects. In addition, FEMA regulations at 44 C.F.R. §201.3⁽¹⁾ and §201.4(a) and (d) require that the State Mitigation Plans be updated and resubmitted to FEMA for approval every three (3) years. The development and maintenance of State and local multi-hazard mitigation plans is a key factor to maintaining eligibility for future funding for:

- Property acquisition or relocation of hazard prone property for conversion to open space in perpetuity;
- Structural and non-structural retrofitting (including designs and feasibility studies when included as part of the construction project) for wildfire, seismic, wind or flood hazards (e.g., elevation, storm shutters, hurricane clips);
- Minor structural hazard control or protection projects that may include vegetation management, and storm water management (e.g., culverts, floodgates, retention basins); and,
- Localized flood control projects, such as certain ring levees and floodwall systems that are designed specifically to protect critical facilities and that do not constitute a section of a larger flood control system.



A FEMA approved State mitigation Plan is an eligibility requirement to apply for and/or receive FEMA assistance under the following grant programs:

- Public Assistance – Categories C-G
- Fire Management Assistance Grants (FMAG)
- Hazard Mitigation Grant Assistance
 - Flood Mitigation Assistance (FMA)
 - Hazard Mitigation Grant Program (HMGP)
 - Pre-disaster Mitigation (PDM)
 - Repetitive Flood Claims (RFC)
 - Severe Repetitive Loss (SRL)

2.3.2: Specifics on FEMA Programs

PUBLIC ASSISTANCE: The objective of the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Grant Program is to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Through the PA Program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

The Federal share of assistance is not less than 75% of the eligible cost for emergency measures and permanent restoration. The grantee (usually the State) determines how the non-Federal share (up to 25%) is split with the subgrantees (eligible applicants).

There is no local/state, mitigation plan requirements as a condition of receiving public assistance grant funds for:

- PA Category A:** Debris Removal: this includes clearance of trees, woody debris, building wreckage, sand, mud, silt, gravel and other disaster related material on public property.
- PA Category B:** Emergency Protective Measures: These are taken before, during and after a disaster to save lives and protect public health and safety.

However, further an approved State mitigation plan is required for any applicant to be eligible to obtain funding assistance for any categories of "permanent work" under the FEMA Public Assistance Program.

- PA Category C:** *Roads and Bridges:* Repair of roads, bridges and associated features such as shoulders, ditches, culverts, lighting and signs.
- PA Category D:** *Water Control Facilities:* Repair of irrigation systems, drainage channels and pumping facilities. Repairs of levees, dams and flood control channels within the limitations of the Public Assistance Program.
- PA Category E:** *Buildings and Equipment:* Repair or replacement of buildings, including their content and systems; heavy equipment and vehicles.
- PA Category F:** *Utilities:* Repair of water treatment and delivery systems; power generation facilities and distribution lines; and sewage collection and treatment facilities.
- PA Category G:** *Parks, Recreational Facilities and Other Items:* Repair and restoration of parks, playgrounds, pools, cemeteries and beaches, as well as any work or facility that cannot be characterized by Categories A-F.



FIRE MANAGEMENT: Fire Management Assistance is available for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction as would constitute a major disaster.

The Fire Management Assistance declaration process is initiated when a State submits a request for assistance to the FEMA Regional Director at the time a "threat of major disaster" exists. The Fire Management Assistance Grant Program provides a 75 percent Federal cost share and the State pays the remaining 25 percent for actual costs. Before a grant can be awarded, a State must demonstrate that total eligible costs for the declared fire meet or exceed the individual fire cost threshold – which applies to single fires, or the cumulative fire cost threshold, which recognizes numerous smaller fires burning throughout a State. Eligible firefighting costs may include expenses for field camps; equipment use, repair and replacement; tools, materials and supplies; and mobilization and demobilization activities.

