



Technical information on the four (4) most recent disasters and climate change issues are still being reviewed and are not included in this April 2012 NJ Hazard Plan update.

Section 5 Mitigation Strategy

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

- No new information has been added since the April 2011 adoption.
- Technical information concerning the recent disasters is in development and will be include in future updates

Explanation of Terms

Updated Plan: Refers to the New Jersey State Hazard Mitigation Plan approved by FEMA and adopted by the Governor of the State on a three (3) year cycle. The original State Hazard Mitigation Plan was adopted in 2005 and subsequently updated in 2008 and 2011. The next scheduled Updated Plan is April 2014.

Plan update: Refers to the maintenance and monitoring of the approved New Jersey Hazard Mitigation on the six (6) month cycle as described in Section 7 of the adopted State Plan. Plan updates provide users with the most current technical information available. Plan updates do not contain any changes in policy or requirements for additional information.

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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5.1 Interim Final Rule Requirements for Mitigation Strategy

The Interim Final Rule (IFR) Subsection 201.4 (c) (3) requires the State Hazard Mitigation Plan to include a Mitigation Strategy. "(The Mitigation Strategy shall provide) the State's blueprint for reducing the losses identified in the risk assessment. This section shall include:

- 1) A description of State goals to guide the selection of activities to mitigate and reduce potential losses.
- 2) A discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area including: an evaluation of State laws, regulations, policies and programs related to hazard mitigation as well as to development in hazard-prone areas; a discussion of State funding capabilities for hazard mitigation projects; and a general description and analysis of the effectiveness of local mitigation policies, programs and capabilities.
- 3) An identification, evaluation and prioritization of cost-effective, environmentally sound and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.
- 4) Identification of current and potential sources of Federal, State, local or private funding to implement mitigation activities.

Additionally, the Interim Final Rule (IFR) Subsection 201.4 (d) requires that the plan be updated on a regular basis. Specifically, "(The) plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts and changes in priorities."



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5.2 State Hazard Mitigation Strategy

5.2.1 Overview of the State Strategy

The Mitigation Strategy is New Jersey's blueprint for reducing potential future losses from hazards. The Mitigation Strategy provides information to guide State decision making regarding the protection of critical State facilities. The State mitigation strategies are also a guide for local hazard mitigation planning. The Mitigation Strategy consists of:

1. A description of the State's hazard mitigation goals and objectives to guide the selection of activities that will mitigate identified hazards and reduce future losses
2. The strategies will lead to the identification, evaluation and prioritization of mitigation actions and activities
3. The strategies will lead to the identification of current and future sources of Federal, State, local and private funding to implement mitigation activities
4. Reference to the stated strategies will permit the evaluation of New Jersey's pre- and post-disaster hazard management policies, programs and capabilities to mitigate hazards
5. Reference to the stated strategies will permit the evaluation of State laws, regulations, policies and programs related to hazard mitigation and the development in hazard prone areas

5.2.2. State Hazard Mitigation Goals and Objectives

The State endorses five goals and objectives and the Repetitive Loss strategy as stated below:

- | | |
|--|---|
| 1. To protect life through | <ul style="list-style-type: none"> o Improved warning and emergency communications systems o Effectively address hazard mitigation issues, laws and regulations o Reduce the impacts of hazards on vulnerable populations o Strengthen State and local building code enforcement |
| 2. To protect property through | <ul style="list-style-type: none"> o Protect critical State and non-state owned facilities and assets o Reduce repetitive losses (as specifically addressed below) o Implement hazard mitigation policies to protect the environment |
| 3. To increase public preparedness through | <ul style="list-style-type: none"> o Improved public awareness of natural hazards and the risks they pose o Improved hazard Information data bases and maps and increase accessibility to those resources o Enhanced community outreach and training emergency responders |
| 4. Develop and maintain an understanding of risks from natural hazards through | <ul style="list-style-type: none"> o Review and incorporate hazard information developed at the local level into the Plan o Increased development of local mitigation planning o Incorporate new FEMA guidance, rules and regulations into the Plan o Update the Plan from lessons learned on the national level |
| 5. Enhance capabilities to make New Jersey less vulnerable to hazards through | <ul style="list-style-type: none"> o Monitor the progress of on-going mitigation activities by state agencies o Provide current information on incentives for mitigation planning and action o Encourage the formation of partnerships to leverage and share mitigation resources o 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.

5.2.3 State Hazard Mitigation Program Repetitive Loss Strategy

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 (RFC) and Severe Repetitive Loss (SRL) programs

Additional information on New Jersey's Repetitive Loss and Severe Repetitive Loss property mitigation strategy is covered in Appendix G.



5.3 Ongoing Mitigation Programs

5.3.1. Identification and Continuity of Mitigation Program Status

Mitigation Projects will be monitored in the State All Hazard Plans. Projects once identified as a mitigation strategy will be carried forward noting:

- The year of the AHP
- The unique Action Number

Once developed into an ongoing mitigation program the action will be noted as such in the manner described in the series of figures below.

Figure 5.3.1-1
Identification of Ongoing Mitigation Programs in 2011 NJ All Hazards Plan.

Example of how identified mitigation strategy will be identified as an ongoing program:

GOAL 1. PROTECT LIFE						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
1.1 Improve warning and emergency communications systems.						
2008 – Action 111 Expand reverse 911 implementation.	High	NJOEM Communica- tions Bureau	Included as an Ongoing Mitigation Program As Noted	Existing State Resources	The State is seeking an inexpensive way to expand warning and emergency communication with the public.	Reverse 911 improves local and state capability to protect life.

Figure 5.3.1-2
Identification of Ongoing Mitigation Programs in future NJ All Hazards Plan.

Example of how an ongoing mitigation programs will be identified in future Plans:

GOAL 1. PROTECT LIFE						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
1.1 Improve warning and emergency communications systems.						
2008 – PSA 111 Expand reverse 911 implementation.	High	NJOEM Communica- tions Bureau	Mitigation action accomplished as an ongoing program			

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Figure 5.3.1-3
 Identification of New Mitigation Objectives and Actions in future NJ All Hazards Plan.

Example of how new mitigation actions will be identified in future Plans:

GOAL 1. PROTECT LIFE						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
1.1 Improve warning and emergency communications systems.						
2011 – Action 117 Description	High Medium Low	Specified	Term defined	Source identified	Specified	Defined

5.3.2 Ongoing Mitigation Programs and Evaluation of Progress

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 previous plans, and reported on the status of each of them.

Mitigation strategy actions that were recognized as positive steps to reduce the impact of hazards on the state and were developed into or have been established and ongoing programs include those listed in below. Operating mitigation programs are described below. Those “accomplished” 2008 Mitigation Strategy Actions are described below and will no longer be carried as a mitigation strategy. Future NJ State Hazard Plans will continue to report of continuing operational programs.

“Mitigation programs” are defined as currently in operation with funded staff, an operation budget and established goals. “Mitigation action” are items under development or proposals that have yet to be completed.

The ongoing mitigation programs, conducted by specific state agencies, support the concept of mitigation being a collaborative effort. Mitigation happens throughout the state because of these varied actions.

To relate these actions to prior strategy actions listed in the 2008 New Jersey State All Hazards Plan, the line item identification number is given. Once established as an ongoing, established, staffed and funded operation, the strategy action will be eliminated in future plans. However, to further relate ongoing actions to prior strategies, the 2008 strategy matrix is repeated with the action to delete noted. Once deleted the numbering will be maintained and noted for inclusion as an ongoing mitigation action. The effected Prior Strategy Actions (2008 PSA) include:

- Ongoing mitigation programs have been eliminated from the STAPLEE review.
- Future New Jersey State Hazard Mitigation Plans will continue to report of the success of these mitigation action programs.

5.3.2.1 Department of Community Affairs (DCA)



DCA is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update. DCA provides administrative guidance, financial support and technical assistance to local governments, community development organizations, businesses and individuals to improve the quality of life in New Jersey.

DCA offers a wide range of programs and services that respond to issues of public concern including fire and building safety, housing production, community planning and development, and local government management and finance.

DCA's programs and services are provided through, among others, the following Divisions:

- Division of Codes and Standards
- Division of Community Resources
- Division of Fire Safety
- Division of Local Government Services
- Office of Smart Growth

2008 PSA 239	The Division of Codes and Standards implements the Uniform Construction Code (UCC). A full time staff is employed working with an ongoing budget. In cooperation with DEP provides educational sessions for construction code officials through the Department of Community Affairs Division of Codes and Standards continuing education seminar series and the Building Safety Week conference. DCA and DEP also works with the American Society of Floodplain Managers to give training on the Certified Floodplain Mangers program. DCA integrate NFIP standards and Firewise into the uniform construction codes utilized by the State. (Prior Strategy Action 1.4.1) Ensure enforcement of the seismic design provisions in the International Building Code for all new buildings and infrastructure in New Jersey. (2008 Prior Strategy Action [2008 PSA] 2.3.9)
2008 PSA 481	The DCA Office of Smart Growth ensures the coordination of growth management plans and policies with hazard mitigation and response planning. Coordinate with the State Planning Commission to integrate the State Development and Redevelopment Plan within the SHMP. (2008 PSA 4.8.1)



5.3.2.2 Department of the Treasury

Treasury is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update.

Implementing hazard mitigation programs in state facilities is a continuing responsibility of the Department. A full staff is employed working with an ongoing budget.

2008 PSA 213	The Division of Property Management provides training seminars in identifying potential hazards to State bureaus responsible for rental/leasing of properties for State offices 2008 PSA 2.1.3 and 2008 PSA 2.1.4
2008 PSA 214	The Division of Property Management conducts routine visits with Building Managers and Leased Space Managers, as well as fire drills, responses to emergencies/complaints and other visits by the Bureau of Special Services all provide opportunities for DPMC staff to identify problems/issues, educate occupants or facility managers regarding problems/required improvements, and to increase safety/mitigate loss. (2008 PSA 2.14)
2008 PSA 231	The Department of the Treasury has ongoing responsibility for about 40 state-owned and 170 plus leased facilities through the Division of Property Management and Construction (DPMC) and also has responsibility for the insurance related to state facilities. Routinely conducts property maintenance and damage surveys of state facilities including post flooding events and maintains an inventory of structures damaged by natural hazards. (2008 PSA 2.3.1)



5.3.2.3 Department of Environmental Protection (DEP)

DEP is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update.

On America's first official "Earth Day" — April 22, 1970, the New Jersey Department of Environmental Protection was born. New Jersey became the third state in the country to consolidate its past programs into a unified major agency to administer aggressive environmental protection and conservation efforts. Former Governor William T. Cahill appointed Richard J. Sullivan as the first commissioner.

Since that day, NJDEP began a role to manage natural resources and solve pollution problems. In what started with about 1,400 employees in five divisions, NJDEP now has a staff of approximately 2,900 and is a leader in the country for its pollution prevention efforts and innovative environmental management strategies.