FEMA HAZARD MITIGATION PRE-DISASTER FUNDING PROGRAMS are described in Section 3.5 of the Plan and in Appendix H. Summary information on the programs include:

- **National Flood Insurance Program (NFIP)** – The Federal program, created by an act of Congress in 1968, that makes flood insurance available in communities that enact satisfactory floodplain management regulations. Also, included is information on the Community Rating System.
- **Flood Mitigation Assistance Program (FMA)** - FMA provides annual funding for county and local governments that are planning or taking action to reduce or eliminate long-term risk of flood damage to buildings, manufactured homes, and other insured structures. Grants may be awarded for planning assistance, implementation or mitigation strategies, and technical assistance.
- **Repetitive Flood Claim Program** — FEMA program to provide assistance in mitigating a property that has had two or more NFIP claims of at least \$1,000 within any 10-year period since 1978.
- **Severe Repetitive Loss Program** – FEMA program to provide assistance in mitigating a NFIP insured residential property having flood losses that resulted in either (1) four or more flood insurance claim payments that exceed \$5,000 with at least two of the payments occurring within a 10-year period, or (2) two or more flood insurance claim payments that cumulatively exceed the value of the property.
- **Pre-Disaster Mitigation (PDM)** – FEMA program to provide assistance in mitigating hazards based on the potential or known threat of a natural disaster (e.g., hurricane, typhoon, volcanic eruption, or other event), preparatory actions taken by Federal, State, and local governments to protect life and property and to minimize the effects of the event on response personnel and equipment.
- **Emergency Preparedness Grant Program (EMPG)** – FEMA program to assist state and local governments in enhancing and sustaining all-hazards emergency management capabilities. Either the New Jersey State Administrative Agency (SAA) or the state's Emergency Management Agency (EMA) are eligible to apply directly to FEMA for EMPG funds on behalf of state and local emergency management agencies, however only one application will be accepted from each state or territory. The general annual allocation methodology dictates that all 50 states will receive a base amount of 0.75 percent of the total available grant funding and the territories will receive a base amount of 0.25 percent of the total available grant funding. The balance of EMPG funds will be distributed on a population-share basis.

FEMA HAZARD MITIGATION POST-DISASTER FUNDING PROGRAMS are described in Section 3.5 of the Plan and in Appendix H. Summary information on the programs include:



- **Hazard Mitigation Grant Program (HMGP)** – Authorized under Section 404 of the Stafford Act, this Program provides funding for cost-effective hazard mitigation projects in conformance with the post-disaster mitigation plan required under Section 409 of the Stafford Act as replaced by Section 322 of the Disaster Mitigation Act of 2000. Section 404 authorizes the President to contribute up to 75 percent of the cost of mitigation measures that are determined to be cost effective and substantially reduce the risk of future damage or loss in states affected by a major disaster. The remaining 25 percent of the cost may be a combination of state, local, and other non-Federal contributions.

2.3.3: Declared Natural Hazard Disaster

The graphic maps (taken from the FEMA website) identify FEMA Public and Individual Assistance. Disasters are listed in descending order with the most current disaster listed first. The maps showing the hurricane paths were taken from information on the National Hurricane Center web site.

Red shows Individual Assistance only. Green shows Public Assistance only. Blue shows combined assistance. (Colors will be adjusted in future Plan editions) All counties in the State are eligible for HMGP.

Note: Since April 2011 Disasters 4021, 4033 and 4039 have been declared. These are noted for information only. Detailed information is not included in this interim update and statistical information on the incidents have not been incorporated into this update.

<u>DR-1954</u>	On December 26 and December 27, 2010 the state of New Jersey was impacted by a severe winter storm and snowstorm. On February 4, 2011 a Presidential-declared disaster for Public Assistance was declared for 13 Counties in New Jersey.				
	Atlantic ●Bergen ●Burlington Camden ●Cape May	●Cumberland ●Essex Gloucester Hunterdon ●Hudson	●Mercer ●Middlesex ●Monmouth ●Morris ●Ocean	●Passaic Salem ●Somerset Sussex ●Union Warren	



<u>DR-1897</u>	<p>On March 12, 2010 and continuing, most of the State of New Jersey was impacted by severe storms and flooding. On April 2, 2010 a Presidential-declared Disaster was declared.</p>				
	<ul style="list-style-type: none"> ●Atlantic ●Bergen ●Burlington ●Camden ●Cape May 	<ul style="list-style-type: none"> ●Cumberland ●Essex ●Gloucester ●Hunterdon ●Hudson 	<ul style="list-style-type: none"> ●Mercer ●Middlesex ●Monmouth ●Morris ●Ocean 	<ul style="list-style-type: none"> ●Passaic ●Salem ●Somerset Sussex ●Union Warren 	
<u>DR-1889</u>	<p>On February 5th and 6th, 2010, the southern portion of New Jersey was impacted by a severe winter storm and snowstorm. On March 23, 2010 a Presidential-declared Disaster was declared. This was the second time in three month that the southern portion of the state was hit by a severe storm.</p>				
	<ul style="list-style-type: none"> ●Atlantic Bergen ●Burlington ●Camden ●Cape May 	<ul style="list-style-type: none"> ●Cumberland Essex ●Gloucester Hudson Hunterdon 	<ul style="list-style-type: none"> Mercer Middlesex Monmouth Morris Ocean 	<ul style="list-style-type: none"> Passaic ●Salem Somerset Sussex Union Warren 	
<u>DR-1873</u>	<p>On December 19th and 20th, 2010 the southern portion of New Jersey was impacted by a severe winter storm and snowstorm. On February 5, 2010 a Presidential-declared.</p>				
	<ul style="list-style-type: none"> ●Atlantic Bergen ●Burlington ●Camden Cape May 	<ul style="list-style-type: none"> ●Cumberland Essex ●Gloucester Hudson Hunterdon 	<ul style="list-style-type: none"> Mercer Middlesex Monmouth Morris ●Ocean 	<ul style="list-style-type: none"> Passaic ●Salem Somerset Sussex Union Warren 	

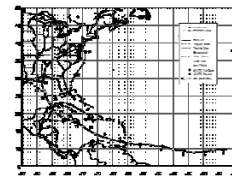


<u>DR-1867</u>	<p>On November 11th through November 15th, the costal area of New Jersey was impacted by severe storms and flooding associated with Tropical Depression Ida and a Nor'easter. On December 22, 2010 a Presidential-declared</p>				
	<ul style="list-style-type: none"> ●Atlantic Bergen Burlington Camden ●Cape May 	<p>Cumberland Essex Gloucester Hudson Hunterdon</p>	<p>Mercer Middlesex Monmouth Morris ●Ocean</p>	<p>Passaic Salem Somerset Sussex Union Warren</p>	
<u>DR-1694</u>	<p>From April 14th to the 20th, 2007 most of the State of New Jersey was impacted by the effects of severe storms and coastal and inland flooding. The strong spring "Northeast", storm impacted the East Coast from South Carolina to Maine. On April 26, 2007, a Presidential-declared Disaster was declared. Infrastructure damages were greatest in Bergen County where FEMA Public Assistance totaled nearly five million dollars.</p>				
	<p>Atlantic</p> <ul style="list-style-type: none"> ●Bergen ●Burlington ●Camden Cape May 	<p>Cumberland</p> <ul style="list-style-type: none"> ●Essex ●Gloucester Hudson ●Hunterdon 	<ul style="list-style-type: none"> ●Mercer ●Middlesex Monmouth ●Morris Ocean 	<ul style="list-style-type: none"> ●Passaic Salem ●Somerset Sussex ●Union Warren 	
<u>DR-1653</u>	<p>Beginning on June 23, 2006 portions of northwestern New Jersey were impacted by severe storms and flooding. The severe storms and heavy rains resulted in flooding along the Delaware River. On July 7, 2006 a Presidential-declared Disaster was declared for four counties in northwestern New Jersey (FEMA DR-1653). The FEMA Public Assistance for this disaster was limited to emergency work (FEMA Categories A and B); debris removal and emergency protective measures. FEMA Project Worksheets for emergency work totaled just over \$1.2 million dollars.</p>				
	<p>Atlantic</p> <p>Bergen</p> <p>Burlington</p> <p>Camden</p> <p>Cape May</p>	<p>Cumberland</p> <p>Essex</p> <p>Gloucester</p> <p>Hudson</p> ●Hunterdon	<ul style="list-style-type: none"> ●Mercer Middlesex Monmouth Morris Ocean 	<p>Passaic</p> <p>Salem</p> <p>Somerset</p> <ul style="list-style-type: none"> ●Sussex Union ●Warren 	