- **DEP Bureau of Dam Safety and Flood Control**

2008 PSA 121	<p>Bureau of Dam Safety and Flood Control – With a full time state and operating budget in place, The Bureau conducts a series of Community Assistance Visits (CAV) and Community Assistance Consultations (CAC) on an ongoing basis. On a day to day basis the Bureau enforces Flood Plain Management as it relates to new and existing construction (2008 PSA 1.2.1).</p>														
2008 PSA 235	<p>The Bureau conducts community outreach, workshops and training to increase NFIP [participation 2008 PSA 2.3.5) The Bureau conducts periodic CAV with local officials to provide technical assistance regarding compliance with NFIP floodplain management requirements.</p> <p>The Bureau also provides Community Assistance Program/State Support Services Element (CAP-SSSE) funding to meet negotiated objectives for reducing flood hazards in NFIP communities. The program requires that participating communities identify, prevent, and resolve floodplain management issues before the issues require compliance action by FEMA. 2009 activities included;</p> <table border="1" data-bbox="625 1249 1128 1591"> <tr><td>CAVs Conducted</td><td>19</td></tr> <tr><td>CAVs Closed</td><td>12</td></tr> <tr><td>CAVs open</td><td>16</td></tr> <tr><td>CACs Conducted</td><td>99</td></tr> <tr><td>Floodplain ordinances reviewed</td><td>1</td></tr> <tr><td>Floodplain Management Workshops Conducted</td><td>2</td></tr> <tr><td>Technical Assistance provided on CRS, Floodplain Management, Insurance and/or Mapping</td><td>7</td></tr> </table> <p>The two workshops conducted were:</p> <p>Digital Flood Insurance Rate Map (D-FIRM) Technical Assistance Training held April 23, 2009 designed to provide municipal floodplain mangers to have the ability to use FEMA's D-FIRM files on their local computer to view the flood risks hazards and make floodplain management decisions for their municipality.</p>	CAVs Conducted	19	CAVs Closed	12	CAVs open	16	CACs Conducted	99	Floodplain ordinances reviewed	1	Floodplain Management Workshops Conducted	2	Technical Assistance provided on CRS, Floodplain Management, Insurance and/or Mapping	7
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	FEMA National Floodplain Insurance Program Community Rating System (CRS) Workshop held May 11 – 14, 2009 designed to provide local officials and insurance agents and brokers with current information on CRS through the FEMA developed course L278
2008 PSA 421	The Bureau continuously updates and maintains repetitive loss and severe repetitive loss lists from the NFIP and provides that information to the NJSP Mitigation Unit and other agencies within DEP (2008 PSA 4.2.1)
2008 PSA 422	The Bureau works with NJOEM, local and regional jurisdictions to encourage their cooperation in making repetitive (and SRL) property mitigation a high priority, and to offer technical support in carrying out the requirements of FEMA mitigation programs. Specifically, the State will ensure that such jurisdictions have the most current and accurate information about SRL and RL properties.(2008 PSA 4.2.2)

- DEP Bureau of Coastal Engineering

2008 PSA 223	Bureau of Coastal Engineering operates with a full time staff and an operating budget, the Bureau maintains a close relationship with the Corps of Engineers regarding all phases of coast protection. The State has continued funding the non-lapsing Shore Protection Fund for shore protection projects associated with the protection, stabilization, restoration or maintenance of the shore including monitoring studies and land acquisition (2008 PSA 2.2.3)																														
2008 PSA 238	<p>Through continued State funding for federal flood control projects through annual state appropriations under the HR-6 Flood Control project budget the Bureau maintains an active series of coastal flood and shore protection projects(2008 PSA 2.3.8).</p> <p>The Bureau proactive responsibilities include beach nourishment, construction of shore protection structures, coastal dredging and aids to navigation. The Bureau has reactive responsibilities resulting from coastal storms. Many of the coastal engineering projects involve coordination with the US Army Corps of Engineers in both the Philadelphia and the New York Districts.</p> <p>The Bureau offices are located in Toms River. From October 2007 through September 2008 the following activities were recorded:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Federal Project Coordination</th> <th>State Funded Projects</th> </tr> </thead> <tbody> <tr> <td>Shore Protection Feasibility Study</td> <td>2</td> <td></td> </tr> <tr> <td>Planning, Engineering & Design</td> <td>4</td> <td>9</td> </tr> <tr> <td>Initial Nourishment</td> <td>1</td> <td></td> </tr> <tr> <td>Nourishment Completed</td> <td>2</td> <td></td> </tr> <tr> <td>Re-Nourishment</td> <td>1</td> <td></td> </tr> <tr> <td>Shore Protection Project Under Construction</td> <td>1</td> <td>3</td> </tr> <tr> <td>Shore Protection Project Completed</td> <td>1</td> <td>3</td> </tr> <tr> <td>Contracts, Bidding and Permits</td> <td></td> <td>10</td> </tr> <tr> <td>Dredging Under construction</td> <td></td> <td>2</td> </tr> </tbody> </table>		Federal Project Coordination	State Funded Projects	Shore Protection Feasibility Study	2		Planning, Engineering & Design	4	9	Initial Nourishment	1		Nourishment Completed	2		Re-Nourishment	1		Shore Protection Project Under Construction	1	3	Shore Protection Project Completed	1	3	Contracts, Bidding and Permits		10	Dredging Under construction		2
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	Dredging Planning, Engineering & Design	61									
The Bureau FY2009 and FY2010 State Funding was:											
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>FY2009</th> <th>FY2010</th> </tr> </thead> <tbody> <tr> <td>Flood Control</td> <td style="text-align: right;">\$ 6,500,000</td> <td style="text-align: right;">\$ 6,750,000</td> </tr> <tr> <td>Shore Protection</td> <td style="text-align: right;">\$16,000,000</td> <td style="text-align: right;">\$18,250,000</td> </tr> </tbody> </table>		FY2009	FY2010	Flood Control	\$ 6,500,000	\$ 6,750,000	Shore Protection	\$16,000,000	\$18,250,000	
	FY2009	FY2010									
Flood Control	\$ 6,500,000	\$ 6,750,000									
Shore Protection	\$16,000,000	\$18,250,000									

- **DEP Division of Land Use Regulation**

2008 PSA 236	Division of Land Use Regulation has developed Rules and regulation to ensure a safer community. They are administered through a full time staff that operates with an annual budget. Regulate development assures reduce flood losses in vulnerable fluvial coastal areas (2008 PSA 2.3.6).
	<ul style="list-style-type: none"> ○ Rules and regulation have been promulgated that govern development in flood hazard areas that have reduced flood losses and insurance claims in flood prone areas. ○ The Division coordinates with the Bureau of Dam Safety and Flood Control and NFIP participating communities on adopting and maintaining their Flood Damage Prevention Ordinance. ○ Ensures compliance with state land use regulations through notices, administrative actions and penalties.

- **DEP Open Space and Land Acquisition Programs**

2008 PSA 237	<ul style="list-style-type: none"> • Green Acres/Blue Acres Program - Green Acres and Blue Acres Program acquisition funds are used for the acquisition of repetitive loss and severe repetitive loss structures. Continued funding of the Green Acres program is based on voter approval of ballot questions (2008 PSA 2.3.7).
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- **DEP Division of Parks and Forests**

2008 PSA 123	Fire Service Section within the Bureau of Forests provides a full time staff of 89 positions and a par time staff of 2,500 wildland firefighters operating through an annual budget, a legislative process is in place to conduct wildland fuel reduction efforts on private properties (2008 PSA 1.2.3). One of the essential components necessary to complete the wildfire hazard mitigation plans is the inclusion of the homeowners and communities themselves as a vehicle to gain support and activity towards achieving Firewise concepts at the local level was needed.
	A full description of the Fire Service mitigation efforts can be found in Section 4.4.8.
2008 PSA 261	Other mitigation action actions of the Fire Service include continue mechanical thinning and prescribed fire use to reduce hazardous wildland fuel accumulations



	Statewide, particularly in high-risk areas.(2008 PSA 2.6.1)
2008 PSA 262	Encourage community acceptance and inclusion of Firewise concepts in municipal and regional planning (2008 PSA 2.6.2) The Firewise Communities program is designed to facilitate and provide information and resources to towns, municipalities, developments and communities that need to adopt long-term, proactive solutions to protect homes and natural resources from the risk of wildfire. There is no single solution, however, to achieving this common goal. The Firewise Communities concept is successful because it emphasizes local decision-making and encourages community representatives, including homeowners to develop their own plan for achieving a set of common goals. In general, the most successful wildfire mitigation programs are driven by the individuals that will benefit most from their efforts; the residents. As an example, the Forest Fire Service worked with residents from the Horizons community of Barnegat Township, in order that they could reach their goal of becoming "Firewise".
2008 PSA 263	Develop and implement effective silviculture strategies that improve the health of forests and reduce the amount of fuels available for wildland fires from dead and dying trees. (2008 PSA 2.6.3) The New Jersey Forest Fire Service has traditionally used prescribed burning to reduce dangerously high wildland fuel loadings. However, with the recent growth of housing units in and around the NJ Pinelands, the Forest Fire Service has initiated an aggressive program of forest thinning in areas where prescribed burning is not practical due to safety, smoke or extreme fuel build-up. Units that contain similar fuels and behavior characteristics.
2008 PSA 264	The Fire Service attempts to limit the number of wildfires to fewer than 2,000 annually and the acreage burned to less than ½ of 1% of the state forest. (2008 PSA 2.6.4) Strategic guidelines for both thinning and prescribed burning projects are similar, whether on state-owned lands, or across the landscape.
2008 PSA 311	Educate the public through NJOEM and NJFS outreach programs and hazard mitigation workshops.(2008 PSA 3.1.1) is a continuing program conducted through the New Jersey Forest Fire Service. Prevention is defined as the various activities directed at reducing the number of incidences of wildfire including; public education and awareness; law enforcement; and engineering practices, such as the reduction of fuel hazards (fuels management) or community planning.
2008 PSA 312	The Fire Service participates in the Emergency Preparedness Conference with fire workshops presentations (2008 PSA 3.1.2).
2008 PSA 323	The Fire Service develop a hazard event GIS database to help State and local emergency managers with hazard mitigation and other planning initiatives.(2008 PSA 3.2.3)
2008 PSA 345	New Jersey Forest Fire Service ensures that each municipality and county develops a wildfire preparedness plan for incorporation into their local and county emergency



	management plans (2008 PSA 3.4.5)
2008 PSA 461	The Fire Service developed and implements a State database/GIS to track and archive past wildfire occurrences, as well as current conditions related to wildfire and urban interface fire risks (i.e. drought conditions, wind, fuel load, etc.) (2008 PSA 4.6.1)

New Jersey Geological Survey (NJGS)

NJGS is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update.

The NJ Geological Survey is a public service and research agency within the NJ Department of Environmental Protection. Founded in 1835, the NJGS has evolved from a mineral resources and topographic mapping agency to a modern environmental organization that collects and provides geo-science information to government, consultants, industry, environmental groups, and the public.

The **mission** of the Survey is to map, research, interpret and provide scientific information regarding the state's geology and ground water resources. This information supports the regulatory and planning functions of DEP and other governmental agencies and provides the business community and public with the information necessary to address environmental concerns and make economic decisions.

NJGS geologists produce geologic and thematic maps that are the basis for subsurface and hydrogeologic investigations, as well as key component of land use planning and environmental hazard investigations. NJGS hydrogeologists perform regional and local ground-water resource studies, including the mapping of aquifer recharge and Well Head protection areas using Geographic Information Systems (GIS). NJGS geophysicists, use state-of-the-art *geophysical techniques* to define subsurface geology, pollutant plumes, and buried material. Because of the State's high population density, mineral exploration is now confined to offshore, where exploration for beach replenishment sand, gravel and metals is ongoing.

2008 PSA 161	<p>New Jersey Geological Survey has identified areas of seismic hazards where retrofits critical facilities are located, which are especially vulnerable seismically and located in high hazard areas.</p> <p>As part of continuing cooperation in the New Jersey State Hazard Mitigation Plan update NJGS has provided copies of all geotechnical maps and HAZUS loss estimates to the NJSP GIS Office (2008 PSA 1.6.1)</p> <p>The NJGS has posted all of the completed HAZUS County Reports, including pdfs of geotechnical maps and results of simulations, on the NJGS website at: http://www.njgeology.org/enviroed/hazus.htm.</p> <p>Also posted on the website are the following reports:</p> <p>Earthquake Risk in New Jersey (http://www.njgeology.org/enviroed/eqrisk.htm),</p> <p>Predicting Earthquake Damage in New Jersey (http://www.njgeology.org/enviroed/infocirc/eqdamage.pdf),</p> <p>Earthquakes in New Jersey (http://www.njgeology.org/enviroed/freedwn/njequakes1977.pdf), and</p> <p>Earthquakes Epicentered in New Jersey</p>
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	http://www.njgeology.org/geodata/dgsdown/njearthquakes.pdf).
2008 PSA 351	<p>New Jersey Geological Survey, through a full time staff and an operating budget, enhances public education and conducts outreach efforts to increase awareness of earthquake and other geological hazards and risk in New Jersey (2008 PSA 3.5.1).</p> <p>The NJGS publishes and distributes educational materials designed for the general public. One such report is a GIS coverage showing the locations of all the earthquakes which have occurred in the state. There is also a pdf version of this coverage for those who do not use GIS. (2008 PSA Action 3.5.1)</p>
2008 PSA 433	<p>The New Jersey Geological Survey (NJGS) has completed geotechnical maps (seismic soil class, liquefaction susceptibility, and landslide susceptibility) and HAZUS loss estimates for 9 of 21 counties. Completed are: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset, and Union counties. Hunterdon County is planned for FY 11, with Sussex and Warren in following years (FY 12 and FY 13), if the NJGS receives funding from NJSP. After the northern part of the state is completed the long range plan is to complete the lower Delaware Valley counties (Mercer, Burlington, Camden, Gloucester, and Salem) and then the outer Coastal Plain counties (Ocean, Atlantic, Cumberland, and Cape May). Note also that the Ramapo Fault is no more seismogenic than any other known or buried fault in the region, so should not be specially identified as a target for modeling activity (2008 PSA 4.3.3)</p>
2008 PSA 441	<p>The NJGS submitted a grant for funding to develop the mines location database but there was no funding available. Therefore this year the only mines located were those on the two quadrangles being mapped under our geologic mapping program. This amounts to about 30 of the estimated 300 mines which remain to be GPS located. Without FEMA funding, obtaining the GPS locations of the remaining ~270 known mines will not be completed in the next three years. Hazard assessment of the threat to the public posed by the mines cannot be completed until all mines are precisely located (2008 PSA 4.4.1).</p>

5.3.3.4 Department of Law and Public Safety,

NJOEM is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update.

The New Jersey State Police (NJSP) is committed to protect, preserve, and safeguard the constitutional and civil rights of all citizens through impartial and courteous law enforcement with integrity and professionalism. We shall ensure public safety and provide quality service in partnership with our communities.

EMERGENCY MANAGEMENT SECTION has the statewide responsibility to prepare for, respond to and recover from emergent and disastrous incidents which occur beyond the capacity of municipalities and counties to effectively respond. In this capacity, the agency is also responsible for the coordination and support of emergency.



- **NJSP Communications Bureau**

2008 PSA 111	Communications Bureau has an on-going reverse 911 call system in place operating with a full time staff and annual budget. Actual emergency activation has proven the system to be effective and viable. The State continually maintains, upgrades the operating system to maximize its efficiency (2008 PSA 1.1.1) .
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- **NJSP Recovery Unit**

The risk and vulnerability sections aids the State identify the jurisdictions that are most vulnerable to natural hazards, and to develop and prioritize appropriate actions to reduce losses. New Jersey intends to remain very actively involved in the mitigation planning process through direct assistance to grantees, and by reviewing documents as they are developed. In addition to this, the State intends to continue developing its capabilities to identify and facilitate mitigation projects and policy changes to reduce risks. .

2008 PSA 131	The Mitigation Unit encourages county and municipal participation in the FEMA program of FMA, PDM, HMGP, SRL, and RFC programs (2008 PSA 1.3.1)
2008 PSA 222	Recovery Bureau conducts day to day operations as part of its standard operations through an expanding staff and operating budget. NJ OEM has implemented a range of mitigation activities that are intended to accomplish this goal. These activities include acquisitions, elevations and facilitating funding of mitigation planning grants that will cover the entire state within about two years. Programs include information dissemination and training of owners and operators of non-state owned critical facilities for hazard mitigation (2008 PSA 2.2.2)
2008 PSA 233	The Training Unit and the Mitigation Unit conduct workshops and training seminars related to all FEMA hazard mitigation grant programs (2008 PSA 2.3.3)
2008 PSA 233	The Mitigation Unit incorporated NFIP information including development and implementation of a detailed severe repetitive loss mitigation strategy that will qualify the State for 90-10 cost share under the FEMA SRL program (2008 PSA 2.3.3).
2008 PSA 234	The Mitigation Unit promotes acquisition and elevation of repetitive loss and severe repetitive loss structures (2008 PSA 2.3.4)
2008 PSA 311	The goal of the Training Unit and the Mitigation Unit is to educate the public through NJOEM and NJFS outreach programs and hazard mitigation workshops (2008 PSA 3.1.1)
2008 PSA 312	The Mitigation Unit maintains a Statewide mitigation awareness through participation in the N. J. Emergency Preparedness Conference with workshops (2008 PSA 3.1.2)
2008 PSA 321	The Mitigation Unit, because of budget and contract conditions, no longer utilizes the continuing education services provided through Rutgers programs (2008 PSA 3.2.1)
2008 PSA 322	The Mitigation Unit and the State Hazard Mitigation Team has incorporated additional profiling and vulnerability information, as recommended by FEMA, into the current All Hazards Plan.
2008 PSA 331	Hazard Mitigation education is a joint effort by several state agencies. Efforts of the state floodplain manager, the state forest fire officer, and the state geologist, all members of the State Hazard Mitigation Team, promote and assist NJOEM in the education of hazard prone communities. In addition, through volunteers in the NJSP sponsored Citizen's Corps program local volunteers and community leaders also assist the permanent staff in mitigation efforts.
2008 PSA 341	The Mitigation Unit has conducted community outreach, workshops and training opportunities to promote development of Pre-disaster Mitigation Plan. (2008 PSA



	3.4.1)
2008 PSA 342	The Mitigation Unit Revised the SHMP and posted it on the web so it is more useable to the public and to local governments developing local mitigation plans.(2008 PSA 3.4.2)
2008 PSA 513	The Mitigation Unit has developed a process by which the State All Hazards Plan is continuously maintained and updated.

- **NJOEM Geographical Information Service Unit**

NJOEM GIS has coordinated an effort to provide greater access to the NJ OMB data directory of State owned facilities known as LBAM. NJOEM GIS will continue to develop this information in the context of hazard mitigation planning.

2008 PSA 321	The NJOEM GIS Unit incorporated existing HAZUS/NYCEM earthquake studies into SHMP and indicate completion schedule for other counties. (2008 PSA 3.2.1)
2008 PSA 323	NJOEM GIS developed a hazard event GIS database to help State and local emergency managers with hazard mitigation and other planning initiatives.(2008 PSA 3.2.3)
2008 PSA 324	NJOEM GIS expanded and enhanced GIS/HAZUS hazard mitigation databases and use for analysis and mapping in the SHMP
2008 PSA 325	NJOEM GIS developed state hazard profiles for manmade and technological hazards.

- **NJOEM Preparedness Unit**

RE: Warning Systems: The state utilizes a warning system consisting of water level and flow gauges and rainfall collection points that primarily covers two riverine systems. A statewide tide telemetry system services 15 of 21 counties.

Tide Telemetry System (Bergen County to Cape May, then to Trenton) is currently under emergency funding from NJOEM (50/50 share with USGS).

The continuing effort for expansion is primarily through the State Climatologist. Funding is from NJOEM, Army Corps and NOAA. The goal of the program is to eventually provide river gauge and telemetry coverage for the entire state. Funding availability greatly impacts the speed of progress within this effort.

2008 PSA 112	The Flood Warning Systems has been expanded by the Preparedness Unit and will be expanded until the entire state is covered. (2008 PSA 1.1.2)
2008 PSA 271	The Preparedness Unit Updated and maintains continuity of government - continuity of operations plans (COOP) to enable the state government to provide critical services during an interruption of business.

- **NJOEM Training Unit**

RE CERT: New Jersey continues to have one of the strongest Citizens Emergency Response Team (CERT) programs in the nation. The NJOEM Support Services Unit as well as the Training Unit play an integral part in maintaining the CERT Program.

RE Training Emergency Responders:



The NJOEM Training Unit provides training to personnel from government and private industry on a variety of FEMA courses in an effort to better prepare them to deal with natural, manmade and technological emergencies. This training covers the four concepts of Emergency management to include Preparedness, Mitigation, Response and Recovery activities.

The State intends to maintain its focus on effective training for emergency responders.

2008 PSA 151	The Training Unit promotes Community Emergency Response Team through its CERT training programs. (2008 PSA 1.5.1)
2008 PSA 152	The NJOEM Training Unit is utilized to train emergency responders.(2008 PSA 1.5.2)
2008 PSA 153	The Training Unit encourages educational programs (2008 PSA 1.5.3)
2008 PSA 313	The Training Unit independently conducts several classes throughout the year as part of their continuing education program on mitigation and other aspects of disaster response, preparedness and prevention. However because of budget and contract issues Rutgers School of Continuing Education is no longer used.
2008 PSA 331	The Training Unit developed a cadre of supplemental staff to assist NJOEM with education of affected communities, project assessment and development of mitigation projects. This staff may be comprised of volunteers, temporary reservists, and permanent personnel. (2008 PSA 3.3.1)

Office of the Attorney General (OAG)

OAG is represented on the State Hazard Mitigation Team and contributed to the 2011 plan update.

Eliminated Strategy Action

2008 PSA 482	<p>The Mitigation Action to coordinate with the Casino Reinvestment Development Authority on mitigation project has been eliminated.</p> <p>The Casino Reinvestment Development Authority's mission is to invest in projects that encourage business development, permanent job creation and opportunities for business expansion. While the Authority could be mitigation conscious in the development of a particular project where appropriate, such as a coastal project, mitigation is not the overriding purpose of any project.</p> <p>The OAG has determined that the original strategy action item was inappropriate and recommended its removal.</p>
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5.4. Continuing and New Mitigation Actions

5.4.1 Presentation of Continuing Actions

Table 5.4-1 lists all mitigation strategies.

- For the 2011 AHP ongoing strategy programs are highlighted in **BLUE**.
- To maintain continuity in future State Plans ongoing mitigation programs will be highlighted in **GREEN** with continuing strategies and projected timelines carried forward.
- New strategies will be highlighted in **ORANGE** as described Section 5.3.1.

5.4.2. Description of New Mitigation Actions

New Mitigation Action are broadly described as:

- Encouraging greater CRS participation
- Encouraging regional authority participation in the NFIP and the mitigation planning process
- Making the Plan more user friendly and readily accessible
- Encouraging non-participating local governments to join in their County plan update.
- Reach out to the colleges and universities in the state to participate in the planning process
- Analyze all of the approved mitigation plans and synthesize findings
- Provide on-going training to Plan authors and coordinators in preparation of Plan updates.
- Sponsor annual meetings to provide hazard mitigation information to non-participating or under-participating groups.
- Publicize mitigation success stories

5.4.3 Mitigation Strategies

Table 5.4.3-1
2011 Mitigation Objectives and Actions

Section 5 - Mitigation Strategy

GOAL 1. PROTECT LIFE						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
1.1 Improve warning and emergency communications systems.						
2008 – PSA 111 Expand reverse 911 implementation.	High	NJOEM Communications Bureau	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources	The State is seeking an inexpensive way to expand warning and emergency communication with the public.	Reverse 911 improves local and state capability to protect life.
2008 PSA 112 Expand Flood Warning Systems (Preparedness Unit).	High	NJOEM Preparedness Unit	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources	Improve coverage increases the number of people able to receive warning of potentially life threatening flooding events.	Expanding and enhancing this system improves local and state capability to protect life.