<u>DR-1588</u>	<p>The severe storm and flooding disaster, caused serious flooding damage to private properties in nine counties throughout New Jersey. The storm occurred April 1-2, 2005. Four of the nine counties were previously declared just six months ago when the Delaware River flooded. Many residential structures were re-damaged before initial repairs were completed. The nine declared counties contain 43.03% of the State's population and comprise 38.75% of its land area. Population density ranges from 276 persons per square mile in Sussex County to 6,285 persons per square mile in Essex County. April 19, 2005. Severe storms and flooding.</p>				
	<p>Atlantic ●Bergen Burlington Camden Cape May</p>	<p>Cumberland ●Essex ●Gloucester ●Hudson Hunterdon</p>	<p>●Mercer Middlesex Monmouth ●Morris Ocean</p>	<p>●Passaic Salem Somerset ●Sussex Union ●Warren</p>	

<u>DR-1563</u>	<p>Hurricane Ivan initially made landfall along the Gulf Coast on September 16, 2004 near the border of Alabama and Florida as a Category 4 Hurricane. As the storm moved inland, it weakened and was eventually downgraded to a tropical depression before reaching New Jersey. As a tropical depression the storm continued to cause extensive damages from heavy rains that totaled up to six particularly along the Delaware River. As a result of the event, a Presidential-declared Disaster was declared on October 1st, 2004. The majority of the infrastructure damages occurred in Warren County where FEMA Public Assistance totaled almost three million dollars.</p>				
	<p>Atlantic Bergen Burlington Camden Cape May</p>	<p>Cumberland Essex Gloucester Hudson ●Hunterdon</p>	<p>●Mercer Middlesex Monmouth Morris Ocean</p>	<p>Passaic Salem Somerset ●Sussex Union ●Warren</p>	



Path of Hurricane Ivan
Source: NHC



<u>DR-1530</u>	<p>From July 12th – 23rd, 2004 portions of central New Jersey were impacted by severe storms and torrential downpours concentrated near the Interstate 295 Corridor in southern Burlington County. The excessive rain caused record breaking flash flooding along nearly every stream in the Rancocas Basin and led to the failure or damage of 51 dams in Burlington County. The flooding that resulted from the heavy rains damaged an estimated 1,000 homes (Source NOAA; NCDC Database). As a result of the event, a Presidential-declared Disaster was declared on July 16th, 2004 (FEMA DR-1530). FEMA Public Assistance totaled just over 4.6 million dollars. Of this total, four million dollars was allocated to Burlington County.</p>				
	<p>Atlantic Bergen ●Burlington ●Camden Cape May</p>	<p>Cumberland Essex Gloucester Hudson Hunterdon</p>	<p>Mercer Middlesex Monmouth Morris Ocean</p>	<p>Passaic Salem Somerset Sussex Union Warren</p>	

<u>DR-1337</u>	<p>On August 12, 2000 northern New Jersey was impacted by severe storms, flooding, and mudslides. The severe thunderstorms remained nearly stationary for almost six hours and produced an estimated 15 inches of rain near the Sussex and Morris County border. The torrential rains resulted in mudslides and flooding that damaged an estimated 2,700 homes (Source NOAA; NCDC Database). On August 17, 2000 a Presidential-declared Disaster was declared for three counties in northern New Jersey (FEMA DR-1337). The majority of the infrastructure damages occurred in Sussex County where FEMA Public Assistance totaled slightly over six million dollars.</p>				
	<p>Atlantic Bergen Burlington Camden Cape May</p>	<p>Cumberland Essex Gloucester Hudson Hunterdon</p>	<p>Mercer Middlesex Monmouth ●Morris Ocean</p>	<p>Passaic Salem Somerset ●Sussex Union Warren</p>	