1.2 Effectively address laws and regulations that address hazard mitigation issues.						
2008 – PSA 121 Encourage enforcement of Flood Plain Management as it relates to new and existing construction.	High	NJOEM, NJDEP, others	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources and Federal grant funds (FEMA CAP-SSSE)	To guide communities in a more effective control and use of floodplains.	Improve disaster resistance of structures within the floodplain. Coordinate with the NFIP participating communities through the Community Assistance Program to ensure that they are adopting, properly using and enforcing the Local Flood Damage Prevention ordinances.
2008 Action 122 Encourage adoption of regulations that include exemptions to life safety/property protection mitigation efforts	Medium	Various	Ongoing	To be determined; multi-agency initiative	Prescribed burning and mechanical fuel reduction efforts are hindered when not considered during development of environmental laws and regulations	
2008 – PSA 123 Provide a legislative process to conduct wildland fuel reduction efforts on private properties.	Medium	NJFS	Included as an Ongoing Mitigation Program As Noted Above	NJFS	Incomplete cooperation on various land ownerships disrupts linear continuity of mitigation efforts	Protects life and property.
2011 Action 124 Expand reverse 911 implementation to include cell phones	High	NJOEM Communications Bureau	New initiative	Existing State Resources	The State is seeking ways to expand warning and emergency communication with the public through cell phone users	Reverse 911 improves local and state capability to protect life.
1.3 Reduce impacts of hazards on vulnerable populations.						
2008 – PSA 131 Encourage participation in existing programs – FMA, PDM, HMGP.	High	NJOEM Mitigation Unit, NJDEM, NJDCA NJ State League of Municipalities	Included as an Ongoing Mitigation Program As Noted Above	Existing local, State and Federal grant funds.	Significant number of households are in floodplains and are potentially at risk to hazards and repetitive losses. Opportunities exist to coordinate with “smart growth” and “safe growth” planning initiatives.	Increasing municipal involvement in and public support for improving the structural integrity of vulnerable homes will improve the safety of households which would otherwise be at risk.
2011 Action 132 Encouraging College/university participation in the mitigation planning process.	Medium	NJOEM	3 years (2014)	Existing NJOEM Resources	Increase level of protection to eligible, but not covered jurisdiction, from all natural hazards and a greater awareness throughout the state to a large segment of the vulnerable population.	Advances the goal of achieving 100% mitigation planning coverage



2011 Action 133 Encourage resolution of flooding issues on NFIP identified Repetitive and Severe Repetitive properties	High	NJOEM, DEP, Local Governments	Ongoing	DEP Green Acres funding, FEMA Grant Funds, Local dedicated Open Space funds, Private contributions	Increases the level of protection from flooding throughout the state to a large segment of vulnerable population.	Advances the goal of several mitigation programs.
1.4 Strengthen State and local building code enforcement.						
2008 Action 141 Integrate NFIP standards and Firewise into the uniform construction codes utilized by the State.	High	NJDCA NJDEP	2 years (2013)	Existing State funds	Incorporate NFIP requirements into the New Jersey Uniform Construction Code to reduce flood losses.	Reduction of flood losses will reduce flood insurance claims.
1.5 Train emergency responders.						
2008 PSA 151 Promote Community Emergency Response Team (CERT) training.	Medium	NJOEM Training Unit	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources	To enhance local communities' ability to respond to hazard events.	Provide public and communities with immediate pool trained first responders.
2008 PSA 152 Utilize the NJOEM Training Unit to train emergency responders.	Medium	NJOEM Training Unit	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources	To enhance local communities' awareness of risks.	Enhance community abilities to effectively respond to hazard events
2008 PSA 153 Encourage educational programs (Rutgers, UMDNJ).	Medium	NJOEM Mitigation - Preparedness unit	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	Continued participation in this joint program leads to a stronger understanding of hazards and risks within the emergency management community as well as in the private sector.	Enhance community abilities to effectively respond to hazard events
2008 Action 154 Ensure Incident Command System use, qualifications, and standards during all incident response and event planning.	Medium	Various	Begin within one year, then ongoing (2012)	Existing State resources	DHS requirement	Protects life and property.
1.6 Ensure that State critical facilities are protected from potential damage or collapse in earthquakes.						
2008 PSA 161 Implement seismic retrofits critical facilities, which are especially vulnerable seismically and located in high hazard areas.	Medium	NJOEM, NJGS	Included as an Ongoing Mitigation Program As Noted Above	FEMA grant funds, grants from other federal or State agencies TBD.	Potential for deaths and casualties in certain combinations of building types and occupancies means that some critical facilities should be protected from seismic hazards.	Protects life and property. Will help State maintain operations in the event of an earthquake.



GOAL 2. PROTECT PROPERTY AND ENSURE CONTINUITY OF OPERATIONS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2.1 Protect critical State facility assets.						
2008 Action 211 Generate State critical facilities information and establish GIS-based repository for data on critical State facilities.	High	NJ Treasury NJOIT/GIS NJOEM	3 years (2014)	Existing State Resources	Establishes comprehensive GIS-based repository for data on critical State facilities.	Data base will allow identification of critical state facilities so that they may be targeted for future mitigation projects.
2008 Action 212 Prioritize structural and nonstructural retrofits for critical State owned facilities based on their vulnerability to natural hazards.	High	NJ Treasury NJOEM	3 years (2014)	Existing State Resources and possible mitigation grant funds	Prioritizing will address the most vulnerable structures first.	Retrofitting facilities based on their vulnerability will preserve important state buildings, as well as protect their records, systems and occupants from hazard events.
2008 PSA 213 Expand State facilities risk management program.	High	NJOEM NJ Treasury	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Maintain flood protection and fire protection	Increases safety of personnel and reduces losses due to fire/flood.
2008 PSA 214 Provide training seminars in identifying potential hazards to State bureaus responsible for rental/leasing of properties for State offices.	Medium	NJOEM NJ Treasury	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Training will augment existing initiatives of Treasury and the State's insurance carriers by expanding the number of hazards addressed and will use all existing hazard profiling information.	Identification of potential hazards will identify vulnerabilities and avoid losses to State facilities through mitigation or relocation. Securing facility contents will protect them from damage and also minimize flood insurance claims.
2008 Action 215 Survey State agencies for their most critical facilities, and use as the basis for prioritizing vulnerability assessments and mitigation grant funds.	Medium	NJOEM, all concerned State agencies, Treasury	To be determined. (2013)	Existing NJOEM and State agency staff resources.	Critical first step in identifying appropriate sites and operations for mitigation priorities.	Protects life, property and continuity of operations.
2.2 Protect critical non-state owned assets.						
2008 Action 221 Inventory non-state owned critical assets that are vulnerable to natural hazards.	High	NJOEM State Agencies Local EMC	Ongoing	Existing resources	Establishes comprehensive GIS-based repository for data on critical non-State owned facilities.	Database will allow identification of non-State owned critical facilities so that they may be targeted for future mitigation projects.



GOAL 2. PROTECT PROPERTY AND ENSURE CONTINUITY OF OPERATIONS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 PSA 222 Encourage training of owners and operators of non-state owned critical facilities for hazard mitigation.	High	NJOEM State Agencies Local Emergency Management Coordinators	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Targeted training will augment existing initiatives of NJOEM and insurance carriers.	Targeted training efforts based on identification of potential hazards will reduce vulnerabilities and losses to critical facilities through mitigation or relocation. Training to secure contents of critical facilities will protect assets from damage and minimize flood insurance claims..
2008 PSA 223 Continue the non-lapsing Shore Protection Fund for shore protection projects, stabilization, restoration or maintenance of the shore, including monitoring studies and land acquisition.	High	NJDEP, Bureau of Coastal Engineering	Included as an Ongoing Mitigation Program As Noted Above	Existing resources.	Implemented recommendations and methods would reduce flooding from storm surge and protect vulnerable evacuation routes on barrier islands.	Partnerships with the U.S. Army Corps of Engineers and local governments allow the State to leverage our funding to implement mitigation projects with larger scale protection. The fund supports coastal engineering research, the Beach Monitoring Network and dune-system assessments.
2011 Action 224 Establish an annual "mitigation" meeting to which a target group on a specific subject will be invited on a 3 year rotating schedule	Medium	NJOEM	3 years (2012)	Existing NJOEM Resources	Increase level of protection to eligible, but not covered jurisdiction, from all natural hazards and a greater awareness throughout the state to a large segment of the vulnerable population.	Advances the goal of achieving 100% mitigation planning coverage
2.3 Reduce repetitive and severe repetitive flood losses Statewide.						
2008 PSA 231 Inventory damaged structures.	High	NJOEM, NJDEP NJ Treasury	Included as an Ongoing Mitigation Program As Noted Above	Existing State Assets and Federal grants	Identifying repetitive loss areas and properties helps communities develop a strategy to reduce future hazard losses.	Retrofitting, elevating or removing repetitive loss properties from known hazard areas protect property and lives as well as preserve personal, state and federal financial resources.
2008 PSA 232 Develop and implement a detailed severe repetitive loss mitigation strategy	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources, in context of State Mitigation Plan update (which used FEMA grant funds)	First step in the State implementing a clear, long-term program of mitigating properties that constitute the most significant losses to the National Flood Insurance Program.	Protects property. See Appendix G of 2008 version of State plan – Severe Repetitive Loss Mitigation Strategy.
2008 PSA 233 Conduct yearly workshops related to FEMA hazard mitigation grant programs.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing State Assets and Federal grants	Making local officials aware of FMA increases participation.	FMA contributes to the mitigations strategy to reduce future flood losses.



GOAL 2. PROTECT PROPERTY AND ENSURE CONTINUITY OF OPERATIONS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 PSA 234 Promote acquisition and elevation of repetitive loss and severe repetitive loss structures.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Federal grants	To eliminate repetitive loss structures	Structures will no longer be flooded thereby reducing repetitive loss claims
2008 PSA 235 Conduct community outreach, workshops and training to increase NFIP participation.	High	NJOEM NJ Treasury	Included as an Ongoing Mitigation Program As Noted Above	Existing State Resources	Encourages participation in the program so that losses will be covered and allows eligibility in the FMA program.	Allows for people to receive flood insurance claims and maintains eligibility in the FMA program of which flood insurance is a requirement.
2008 PSA 236 Regulate development to reduce flood losses in vulnerable fluvial and coastal areas.	High	NJDEP	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Necessary to reduce flood insurance losses in floodprone areas.	Promulgates regulations governing development in flood hazard areas which reduce flood losses and ensures a safer community.
2008 PSA 237 Continue NJDEP Green Acres, Blue Acres acquisition of repetitive loss and severe repetitive loss structures.	Medium	NJDEP NJOEM NJ State League of Municipalities	Included as an Ongoing Mitigation Program As Noted Above	New and existing State appropriations	Requested in local mitigation planning efforts to eliminate repetitive loss structures.	Augments Federal funding to ensure that more structures will no longer be flooded thereby reducing repetitive loss claims.
2008 PSA 238 Continue State funding for federal flood control projects through annual state appropriations under the HR-6 Flood Control project budget.	High	NJDEP, Bureau of Dam Safety & Flood Control	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	Implemented recommendations and methods would reduce flooding and protect vulnerable public and private properties, infrastructure, utilities and municipal services	Partnerships with the U.S. Army Corps of Engineers and local governments allow the State to leverage our funding to implement flood mitigation projects that provide larger scale protection.
2008 PSA 239 Ensure enforcement of the seismic design provisions in the International Building Code for all new buildings and infrastructure in New Jersey.	Medium	Local governments; State government	Included as an Ongoing Mitigation Program As Noted Above	Existing local and State resources	Long-term continued enforcement is best form of mitigation for most hazards.	Best possible long-term mitigation against damages from earthquakes, especially for new construction
2011 Action 240 Encourage greater municipal CRS participation through county and municipal educational programs.	Medium	NJDEP	3 years (2014)	Existing NJ DEP resources	Greater CRS participation will promote general flood hazard awareness, increase flood insurance coverage and reduce flood policy costs and decreases flood losses	Increase the awareness of flood hazards.
2011 Action 241 Encourage regional authorities, with established land use regulatory authority to participate in the NFIP CRS program	Medium	NJDEP	3 years (2014)	Existing NJ DEP resources The Meadowlands Commissions can be used as a model.	Greater CRS participation will promote general flood hazard awareness, increase flood insurance coverage and reduce flood policy costs.	Increase flood hazard awareness and provide greater flood insurance coverage at lower costs.



GOAL 2. PROTECT PROPERTY AND ENSURE CONTINUITY OF OPERATIONS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2.4 Ensure that State-owned and operated critical facilities are protected against potential wind damage.						
2008 Action 241 Undertake cost-effective wind retrofits and upgrades of the most critical state facilities.	Medium	State government	To be determined (2014)	State resources and/or FEMA grant funds	Protects key State resources. Part of possible eventual enhanced State plan status.	Protects lives, property and essential State functions.
2.5 Identify and mitigate local or regional critical facilities that are in flood velocity zones						
2008 Action 251 Use HAZUS to identify local or regional police, fire, hospital and emergency operations centers that are in FEMA-designated V and VE flood zones.	Medium to High	NJOEM and local/regional authorities	One year (2012)	Existing NJOEM and local/regional resources	First step in initiating mitigation activities to protect critical facilities.	Protects property, and because the facilities in question are critical in nature, by extension these activities also contribute to the goal of protecting life, as well as maintaining the effective operation of government operations that may be essential in the post-event environment.
2008 Action 252 Undertake detailed vulnerability assessments and develop mitigation options for critical facilities in V and VE zones.	Medium to High	NJOEM and local/regional authorities	To be determined based on funding.	To be determined, probably NJOEM and regional or local entities.	Step in process of securing grant funds to mitigate risks to these sites.	Contributes to goals of protecting property and life.
2008 Action 253 Initiate mitigation projects to reduce risks to critical facilities located in V and VE zones	Medium to High	NJOEM and local/regional authorities	To be determined based on funding.	FEMA grant programs, with State	Protects critical facilities.	Contributes to goals of protecting property and life.
2.6 Continue to ensure minimal risk from wildfires and urban interface fires.						
2008 PSA 261 Continue mechanical thinning and prescribed fire use to reduce hazardous wildland fuel accumulations Statewide, particularly in high-risk areas.	High	NJFS	Included as an Ongoing Mitigation Program As Noted Above	NJFS, federal programs	Historically vulnerable areas require continual mitigation efforts to manage risk. Many vulnerable areas are subject to increasing development pressures, meaning that risk is gradually increasing, although the probability of fire may remain stable because of mitigation efforts.	Improving the health of the forests will make less fuel available for wildland fire and protect forest resources. Protects property and life.
2008 PSA 262 Encourage community acceptance and inclusion of Firewise concepts in municipal and regional planning	Medium	NJDEP, Forest Fire Service	Included as an Ongoing Mitigation Program As Noted Above	Fosters defensible space and community development standards to improve survivability of residences during wildfire incidents	Allows continuity of mitigation efforts between communities and other open lands.	Improving the health of the forests will make less fuel available for wildland fire and protect forest resources.



GOAL 2. PROTECT PROPERTY AND ENSURE CONTINUITY OF OPERATIONS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 PSA 263 Develop and implement effective silviculture strategies that improve the health of forests and reduce the amount of fuels available for wildland fires from dead and dying trees.	Medium	NJDEP, Forest Fire Service	Included as an Ongoing Mitigation Program As Noted Above	Existing resources and National Fire Plan grants	A portion of the state's forests has trees killed or defoliated by forest insects or disease.	Improving the health of the forests will make less fuel available for wildland fire and protect forest resources.
2008 PSA 264 Limit the number of wildfires to fewer than 2,000 annually and the acreage burned to less than 1/2 of 1% of the state forest.	Medium	NJ DEP Forest Fire Service	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Minimizes wildfire ignitions and limits acreages burned by breaking up large areas of hazardous fuels.	Provides access for suppression and enforcement as well as contingency lines for prescribed burning and wildfire control. Improve public acceptance of efforts
2.7 Ensure continuity of critical business operations.						
2008 PSA 271 Update and maintain continuity of government to enable the state government to provide critical services during an interruption of business.	High	NJOEM NJOIT	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	Critical services are still necessary during an interruption of business.	The existence and exercise of these plans will assure that State Government services will continue to be provided regardless of the hazards faced.

GOAL 3. INCREASE PUBLIC PREPAREDNESS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
3.1 Improve public awareness and preparedness for natural hazards and the risks they pose.						
2008 PSA 311 Educate the public through NJOEM and NJFS outreach programs and hazard mitigation workshops.	High	NJOEM NJFS	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	To increase participation in hazard mitigation programs for the prevention of potential loss of life and damage to structures.	Encourages the development of Pre Disaster Mitigation plans and participation in mitigation grant programs.
2008 PSA 312 Participate in the Emergency Preparedness Conference with workshops.	High	NJOEM NJFS	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	The Emergency Preparedness Conference is an important venue to promote and increase participation in hazard mitigation programs and reaches a wide variety of people and interests.	Encourages the development of Pre Disaster Mitigation plans and participation in mitigation grant programs.
2008 PSA 313 Promote continuing education of state and local officials through Rutgers programs.	Medium	NJOEM Rutgers University	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	To make local officials and emergency management coordinators aware of possible hazards and actions to reduce hazards and vulnerabilities in their community.	Increases protection to property and life in the state.



GOAL 3. INCREASE PUBLIC PREPAREDNESS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2011 Action 314 Analyze local risks and other information and incorporate into 2014 Plan update.	Medium	NJOEM	3 years (2014)	Existing NJOEM Resources	Increase level of understanding of all natural hazards and a greater awareness throughout the state.	Advances the goal full awareness of all hazards on all levels.
3.2 Improve hazard information data bases and maps.						
2008 PSA 321 Incorporate existing HAZUS /NYCEM earthquake studies into the SHMP and indicate completion schedule for other counties	Highest	Geological Survey	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	HAZUS and NYCEM data will be invaluable in the development of mitigation planning, for both the State and local communities by providing a comprehensive database for mitigation planning	Assists in developing state and local mitigation plans with current information.
2008 PSA 322 Incorporate additional profiling and vulnerability information recommended by FEMA into the SHMP.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing State resources	To increase statewide vulnerability and hazard trends.	Decreases losses through identification of hazard prone areas. Increases protection of vulnerable state activities.
2008 PSA 323 Develop a hazard event GIS database to help State and local emergency managers with hazard mitigation and other planning initiatives.	High	NJOEM NJOIT/GIS NJFS	Included as an Ongoing Mitigation Program As Noted Above	Existing resources	The current NJOEM GIS database to capture and organize the volume of information generated by research and actual disaster events needs to be expanded.	Improving knowledge of hazards and hazard events will improve mitigation and other planning designs to reduce the impact of hazard events on local and state economies.
2008 PSA 324 Expand and enhance GIS/HAZUS hazard mitigation databases and use for analysis and mapping in the SHMP.	High	NJOEM NJOIT/GIS	Included as an Ongoing Mitigation Program As Noted Above	Existing resources and mitigation grants	Provide a data base for the identification of hazardous areas and provide loss estimations for hurricanes and flood winds	Provide rationalization for future land use planning.
2008 PSA 325 Develop state hazard profiles for manmade and technological hazards.	High	NJOEM NJCA Office of Smart Growth Local Planning and Emergency Management Agencies	Included as an Ongoing Mitigation Program As Noted Above	Mitigation grants	Existing profiles primarily discuss state and local vulnerability to natural hazards.	Improving knowledge of manmade hazards and technological hazard events will improve mitigation and other planning designs to reduce the impact of hazard events on local and state economies.
3.3 Enhance community outreach.						
2008 PSA 331 Develop a cadre of supplemental staff to assist NJOEM with education of affected communities, project assessment and development of mitigation projects.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Mitigation grants	Allow flexibility in staffing and increase during periods of disasters. Hiring staff is necessary for the Mitigation Unit to fulfill its responsibilities and manage its increased workload resulting from recent disasters and commitments in the SHMP.	Provide better public relations, education and identification of viable hazard mitigation projects.



GOAL 3. INCREASE PUBLIC PREPAREDNESS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
3.4 Increase development of local mitigation planning.						
2008 PSA 341 Conduct community outreach, workshops and training opportunities to promote development of PDM plans.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Mitigation grants and technical assistance funds.	Development of FEMA approved plans is required for HMGP and PDM funds	Approved plans will allow communities to receive mitigation grants to implement projects that will protect life and property.
2008 PSA 342 Increase NJOEM staffing in areas of planning, engineering and management.	High	NJOEM,	Included as an Ongoing Mitigation Program As Noted Above	Mitigation grants	Additional staff required to expand expertise, for the timely development of hazard mitigation plans and to facilitate implementation of projects.	Development of viable local hazard mitigation plans and projects.
2008 Action 343 Revise the SHMP and post it on the web so it is more useable to the public and to local governments developing local mitigation plans.	Highest	NJOEM SHMT	6 months (2011)	Existing state mitigation grants	To enhance local jurisdictions ability to utilize the State plan to develop ongoing and comprehensive mitigation strategies.	Will provide a user friendly guidance to local jurisdictions.
2008 Action 344 Develop and maintain local government mitigation planning assistance/coordination on web page.	Highest	NJOEM NJ Treasury NJOIT/GIS	6 months (2011)	Existing State resources	Provide up to date reference for the development and updating of local hazard mitigation plans.	This local information will be utilized in the updating of the State Hazard Mitigation Plan.
2008 PSA 345 Ensure that each municipality and county develops a wildfire preparedness plan for incorporation into their local and county emergency management plans.	Medium	NJOEM NJDEP Forest Fire Service	Included as an Ongoing Mitigation Program As Noted Above	FEMA Fire Management Assistance Grant Program; National Fire Plan grants and NJDEP Community Wildfire Hazard Mitigation Grants, others.	Provides resources for preparing mitigation plans and implementation of measures to mitigate wildfire hazards	Helps to address goals of protecting life and property.
2011 Action 346 Encourage greater active county involvement in plan updates and local project development through establishing "Plan Update" training courses to assist counties in fulfilling the plan maintenance sections of their plans.	Medium	NJOEM and County OEM Coordinators	3 years (2014)	Existing NJOEM Resources	Brings about a greater degree of coordination between state, county and local emergency managers in plan maintenance.	Advances the goal full awareness of all hazards on all levels.
3.5 Ensure that citizens of the State have at least some understanding of earthquake risk, how to respond if any earthquake occurs, and best practices for mitigation on a local or individual level.						



GOAL 3. INCREASE PUBLIC PREPAREDNESS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 PSA 351 Enhance public education and outreach efforts to increase awareness of earthquake hazards and risk in New Jersey.	Low to Medium	NJGS, NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing State staff and funds.	Protects life and property.	Advances goals of protecting life and property.
3.6 Encourage involvement in advancing mitigation among State, regional and local agencies.						
2008 Action 361 Encourage the NJ League of Municipalities to become more involved in mitigation activities.	Medium	NJOEM, NJ League of Municipalities	TBD (2014)	Existing staff	Helps to spread concepts of mitigation to new areas.	Advances all goals in the plan by increasing preparedness and knowledge of citizens, and law and policymakers.
2011 Action 362 Encourage plan participation by non-participating local governments	High	NJOEM	3 years (2014)	Existing NJOEM resources	Increase level of protection from all natural hazards and a greater awareness throughout the state.	Advances the goal of achieving 100% mitigation planning coverage

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GOAL 4 DEVELOP AND MAINTAIN AN UNDERSTANDING OF RISKS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
4.1 Ensure that the State Hazard mitigation Plan is maintained as a current "living" document.						
2008 Action 411 Continuously update the State Hazard Mitigation Plan to ensure that it includes the most current technical information, serves as a reference and guidance document for local and regional planners, and reflects current State policies, practices and priorities.	High	NJOEM	Commencing immediately, then ongoing (2011)	Existing staff, support from MCT and SHMT. Potential for additional funding through FEMA grant programs.	Federal requirement. In order to maximize the utility of the plan, it must be constantly updated to include most recent information.	Basis for most of the State's decisions about mitigation actions and strategies.
2011 Action 412 Make the AHP web site more user friendly and maintain, as part of the web site, all handouts and information developed for public distribution with current information	High	NJOEM	1 year (2012)	Existing NJOEM resources and NJSP Public Information Office.	Increased access to the NJ AHP will help spread the concept of hazard mitigation.	Advances all of the goals of the plan by increasing preparedness and knowledge of municipal and county officials, citizens and law and policymakers.



GOAL 4 DEVELOP AND MAINTAIN AN UNDERSTANDING OF RISKS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
4.2 Ensure that the State has a complete and accurate GIS-based inventory of its facilities, in particular those that are critical to response and recovery from the impacts of natural and manmade hazards.						
2008 Action 421 Compile a GIS-based inventory of critical facilities Statewide	High	NJOEM/ Treasurer	Two to five years (2013)	Existing staff, possibly consultants depending on funding availability	Developing basic information such as this will allow the State to meet federal requirements for prioritizing mitigation grant funds that will be directed to reducing losses to State-owned and operated facilities. Furthermore, and more importantly, this information will allow the State to make informed decisions regarding the use of federal and State resources to reduce potential damages.	This action is the basic building block of a mitigation strategy. Completing this action is the first step in meeting the goals of protecting lives and property, as related to State facilities
4.3 Ensure that the State obtains and maintains best available information related to risks from flood hazards.						
2008 PSA 431 Continuously update repetitive loss and severe repetitive loss lists from the NFIP.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing staff	Essential to continuing the State's effort to reduce flood losses. Enables NJOEM to appropriately prioritize its actions to mitigate repetitive loss and severe repetitive loss properties, in accordance with FEMA requirements (and potentially qualifies the State and local jurisdictions for the 90-10 federal-local match under the SRL program.	The State mitigation strategy has a focus on reducing losses to property by implementing appropriate flood mitigation activities. Keeping these lists up to date allows the State to prioritize assistance and funds.
2008 PSA 432 Continue working with local and regional jurisdictions to encourage their cooperation in making repetitive property mitigation a high priority, and to offer technical support in carrying out the requirements of FEMA mitigation programs.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing staff, with support from FEMA RII.	Basic requirement to initiate and sustain momentum	Initiates a long-term process to protect property from effects of repetitive flooding.
4.4 Ensure that the State obtains and maintains best available information related to risks from earthquake hazards.						