<p>DR-1295</p>	<p>Hurricane Floyd initially made landfall on September 16, 1999 along eastern North Carolina near Cape Fear as a Category 2 Hurricane. As the storm continued in a northeast direction along the Eastern U.S. coastline it weakened to a tropical depression near the mid-Atlantic. The tropical depression produced extreme rainfall totals of between 10-14 inches in some parts of New Jersey. After the event, portions of ten States from Florida to Connecticut received Presidential Disaster Declarations. On September 18, 1999 a Presidential Disaster was declared for twelve counties in central and northern New Jersey. The flash flooding and over-bank riverine flooding from Hurricane Floyd caused a total of 57 deaths, six of which were in New Jersey. The FEMA Project Worksheets estimated the infrastructure damages in New Jersey from Hurricane Floyd at slightly over \$53 million dollars. The most extensive damages from the event occurred in Bergen, Somerset, and Union Counties.</p>					
	<p>Atlantic ●Bergen Burlington Camden Cape May</p>	<p>Cumberland ●Essex Gloucester Hudson ●Hunterdon</p>	<p>●Mercer ●Middlesex Monmouth ●Morris Ocean</p>	<p>●Passaic Salem ●Somerset Sussex ●Union Warren</p>	<p>Path of Hurricane Floyd Source: NHC</p>	



The presidential declared disaster impacts are reflected in damages as follows:

Table 2.3.3-1
Impact of FEMA Public Assistance Amounts for Recent Disasters
 Source: NJOEM Public Assistance

Disaster	Category A: Emergency work, primarily debris clearance.	Category B: Emergency protective measures.	Category C: Permanent repair work, roads and bridges.	Category D: Permanent repair work, water control facilities.	Category E: Permanent repair work, public buildings.	Category F: Permanent repair work, utilities.	Category G: Permanent repair work, parks and recreation facilities.	Total
DR-1954	1,500	47,633,220	5,643	0	87,302	18,681	413,215	48,159,564
DR-1897	822,6440	9,185,497	3,168,205	731,594	1,292,640	1,444,759	9,143,823	33,192,962
DR-1889	64,3086	12,791,883	106,906	0	35,990	101,836	140,109	13,819,881
DR-1873	0	13,588,234	133,641	0	9,637	0	0	13,731,513
DR-1867	361,051	1,069,244	431,468	220,255	64,172	10,451	19,184,468	21,341,113
DR-1694	\$21,019	\$2,959,810	\$95,290	\$47,600	\$111,517	\$0	\$209,583	\$3,444,819
DR-1653	\$117,294	\$1,363,469	\$0	\$0	\$0	\$0	\$0	\$1,480,763
DR-1563	\$27,108	\$658,701	\$344,167	\$0	\$495,967	\$40,700	\$10,426	\$1,577,069
DR-1530	\$61,083	\$659,490	\$480,610	\$332,107	\$235,068	\$0	\$180	\$1,768,538
DR-1337	\$0	\$3,283	\$0	\$199,689	\$38,807	\$0	\$0	\$241,779
DR-1295	\$938,911	\$3,439,527	\$336,040	\$465,194	\$289,189	\$52,402	\$1,975,249	\$7,496,512
Total	\$10,397,492	\$93,352,358	\$5,101,970	\$1,996,439	\$2,660,289	\$1,668,829	\$31,077,053	\$146,254,513



2.4: Organization of the Plan

The purpose of the State Hazard Mitigation Plan is to understand the process of identifying and implementing appropriate hazard mitigation actions. The Plan includes:

- Characterization of Natural and Technical Hazards Statewide, including occurrences, impacts and probability
- Vulnerability assessment and loss estimation
- Identification of jurisdictions most at risk
- Goals, objectives, strategies and actions that will guide the State's mitigation activities
- Comprehensive evaluation of progress towards achieving stated goals, strategies and actions
- Process for implementing and monitoring the Plan

The updated New Jersey Hazard Mitigation Plan is organized to parallel the structure provided in the Interim Final Rule (IFR). The Plan has nine sections.

- Section 1: **Table of Contents**
- Section 2: **Executive Summary**
- Section 3: **Planning Process**
- Section 4: **Risk Assessment**
- Section 5: **Mitigation Strategy**
- Section 6: **Coordination of Local Planning**
- Section 7: **Plan Maintenance**
- Section 8: **Approval and Adoption**
- Section 9: **Appendices**

There are references to the IFR throughout the Plan. Where possible these provide specific section and subsection notations for the convenience of reviewers.

The body of the plan is contained in Sections 3 through 8 briefly described as follows:

2.4.1: Table of Contents (without discussion)

2.4.2: Executive Summary (without discussion)

2.4.3: Summary of Section 3 Planning Process

This section includes a detailed description of the process and the individuals and agencies who were involved in the update. The process used to develop the initial Plan was closely modeled on the FEMA "How-To" series for Hazard Mitigation Planning but adapted to meet the geographical, political and social uniqueness of the State of New Jersey.