GOAL 4 DEVELOP AND MAINTAIN AN UNDERSTANDING OF RISKS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 PSA 441 Overlay an inventory of critical facilities with the level of seismic hazard at each location, using the USGS national seismic hazard maps and the New Jersey Geological Survey maps of seismic soil classes.	Medium	NJGS, NJOEM, potentially others	Included as an Ongoing Mitigation Program As Noted Above	To be determined	Serves as first step in a long-term plan to reduce risks to the most critical State facilities.	Results in protecting both life and property.
2008 Action 442 Prioritize earthquake risk by conducting more detailed risk assessments of the critical facilities	Medium	NJGS, NJOEM, potentially others	Two to five years, starting after earlier phases described above. (2013)	To be determined	Serves as first step in a long-term plan to reduce risks to the most critical State facilities.	Results in protecting both life and property.
2008 Action 443 Complete HAZUS loss estimation runs for the mostly likely damaging earthquakes for New Jersey,	Medium	NJGS	Estimated at three years. (2014)	Existing NJGS staff and financial resources.	Part of a larger process to identify most at-risk areas, as basis to determine where State mitigation resources can best be used henceforth.	Results in protecting both life and property.
4.5 Ensure that the risks related to abandoned mines are understood and mitigated.						
2008 Action 451 Develop a GIS database of abandoned mines based on collection of accurate locations using a Global Positioning System (GPS).	Medium	NJDEP, NJGS	Three years (2014)	FEMA and/or USGS (?) grant funds, existing State resources.	The number and distribution of mines Statewide creates widespread hazards and a range of risks to citizens and physical assets. The database will include information on the known size and depth of the mines.	Mapping is an essential first step in fully understanding risks related to abandoned mines, and in developing and prioritizing appropriate mitigation actions. Improved knowledge of the subsurface hazard locations relative to existing roads and building will assist in assigning a priority for remediation.
4.6 Ensure that the State has an understanding of the wind risks to state owned and operated critical facilities.						
2008 Action 461 Conduct a survey of wind vulnerabilities, based on criteria such as age of the facility, value of operations, proximity to the coast, etc.	Medium	NJOEM, with cooperation of State agencies that own or operate the facilities	To be determined	State funds, dependent on budget priorities.	Although wind is not as significant a risk to the State as some other hazards, there are likely some State facilities that are quite vulnerable to wind hazards, and where these vulnerabilities may be relatively inexpensive to mitigate.	Basis for prioritizing actions to mitigate risk.
4.7 Ensure that the State has an understanding of wildfire and urban interface fire risks, on a near-real-time basis.						



GOAL 4 DEVELOP AND MAINTAIN AN UNDERSTANDING OF RISKS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 Action 471 Develop and implement a State database/GIS to track and archive past wildfire occurrences,	Medium	NJFFS	Within 2 years (2013)	PDM Grant	Map of all areas of the State with the ranking of the threat from wildland fuels will assist in local and regional planning	Provides basis for Pinelands Commission and other defensible space regulations and enforcement.
4.8 Provide incentives for mitigation planning and actions.						
2008 PSA 481 Provide grants, planning tools, training and technical assistance to increase the number of public and private sector hazard mitigation plans and initiatives, especially for multi-jurisdiction districts.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	Existing Resources, Mitigation Grant	Providing incentives and resources encourages organizations to develop hazard mitigation plans and initiatives they otherwise would not have	Expanding the number of hazard mitigation initiative will improve the state's resistance to hazards and reduce the impact of hazard events on the State's economy.
4.9 Form partnerships to leverage and share resources for mitigation.						
2008 Action 491 Ensure coordination with the State Planning Commission	High	NJOEM SHMT State Planning Commission NJDCO Office of Smart Growth	Ongoing (2011)	Existing State Resources	To ensure that growth plans do not conflict with hazard mitigation and response planning.	To enhance the State's coordination abilities.
2008 Action 492 Coordinate with the Casino Reinvestment Development Authority on mitigation projects.	High	NJOEM NJ Attorney General's Office CRDA	Deleted	Existing Resources	Provide a source of additional funding for mitigation projects.	Allows for greater participation of mitigation actions throughout the state at all jurisdictional levels, thus increasing the number of completed projects.
2008 Action 493 Identify and describe existing plans addressing hazard mitigation issues for review and integration into the SHMP.	Medium	NJOEM, SHMT	1 Year (2012)	Existing State resources	Develop plans for their effective use and integration with other agencies' for use of existing resources to reduce losses.	Enhances local capabilities to utilize public and private resources.

GOAL 5 ENHANCE THE CAPABILITY OF NJOEM TO CONTINUOUSLY MAKE NEW JERSEY LESS VULNERABLE TO HAZARDS

Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
5.1 Institutionalize hazard mitigation						



GOAL 5 ENHANCE THE CAPABILITY OF NJOEM TO CONTINUOUSLY MAKE NEW JERSEY LESS VULNERABLE TO HAZARDS						
Objective/Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority	How Action Contributes to Mitigation Strategy
2008 Action 511 Seek funding for additional staff and resources	High	NJOEM	Commencing immediately, then ongoing (2011)	To be determined, probably State of New Jersey and FEMA.	Federal requirement. In order to maximize the utility of the plan, it must be constantly updated to include most recent information.	Basis for most of the State's decisions about mitigation actions and strategies.
2008 Action 512 Provide ongoing staff and resources to keep the State plan a living document.	High	NJOEM	Continuous as part of normal budget and staffing activities.	State, NJOEM.	Ensures that the plan is a current and technically accurate document.	Ensures that all aspects of the HMP are current, and enhances resources available to local and regional planners.
2008 PSA 513 Continuously update and enhance the State plan. Begin by incorporating recommended FEMA revisions. Institute stronger plan maintenance procedures, such as having agencies responsible for mitigation actions provide annual progress reports to the SHMO.	High	NJOEM	Included as an Ongoing Mitigation Program As Noted Above	NJOEM, FEMA	Required to ensure that the plan is a current document, and remains useful to the State, as well as to local and regional planners.	The plan is the basis for prioritizing all actions.
5.2 Improve coordination with mitigation planning partners						
2008 Action 521 Ensures that mitigation planning continues to evolve in the State	Medium	NJOEM, FEMA	Beginning immediately, ongoing. (2011)	NJOEM, FEMA, NJ counties and local jurisdictions.	Ensures that mitigation planning continues to evolve in the State, and that efforts of State, federal government and local jurisdictions are aligned.	
2011 Action 522 Publicize mitigation success stories by requiring project applicants to report on how the mitigation action affected the hazard issue.	Medium	NJOEM and Public Information Office	3 years (2014)	Existing NJOEM Resources and NJOEM Public Information Office	Increase level of awareness of natural hazards and a greater awareness of the relation between planning and project that relieve or prevent hazard results.	Advances the goal of achieving 100% mitigation planning coverage and better mitigation projects
5.3 Maximize utilization of best technology						
2008 Action 531 Increases technical quality of HMP and abilities of State	Medium	State, NJOEM.	Ongoing. (2011)	Various, including NJOEM, FEMA, local and national partners.	Increases technical quality of HMP and abilities of State, local and regional planners.	Ensures that technical aspects of the plan and mitigation activities are based on best available technology and data.



5.5 Evaluating Alternative Mitigation Actions

The New Jersey Hazard Mitigation Plan uses the STAPLEE to evaluate and apply evaluation criteria. STAPLEE enables a systematic approach that considers, in a systematic way, the Social, Technical, Administrative, Political, Economic and Environmental opportunities and constraints of implementing a particular mitigation action.

The areas of discussion included in STAPLEE review cover:

S - Social	<ul style="list-style-type: none"> Community acceptance (acceptance) 	<ul style="list-style-type: none"> Adverse concerns on a segment of the population (concern)
T - Technical	<ul style="list-style-type: none"> Technical feasibility (feasible) Long term solution (long-term) 	<ul style="list-style-type: none"> Secondary impacts (impact)
A - Administrative	<ul style="list-style-type: none"> Staffing sufficient in number and training (staff) Funding allocated (funding) 	<ul style="list-style-type: none"> Maintenance and operation (maintenance)
P - Political	<ul style="list-style-type: none"> Political support (support) Local plan champion or plan proponent (champion) 	<ul style="list-style-type: none"> Public support (public)
L - Legal	<ul style="list-style-type: none"> State authority (state) Local authority (local) 	<ul style="list-style-type: none"> Action potentially subject to legal challenge (challenge)
E ¹ - Economic	<ul style="list-style-type: none"> Benefit of mitigation (benefit) Cost of mitigation action (cost) 	<ul style="list-style-type: none"> Contributes to economic goals (contributes) Outside funding required (funding)
E ² - Environmental	<ul style="list-style-type: none"> Affects land and water (land) Affects endangered species (species) Affects hazardous waste materials and waste sites (waste) 	<ul style="list-style-type: none"> Consistent with environmental goals (ecological) Consistent with federal laws (law)



Table 5.5-1
STAPLEE Review

STAPLEE CRITERIA		S		T			A			P			L			E ¹				E ²				
		Acceptance	Concern	Feasible	Long-Term	Impacts	Staffing	Funding Allocation	Maintenance	Support	Champion	Public	State	Local	Challenge	Benefit	Cost	Contributes	Funding	Land	Species	Waste Sites	Ecological	Law
Considerations For Alternative Actions	LEGEND: + Presents a positive impact - Presents a negative impact N Not Applicable																							
122 Encourage adoption of regulations that include exemptions to life safety/property protection mitigation efforts in tightly regulated environmental laws.		-	-	-	-	-	-	-	+	+	+	-	-	N	+	-	-	-	-	N	N	N	-	-
132 Encourage college/university participation		-	-	-	-	-	-	-	+	+	+	-	-	N	+	-	-	-	-	N	N	N	-	-
141 Integrate NFIP standards into the uniform construction codes utilized by the State.		-	-	-	-	-	-	+	+	-	-	-	N	N	-	-	+	-	-	-	-	-	-	
154 Ensure Incident Command System use, qualifications, and standards during all incident response and event planning.		-	-	-	-	-	+	+	+	-	N	-	-	-	N	-	+	N	+	N	N	N	-	-
211 Establish comprehensive GIS-based repository for data on critical State facilities.		-	N	-	N	-	+	+	+	-	N	N	-	-	-	-	+	-	-	N	N	N	-	-
212 Prioritize structural and nonstructural retrofits for critical State owned facilities based on their vulnerability to natural hazards.		-	N	-	N	-	+	+	+	-	N	-	-	-	-	-	+	-	-	N	N	N	-	-
215 Conduct a survey of State agencies as the basis for identifying their most critical facilities, and use this as the basis for prioritizing vulnerability assessments and (subsequently) mitigation grant funds.		-	N	-	N	N	-	N	N	-	N	N	-	N	-	N	+	N	-	N	N	N	-	-
221 Inventory non-state owned critical assets that are vulnerable to natural hazards.		-	-	-	-	-	-	+	+	-	-	-	N	N	-	-	+	-	-	-	N	N	-	-
224 Establish an annual mitigation meeting		-	-	-	-	-	+	N	N	-	N	-	-	N	N	-	-	-	-	N	N	N	N	N
232 Develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the State for 90-10 cost share under the FEMA SRL program.		-	-	-	-	-	+	N	N	-	N	-	-	N	N	-	-	-	-	N	N	N	N	N
240 Encourage greater CRS participation		-	-	-	-	-	+	+	N	+	N	-	-	-	N	-	+	N	+	N	N	N	N	-
241 Encourage regional authorities to participate in NFIP and CRS		-	-	-	-	-	+	+	N	+	N	-	-	-	N	-	+	N	+	N	N	N	N	-
251 Use HAZUS to identify local or regional police, fire, hospital and emergency operations centers that are in FEMA-designated V and VE flood zones.		-	N	-	N	-	+	-	N	-	N	-	-	N	-	-	-	N	-	N	N	N	N	-