Subject matter experts were solicited for specific information regarding hazards, risks, capabilities and strategies.

The plan was developed by:

- Plan Development Committee (PDC) members who acted as the staff writers and researchers. Contact with subject matter experts (water, climate, geology, wildfire, flood, etc. were included throughout the plan development.



- Mitigation Core Team (MCT) who provided the first line review of the document. and
- State Hazard Mitigation Team (SHMT) members who reviewed the draft materials mitigation strategies identified and provided feedback on progress towards achieving the goals and completing the actions. SHMT members also provided interim reviews of draft sections as appropriate throughout the update process and final approval before submission to FEMA.
- After all sections were completed and comments incorporated, the Plan was submitted to FEMA and the Governor for adoption.

2.4.4: Summary of Section 4 Risk Assessment

This section includes a detailed description of the process that was used to identify, characterize and assess the natural and technological hazards that can affect New Jersey and provides hazard profiles for the hazards that are most likely to affect the State. These comprise:

- **Atmospheric Hazards including** Avalanche, Extreme Temperatures both Heat and Cold, Extreme Straight Line Winds, Hailstorm, Hurricanes, Nor'easters and Tropical Storms, Lightning, Tornados, and Winter Storms resulting in Snow and Ice
- **Hydraulic Hazards including** Coastal - Erosion, Storm Surge and Wave Action, Dam Failure, Drought, Floods both Riverine and Coastal, and Flooding caused by Ice Jams
- **Geologic Hazards including** Earthquake, Expansive Soils, Landslide and Mud Slides, Land Subsidence, Tsunami, Volcano
- **Other Natural Hazards including** Wildfire
- **Technological Hazards including**, among others; Pandemics Hazardous Waste – Fixed Site, Transportation, and Nuclear, Crop Failure, and Fisheries Failure
- **National Security issues including** Power Outages, Civil Unrest and Terrorism

In accordance with the IFR the State Hazard Mitigation Plan has reviewed and considered all natural hazards. The 2011 Plan also initiates a discussion of technological and national security hazards. Greater detail will be included in future plan updates. Local jurisdictions in their preparation of hazard mitigation plan updates are requested to expand the scope of their plans and identify all hazards that may pose a threat.

Section 4.5 characterizes the State's vulnerabilities to natural hazards, and **Section 4.6** follows with a summary of the jurisdictions that are at risk from the effects of natural hazards. Because this Plan is partly intended as a resource for local and regional planners, NJOEM wished to avoid any ranking or scoring of hazards or jurisdictions, because this might suggest that planners should ignore some of the lower-ranking hazards or vulnerable areas. The State Hazard Mitigation Plan provides a general framework to guide State-level mitigation strategies. In carrying out their own planning processes, jurisdictions should perform more detailed and locally focused hazard profiles and risk assessments to develop appropriate strategies and actions.

New Jersey is comprised of 21 Counties, all of which have some risk of most of the natural hazards on the list above. It is important for local jurisdictions to understand that while State-level risk may appear to be concentrated in Counties where there are high populations and large infrastructure, there are areas of high risk in every County, and in many jurisdictions within the Counties. It should also be noted that a wide range of mitigation actions and strategies exist for most hazards, and that the costs and effectiveness of these measures varies significantly. The



implication of this is that both the State and local jurisdictions must be aware that the ultimate effectiveness of mitigation is based both on risk and the action that is used to reduce it.

2.4.5: Summary of Section 5 Mitigation Strategy

The State Hazard Mitigation Strategy endorses five goals and objectives as stated below:

1. **To protect life through**
 - Improved warning and emergency communications systems
 - Effectively address laws and regulations that speak to hazard mitigation issues
 - Reduce the impacts of hazards on vulnerable populations
 - Strengthen State and local building code enforcement
2. **To protect property through**
 - Protect critical State and non-state owned facilities and assets
 - Reduce repetitive losses
 - Implement hazard mitigation policies to protect the environment
3. **To increase public preparedness through**
 - Improved public awareness of natural hazards and the risks they pose
 - Improved hazard Information data bases and maps and increase accessibility to those resources
 - Enhanced community outreach and training emergency responders
4. **Develop and maintain an understanding of risks from natural hazards through**
 - Review and incorporate hazard information developed at the local level into the Plan
 - Increased development of local mitigation planning
 - Incorporate new FEMA guidance, rules and regulations into the Plan
 - Update the Plan from lessons learned on the national level
5. **Enhance capabilities to make New Jersey less vulnerable to hazards through**
 - Monitor the progress of on-going mitigation activities by state agencies
 - Provide current information on incentives for mitigation planning and actions
 - Encourage the formation of partnerships to leverage and share mitigation resources
 - Ensure continuity of critical operations of government and commerce

In addition to the stated mitigation goals and incorporated throughout the strategy to accomplish the State goals, New Jersey will use a three-prong approach:

1. Recognize flooding as the major disaster threat facing the state and use acquisition between a voluntary seller and a public agency as the primary means to accomplish all of the goals and objectives (with additional Repetitive Loss Strategy information below).
2. Offer, as a secondary means of accomplishing the state goals, assistance in the elevation of homes where or when acquisition is not an option.
3. Work with both county and municipal governments that have an approved local mitigation plan and those whose plans are nearing completion to develop sound and beneficial projects to alleviate the impacts of all natural disasters, not limited to flooding alone.

Repetitive Loss Strategy: To reiterate the State's repetitive loss strategy referred to above and in several other places in the plan, and to clearly state New Jersey's actions and maintain eligibility for increased Federal cost share of up to 90 percent, the strategy to reduce the number of repetitive loss and severe repetitive loss properties is:

- Use available state financial resources to acquire, demolish and use such properties for permanent state-owned open space.



- Provide matching Green Acres acquisition funds to county and local governments to purchase flood prone properties.
- Provide "Payments in Lieu of Taxes" to municipalities when repetitive and severe repetitive loss properties are acquired by the state and the lands are set aside for permanent open space.
- Award repetitive and severe repetitive loss property acquisition and elevation projects specific points in project ranking scoring.
- Require that all county and municipal hazard mitigation plans include strategies to ensure actions to reduce the number of these properties.
- Develop and disseminate information on FEMA's Repetitive Flood Claim and Severe Respective Loss programs

As required by FEMA, the Mitigation Core Team and State Hazard Mitigation Team completed a comprehensive evaluation of the mitigation strategies and actions from the original plan, and reported on the status of each of them. Additional information on the New Jersey Severe Repetitive Loss Mitigation Strategy can be found in Appendix G.

2.4.6: Summary of Section 6 Coordinating Local Planning

This section describes how the State provides assistance and guidance to local jurisdictions for developing their hazard mitigation Plans; how information from the State and local Plans is linked and integrated, and how the State prioritizes funding opportunities for local jurisdictions.

In addition, the 2011 state plan revision has incorporated information developed by the County Plans. Specific information gathered on the local level has been incorporated into the 2011 State HMP. A more detailed discussion of local planning status is included in Section 6 – Coordination Local Planning. Full copies of both approved local plans and local plans pending finalization and FEMA review and approval can be found on the web at:

<http://www.State.nj.us/njoem/>

* Plan Approval Status list only those county plans that have received final FEMA approval.

Plan Approval Status Summary as of may 2010. (Note: Additional Plans may be approved at the time that this 2011 Plan is published.)

As noted in various places throughout the document of the state's 21 counties:

- 1 county is yet to begin the preparation of a hazard mitigation plan
- 20 counties have plans completed or in preparation
 - 4 have plans in preparation
 - 16 have completed the preparation of a Hazard Mitigation Plan.
 - 9 have completed plans that are pending State and/or FEMA review
 - 7 have FEMA approved or approved pending adoption plans

It is NJOEM's intent to use the State Plan as a way to provide data to local and regional governments to reinforce their ongoing mitigation planning processes, support mitigation project selection, and to provide guidance on best practices.

To assist in the development of Hazard Mitigation Plans and to foster greater availability of current information, NJOEM has prepared a series of handouts. The full printouts of the handouts are included in Appendix X. Over the years the emphasis has shifted from (1) providing general information on hazards and defining mitigation to (2) encouraging the development of mitigation plans to (3) presenting information on project development and FEMA policy. Handouts are discussed more fully in Section 6 – Coordinating Local Planning.