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STAPLEE CRITERIA		S		T			A			P			L			E ¹				E ²				
Considerations For Alternative Actions	LEGEND: + Presents a positive impact - Presents a negative impact N Not Applicable	Acceptance	Concern	Feasible	Long-Term	Impacts	Staffing	Funding Allocation	Maintenance	Support	Champion	Public	State	Local	Challenge	Benefit	Cost	Contributes	Funding	Land	Species	Waste Sites	Ecological	Law
		252 Undertake detailed vulnerability assessments and develop mitigation options for critical facilities in V and VE zones.	-	-	-	-	-	-	+	+	N	+	N	-	-	N	N	-	+	-	+	N	N	N
253 Initiate mitigation projects to reduce risks to critical facilities located in V and VE zones	-	-	-	-	-	-	+	+	N	+	N	-	-	N	N	-	+	-	+	N	N	N	N	-
314 Synthesize findings of local plans	-	-	-	-	-	-	-	+	+	-	-	-	-	-	N	-	-	-	-	N	N	N	N	-
331 Develop a cadre of supplemental staff to assist NJOEM with education of affected communities, project assessment and development of mitigation projects.	-	-	-	-	-	-	-	+	+	-	-	-	-	-	N	-	-	-	-	N	N	N	N	-
341 Conduct community outreach, workshops and training opportunities to promote development of PDM plans.	-	-	-	-	-	-	-	+	+	-	-	-	-	N	N	-	+	-	+	-	N	N	-	-
342 Increase NJOEM staffing in areas of planning, engineering and management.	-	-	-	-	-	-	-	+	+	-	-	-	-	N	N	-	+	-	+	-	N	N	-	-
343 Revise the SHMP and post it on the web so it is more useable to the public and to local governments developing local mitigation plans.	-	-	-	+	-	N	N	-	-	N	-	-	-	N	N	-	-	-	N	-	-	-	-	-
344 Develop and maintain local government mitigation planning assistance/coordination web page.	-	-	-	-	-	+	+	+	-	N	-	-	-	N	N	-	-	-	+	N	N	N	-	-
346 Greater county involvement	-	-	-	+	-	+	+	N	-	N	-	-	-	N	N	-	-	N	-	N	N	N	N	-
361 Encourage the NJ League of Municipalities to become more involved in mitigation activities.	-	-	-	+	-	+	+	N	-	N	-	-	-	N	N	-	-	N	-	N	N	N	N	-
362 Encourage non-participating locals	-	-	-	-	-	-	+	+	-	-	-	-	-	N	N	-	+	-	+	-	N	N	-	-
411 Compile a GIS-based inventory of critical facilities Statewide	-	N	-	+	-	+	+	N	-	N	-	-	-	N	-	-	+	+	+	N	N	-	-	-
412 Make web site more user friendly	-	N	-	+	-	+	+	N	-	N	-	-	-	N	-	-	+	+	+	N	N	-	-	-
451 Using a prioritized list of State facilities, conduct a survey of wind vulnerabilities, based on criteria such as age of the facility, value of operations, proximity to the coast, etc.	-	-	-	N	-	+	+	N	-	-	N	-	-	N	-	-	+	N	-	N	N	N	-	-
471 Provide grants, planning tools, training and technical assistance to increase the number of public and private sector hazard mitigation plans and initiatives, especially for multi-jurisdiction districts.	-	-	-	N	-	+	-	N	-	-	-	-	-	-	-	-	+	N	+	N	N	N	-	-
483 Identify and describe existing plans addressing hazard mitigation issues for review and integration into the SHMP.	-	N	-	+	-	-	N	N	-	N	-	-	-	-	-	-	-	+	-	N	N	N	-	-

Section 5 - Mitigation Strategy



STAPLEE CRITERIA		S		T			A			P			L			E ¹				E ²				
Considerations For Alternative Actions	LEGEND: + Presents a positive impact - Presents a negative impact N Not Applicable	Acceptance	Concern	Feasible	Long-Term	Impacts	Staffing	Funding Allocation	Maintenance	Support	Champion	Public	State	Local	Challenge	Benefit	Cost	Contributes	Funding	Land	Species	Waste Sites	Ecological	Law
		522 Publicize mitigation success stories		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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5.6 Progress on Other State Mitigation Actions

5.6.1 NJDEP Flood Update – Delaware River

The following represents a summary of some of the initiatives of the Report on Delaware River Flood Mitigation that are currently being undertaken by the NJDEP.

5.6.1.1. Updated Flood Hazard Area Control Act Rules

On November 5, 2007, the NJ Department of Environmental Protection adopted new Flood Hazard Area Control Act rules (N.J.A.C. 7:13), which incorporate more stringent standards for development in flood hazard areas and riparian zones adjacent to surface waters throughout the State. The Department has adopted these new rules in order to better protect the public from the hazards of flooding, preserve the quality of surface waters, and protect the wildlife and vegetation that exist within and depend upon such areas for sustenance and habitat.

In order to minimize the impacts of development on flooding, a 0% net-fill requirement (which was previously implemented only in the Highlands Preservation Area and Central Passaic Basin) will now apply to all non-tidal flood hazard areas of the State. The new rules also expand the preservation of near-stream vegetation (previously protected within 25 or 50 feet of streams) by implementing new riparian zones that are 50, 150 or 300 feet in width along each side of surface waters throughout the State. The riparian zone width depends on the environmental resources being protected, with the most protective 300-ft riparian zone applicable to waters designated as Category One and certain upstream tributaries. Certain waters supporting trout, or habitats of threatened or endangered species critically dependant on the watercourse to survive, or watercourses which flow through areas that contain acid-producing soil deposits, receive a 150-ft riparian zone.

Some of the other highlights of the new rule include allowing the use of Federal flood mapping in communities where no State flood mapping is available, and providing a simplified method to approximate flood depths in communities where no State or Federal flood mapping is available; requiring floor elevations and roadway surfaces to be set at least one foot above the State's flood hazard area design flood elevation in order to provide increased flood protection for buildings and public roadways; creating 46 permits-by-rule and 16 general permits to both facilitate and encourage projects that have no adverse impact on flooding and the environment, including a permit-by-rule for elevating homes, which requires no prior NJDEP approval, and a free, expedited general permit for the reconstruction and elevation of homes damaged by flooding; and Amending the Coastal Permit Program rules (N.J.A.C. 7:7) and Coastal Zone Management rules (N.J.A.C. 7:7E) to incorporate equivalent flood protection and stream buffers to all waters and flood hazard areas Statewide.

5.6.1.2. Updated Floodplain Study & Mapping Delineation

The NJDEP has set aside \$1,000,000 to begin the preparation of new floodplain delineations and associated mapping for the main stem of the Delaware River. On May 16, 2006, the NJDEP executed a Collaborative Technical Partnership (CTP) agreement with the Federal Emergency Management Agency (FEMA) in order to leverage NJDEP funding with the current federal Flood Map Modernization Program resources. FEMA will also be contributing an additional \$2,500,000 dollars towards completion of this effort.

The NJDEP has also coordinated with USGS and FEMA on the development of updated hydrologic information for the main stem of the Delaware River. On May 2007, the USGS recommended flood magnitude and frequencies for the 8 gauging stations along the main stem Delaware River in New Jersey, New York, and Pennsylvania. These figures were developed by Bob Schopp, USGS NJ Water Science Center and Gary Firda, USGS NY Water Science Center. These figures were developed in consultation with the U.S Army Corps of Engineers Philadelphia District, FEMA Regions II and III, NJDEP-State NFIP



Coordinator's Office and DRBC. USGS plans to post a web-based report documenting the assumptions that were made in determining these discharges.

Medina Consultants, the flood mapping contractor, is currently in the process of performing field surveys of river cross-sections along a 126 miles reach of the main stem of the Delaware River. In addition, various stages of LiDAR acquisitions are planned for the four counties along the Delaware River. The surveyed river cross-sections, the LiDAR information and the updated hydrology will be incorporated into updated hydraulic modeling for preparation of the new mapping. This state of the art new mapping will be a valuable resource during times of emergency and for the regulation of land use along the floodplain area. The goal of this mapping effort is to more accurately define the limits of the flood hazard area and associated base flood elevation.

5.6.1.2. Flood Mitigation Feasibility Study

The NJDEP has committed funding to be cost shared with the US Army Corps of Engineers (USACE) for the preparation of a feasibility study to evaluate possible flood mitigation options, including flood-proofing and removing or relocating structures within the floodplain of the Mid-Delaware River Basin. The Feasibility Cost Share Agreement between NJDEP and the USACE was signed on July 27, 2006. The NJDEP and USACE have met with Delaware River town residents and local officials to perform visual inspections and gather information on the 2004, 2005 and 2006 flooding. NJ continues to provide cost-share funding and the USACE continues to move forward on the study.

5.6.1.3. Upgrades to USGS Stream Gauging Program

The NJDEP has committed funding for the upgrade, replacement, and addition of stream gauges along the Delaware River. On June 9, 2006, the NJDEP signed a joint funding agreement with the United States Geological Survey (USGS) to provide various upgrades to stream gauging programs in NJ. Along the Delaware River, the scope of work includes the addition of high-data rate satellite transmitters to provide better aerial data coverage on a real-time basis and to develop flood data for use in design of flood control measures, major gage repairs in order to improve stream flow data accuracy, and the addition of rain gages to aid the National Weather Service (NWS) in flood-forecasting and refinement of their radar estimates of precipitation.

To date, major gage repairs and upgrades have been accomplished to the existing gages at the Delaware River at Montague, Riegelsville, and Trenton. In addition, a radar stage gage has been installed and a tipping-bucket rain gage has been re-installed at the Delaware River at Stockton and a radar stage and rain gage has been installed at the Delaware River at Lambertville.

5.6.1.4. Multi-Jurisdictional Flood Mitigation Plan

FEMA has awarded the Delaware River Basin Commission (DRBC) a grant under the Flood Mitigation Assistance program for the preparation of a multi-jurisdictional Flood Mitigation Plan (FMP) for 64 municipalities located within Sussex, Warren, Hunterdon and Mercer Counties that have boundaries either partially or entirely within the Delaware River drainage basin. NJDEP has provided cost share funding for the FEMA grant. *NJOEM, NJDEP, and the DRBC will lead this effort to develop the FMP, which will be part of future All-Hazard Mitigation Plans.* NJOEM, NJDEP, and DRBC have held kick-off, planning, and technical assistance meetings with county and municipal representatives in order to engage local community participation. Local involvement in the planning process is crucial for the identification of critical facilities, flood-prone areas, community goals and desired local mitigation actions for the successful development of a FMP.

NJOEM, NJDEP, and DRBC continue to work with local municipalities on the goal of completing the plan by early 2008. This plan would provide the four counties with a valuable asset that could be incorporated into a future All-Hazards Plan.



5.6.1.5 Updated State Hazard Mitigation Plan

Representatives from a number of NJDEP programs, including the State NFIP Coordinator's Office, actively participate in NJOEM planning and technical meetings under the State Hazard Mitigation Team. NJ DEP has implemented new processes and partnerships to address issues that FEMA raises regarding the current state plan. NJDEP is currently participating in a core work group to support NJOEM with their FEMA required three year update to the current state plan. NJDEP also supports future effort that would earn the state an enhanced classification and increase the mitigation grant funding that is available for hazard mitigation projects from 7.5% to 20%.

5.6.1.6. Develop a Flood Analysis Modeling Tool

The NJDEP has committed funding to the DRBC for development of a flood analysis model. This model will allow the evaluation of existing reservoirs for flood mitigation purposes by providing data to evaluate the effects of various reservoir operating alternatives on flooding at locations downstream of the reservoirs. The scope of work for this project has been finalized and USGS has signed an agreement with DRBC on June 20, 2007. Development of the model will be by a multi-agency project team which will include participation of the National Weather Service (NWS), the USACE, and USGS. The flood analysis model is scheduled to be completed within eighteen months, or in January 2009.

5.6.1.7. Blue Acres Program for New Jersey

Governor Corzine signed into law the "Green Acres, Farmland, Blue Acres, and Historic Preservation Bond Act of 2007" which was presented to the voters and approved at the November 2007 election. The bond act will provide \$12,000,000 for the state to acquire, for recreation and conservation purposes, lands in the floodway of the Delaware River, Passaic River, and Raritan River, and their respective tributaries, that have been damaged by, or may be prone to incurring damage caused by storm-related flooding or that may buffer or protect lands from such damage.