County	Plan Approval Status *	The County Hazard Mitigation Plan can be found at
Atlantic	2011	www.aclink.org/oep
Bergen	2008	www.bcpd.org/oem01.html
Burlington	2008	www.co.burlington.nj.us/Pages/pages.aspx?cid=57TPIO=727
Camden	2011	www.ccoem.org/hm/HM_draft.html
Cape May	2011	www.capemaycountygov.net/cit-e-access/webpage.cfm?tid=5&TPIO=727
Cumberland	2011	www.ccoem.org/hm/HM_draft.html
Essex	2008	www.essexsheriff.com/index.php?option=com_content&task=view&id=4&itemid=7
Gloucester	2009	www.ccoem.org/hm/HM_draft.html
Hudson	2009	Pending
Hunterdon	2011	Pending
Mercer	2011	www.nj.gov/counties/mercerc/departments/psem/draftplan.html
Middlesex	2011	www.co.middlesex.nj.us/emrgency/index.asp
Monmouth	2009	www.visitmonmouth.com/page.aspx?ID=145
Morris	2010	www.Morrisoem.org/
Ocean		Pending
Passaic	2010	www.passaiccountynj.org/Department/departments.html
Salem	2011	www.ccoem.org/hm/HM_draft.html
Somerset	2008	www.co.somerset.nj.us/hazard/index.html
Sussex	2011	www.sussexcountysheriff.com
Union	2011	Pending
Warren	2011	www.warren.nj.us/Hazards_M_Planning/index.html

Table 2.4-6-1 County Hazard Mitigation Plan Web Sites

- Several approved municipal plans have opted to join in the county plan and will not be recertifying individually.

See Tables 6.2-1 and 6.2-2 for the status of New Jersey County and municipal Hazard Mitigation Plans as of March 30, 2010 for more detailed information.

2.4.7: Summary of Section 7 Plan Maintenance

This section describes how the Plan will be periodically evaluated and updated. The Interim Final Rule requires that the State Hazard Mitigation Plan be updated and re-submitted to FEMA for review and re-approval every three years. In addition to meeting this requirement, the State, under the direction of NJOEM, will review the Plan annually, based on criteria that are described in Section 7.2. The criteria are:

1. New Presidential Disaster or Emergency Declarations
2. Progress in completing tasks listed in the Mitigation Strategies section of the Plan
3. Changes in development
4. Progress in Statewide mitigation activities, including meeting State Mitigation Goals
5. Changes in priorities
6. Changes in available funding sources and programs
7. Advances in GIS, data acquisition and other technologies



8. Increases in available information
9. Changes in State or Federal laws, including amendments to FEMA rules and guidance; and
10. Other factors affecting the Plan, as described in the section.

Other parts of **Section 7** describe how the State will monitor mitigation activities and measure progress toward achieving the goals that are described in **Section 6**.

2.4.8: Summary of Section 8 Approval and Adoption

This section of the Plan describes the approval and adoption processes and provides assurances as required by the IFR. It also includes documents related to Plan adoption, including an approval letter from the Director of the New Jersey Office of Emergency Management (NJOEM), and a letter of endorsement and support from the Governor.

As noted in Section 3 of the Plan, each State Hazard Mitigation Team (SHMT) member was provided a full draft copy of the Plan for review, comment and endorsement prior to adoption by the Governor. NJOEM retains the comments and changes. The New Jersey State Hazard Mitigation Plan was adopted by the Governor through the authority delegated to NJOEM. The Plan was approved by the Director of the New Jersey Office of Emergency Management through authority delegated by the Governor.

Upon completion of review and approval by FEMA Regional Office, this Plan Update will be approved and adopted by the Governor through the same mechanism used for the 2008 Plan.

2.4.9: Contact Information

For more information contact:

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The State of New Jersey 2011 Hazard Mitigation Plan can be found at:

- www.ready.nj.gov
- NJ Office of Emergency Management
- NJOEM Programs
- Mitigation – Protecting People and Property, Reducing Risks from Hazards
- Mitigation Related Links
- NJ Hazard Mitigation Plan