5.6.3 Shore Protection Program Projects

Below are all the state-local shore protection projects that the NJDEP, Bureau of Shore Protection has completed or is currently working on since FY08:

Borough of Monmouth Beach Seawall
 Monmouth County/Boro of Manasquan Fisherman's Cove Bulkhead
 Ocean City Beachfill
 Cape May Point Gabions
 Keyport Phase II Bulkhead
 City of Trenton Bulkhead
 Borough of Belmar Bulkhead
 Fortesque State Marina Bulkhead

The Bureau FY2009 and FY2010 State Funding was:

	FY2009	FY2010
Flood Control	\$ 6,500,000	\$ 6,750,000
Shore Protection	\$16,000,000	\$18,250,000

* The fiscal year (FY) indicated is the year the money was appropriated.

State Flood Control Grant Program

The "Dam, Lake, Stream, Flood Control, Water Resources, and Wastewater Treatment Project Bond Act of 2003" provided \$25,000,000 for grants to implement state and local flood control projects. The following represents a current list of flood control projects that have been funded by the NJDEP, Flood Control Section through the Bond Act of 2003:

<u>Project</u>	<u>Project Sponsor</u>	<u>Grant Amount</u>
Regional Flood Management Plan	Atlantic County	\$200,000
Weasel Brook Culvert	Clifton City	\$1,318,500
Pine Mt. Levee & Tide Gate	Cumberland County	\$600,000
Culvert Replacement	Dunellen Borough	\$900,000
Bulkhead Construction	Egg Harbor Township	\$2,000,000
Detention Basin	Franklin Township	\$200,000
Storm Sewer	Galloway Township	\$640,897
Repaupo Creek Flood Gate	Greenwich Township	\$2,250,000
Buyout	Lawrence Township	\$750,000
Flood Management Plan	Mahwah Township	\$150,000
Flood Management Plan	Maplewood Township	\$182,250
Storm Sewer	Mount Arlington Borough	\$208,000
Channel Improvement	North Caldwell Borough	\$261,750
Channel Improvement	Oakland Borough	\$346,725
Bridge & Channel Improvement	Roselle Borough	\$5,055,000
Pine Brook Culvert	Washington Township	\$255,000
Buyout	Wayne Township	\$1,800,000
W.Br.Elizabeth River Sewer	Union Township	\$1,185,000
Map Modernization	NJDEP	\$1,000,000
Lower Saddle River Project	NJDEP	\$3,696,878
USGS Stream Gage	NJDEP	\$1,000,000



5.7 Pre- and Post-Disaster Hazard Management Organization, Policies, Programs and Capabilities

5.7.1. Organization of the Office of Emergency Management

The Governor of New Jersey has the overall responsibility for Emergency Management activities in the State. The Superintendent of the New Jersey State Police is also the State Director of the New Jersey Office of Emergency Management. On behalf of the Governor all activities and departments are coordinated, directed and controlled from the State Office of Emergency Management, Emergency Operations Center.

In order to effectuate the powers of the Governor, the State Director of Emergency Management supervises, directs and controls the appointment of deputies and/or assistants to control the daily activities of the State Office of Emergency Management. The function and staffing of the Office of Emergency Management is with the approval of the Attorney General.

The NJ Office of Emergency Management office has evolved from a small agency with limited planning, training, and response capabilities to its present status as an integral part of state government.

- Before 1950, federal and state disaster relief programs focused on protecting the U.S. Population from acts of war. At that time, key functions of the integrated emergency management program model used today - evacuation planning, sheltering, volunteer management, alert and warning, and resource management - were elements of the "civilian defense plans" developed to prepare for war-related activities.
- During the 1950's and 1960's, the N.J. Civil Defense Office was primarily responsible for coordination with its designated federal counterpart to disseminate information on civil defense, to maintain civil defense communications, and to provide for civil defense training programs. Nationally, the federal government offered assistance on a per-incident basis to victims of natural disasters.
- Until 1979, emergency management programs dedicated to specific hazards were scattered around the national government in various Federal agencies. During this time, the realization was growing that managing an emergency successfully included attention to all phases of the emergency -- mitigation (risk reduction), preparedness, response, and recovery - and similar emergency management strategies could apply whether the emergency was a flood, earthquake, drought, fire, chemical spill or a terrorist attack.
- The increase in technological disasters in the 1970's and 1980's - many due to hazardous chemical emergencies - brought about the "all-hazard" approach to emergency management and the emergence of state offices with a much broader scope of responsibility.
- In 1979, after the Three Mile Island Nuclear Generating Station incident, President Carter established the Federal Emergency Management Agency (FEMA). This vested in the President all functions that had been delegated or assigned to the Civil Defense Preparedness Agency, the Federal Disaster Assistance Administration, the Federal Preparedness Agency, and the agencies named in the Earthquake Hazards Reduction Act of 1977.
- In 1980, amendments to the Civil Defense Act mandated FEMA to work with the State and local governments to assist them in setting up emergency management programs. These amendments prescribed the coordination and support role that FEMA plays to State and local governments.



- Amendments to the Civil Defense Act also provided for "dual use" of funds, meaning that Federal funding to the states may be used to prepare for and respond to natural and technological emergencies to the extent that the use of funds is consistent with, contributes to, and does not detract from attack preparedness. Once all emergency programs were established under FEMA, work began to consolidate functional activities that were similar for all emergencies (such as evacuation or public education) into a unified planning effort.
- A Presidential Executive Order states that the Director of the FEMA will represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response, and recovery programs. The FEMA Director also develops policies which provide that all emergency management functions, resources and systems of executive agencies are integrated with organizations, resources and programs of state and local governments, the private sector and volunteer organizations.
- In New Jersey, a Reorganization Plan was submitted to the Legislature to transfer the functions, powers and duties of the Office of Civilian Defense Director from the Department of Defense to the Department of Law and Public Safety on July 22, 1976. Pursuant to an order of Attorney General William F. Hyland dated January 12, 1978, the Office of Civilian Defense Director was established in the Division of State Police. Colonel Clinton L. Pagano, Superintendent, New Jersey State Police was appointed as the State Director on February 10, 1978. On December 17, 1980, the Honorable Brendan Byrne, Governor of the State of New Jersey, issued Executive Order 101, triggered by the creation of the Federal Emergency Management Agency as previously described, which renamed the Office of the Civilian Defense Director as the Office of Emergency Management.
- All of the functions, powers and duties of the Office of Civilian Defense Director in the Department of Law and Public Safety as provided in the July 22, 1976 Reorganization Plan are carried out by the State Director of Emergency Management.

Recovery Bureau

The Bureau Chief of the Recovery Bureau supervises the preparedness, mitigation and public assistance units and three regional coordinators. The Preparedness Unit is responsible for disseminating preparedness information in advance of a disaster or potential disaster. The NJOEM Preparedness Unit maintains an extensive library of natural disaster preparedness and recovery information on its Family and Community Emergency Preparedness website, accessible through www.nj.gov/njoem or www.njsp.org/njoem. Such information, featured prominently on the New Jersey State Police and NJOEM website "home" pages, is a critical part of New Jersey's efforts to protect public health and safety and to minimize loss of life and property in the event of a disaster.

The Mitigation Unit undertakes hazard mitigation planning and the review of mitigation projects in advance of potential disasters, and is also activated during and immediately after disasters to evaluate existing and proposed mitigation measures in the affected areas. The Public Assistance Unit accepts and reviews applications for funds for emergency work submitted by local individuals, households and businesses as well as from local governments during and immediately after a disaster.

Each Regional Coordinator is the primary liaison for NJOEM with the County Emergency Management Coordinators for seven contiguous counties in their assigned region (North, Central and South). Responsibilities of the Regional Coordinators fall into seventeen (17) different functional categories. They are required to attend County, Municipal and other agency meetings; attend and conduct NJSP and NJOEM training; conduct, exercise and participate in local exercises; respond to all major incidents and disasters; provide direct EOP development assistance; and to conduct compliance surveys, State Police details, program support and other administrative functions. Regional personnel represent the Governor and State Director of Emergency Management at all emergency and disaster situations in the State. They monitor these situations and assure proper response and recovery activities. Response to an incident provides interaction between local and state government that expedites and centralizes the State's response. These activities include State, County and Municipal EOC activations, participation in actual operations, and technical assistance



during the response and recovery phase. They are also responsible for providing status reports of events, through channels, to the Office of the Governor and Attorney General. In the post-emergency phase, they are responsible for the incident's evaluation and critique. It is also the responsibility of the Regional Units to assist with the development, review and compliance of all county and municipal Emergency Operations Plans. Regional personnel meet with and evaluate all Emergency Management Assistance (EMA) funded jurisdictions for year-end reports, development and review of Emergency Operation Plans (EOPs), exercises, and performance review of semi-annual and final EMA claim forms. New Jersey has currently achieved a compliance rate of 95% approved EOPs.

- The North Region coordinates emergency management activities throughout the northern seven (7) counties and two hundred and six (206) municipalities. In 2004, thirty-one (31) of these two hundred and six (206) political subdivisions received EMA Funding.
- The Central Region coordinates emergency management activities throughout the central seven (7) counties and one hundred and ninety-two (192) municipalities. In 2004, thirty-five (35) of these one hundred and ninety-two (192) political subdivisions received EMA Funding.
- The South Region coordinates emergency management activities throughout the southern seven (7) counties and one hundred sixty seven (167) municipalities. In 2004, twenty-four (24) of these one hundred sixty seven (167) political subdivisions receive Emergency Management Assistance (EMA) Funding.

Mitigation Unit

The Mitigation Unit, within the Emergency Management Section, has the mission of enhancing state, county, and municipal risk reduction through the development and implementation of mitigation strategies. Hazard mitigation, by definition, is any sustained action that prevents or reduces the loss of property or human life from recurring hazards. The Mitigation Unit accomplishes this task by implementing and administering several grant based programs in conjunction with the Federal Emergency Management Agency (FEMA).

- Counties and municipalities are made aware of these programs through letters announcing upcoming grants for which eligible communities in their jurisdiction may apply. Additional workshops are held to further explain available programs, and municipalities are encouraged to apply for grant funds. Upon receiving completed applications, NJOEM will then narrow down the list of prospective applicants based on existing plans and potential project needs.
- Follow-up is conducted through extensive use of e-mail communications and phone contact. The State Hazard Mitigation Team will convene to review all applications for funding. Approved project applications and planning grant information are forwarded to FEMA for review and approval.
- Upon notification of approval from FEMA, members of the Mitigation Unit notify appropriate municipalities of the award. NJOEM personnel conduct workshops and participate in public meetings with the goal of successfully completing the grant process. Additional workshops are held around the State with presentations given to explain the various programs and their benefits to potential participants.
- Program partnerships with resource agencies such as The League of Municipalities, professional, educational, civic, and trade-based organizations are utilized to disseminate information as well as garner public input and inquires. During a post-disaster period, Mitigation Unit personnel will work closely with all involved communities to assist with the Hazard Mitigation Grant Program in the same manner as is done with Pre-Disaster programs.

➤ Training and Outreach



The New Jersey Office of Emergency Management, in cooperation with other State agencies and FEMA, seeks to mitigate hazards and reduce repetitive losses due to flooding through the implementation of programs such as the HMGP FMA, RFC, SRL, RL, and PDM Programs. Each program functions in a different manner, but they all achieve the same objective to provide funding for hazard mitigation projects or reduce repetitive losses of flood prone structures. This will not only save Federal funds, but lives and reduce the risk of personal injury to response personnel in a disaster situation.

➤ Emergency Operations Management Unit

Whenever a disaster occurs, or is predicted to occur, the State Emergency Operations Center is activated and staffed with personnel from NJOEM Mitigation Unit as well as other State Police emergency management units and various State Agencies. A 24/7 schedule for staffing is developed in advance each month, so the EOC may be activated at any time at a moment's notice. The State Emergency Operations Plan addresses the State's response to any disaster or emergency. It provides the basis for coordinated emergency operations involving disaster planning, response, recovery and mitigation. The Emergency Operations Plan defines the relationships between NJOEM and other entities, both government and volunteer, serving citizens prior to, during and after emergencies. The Plan involves twenty seven federal agencies, sixteen State departments, and twenty four State and volunteer agencies. The New Jersey Office of Emergency Management responds to the resource requests of the counties when they are overwhelmed and in need of assistance whether it is a statewide disaster or one on a more local (county) level.

During a post disaster period, the NJOEM Mitigation Unit personnel work closely with all of the communities involved to assist with the Hazard Mitigation Grant Program in the same manner as with the pre-disaster programs.

➤ NJOEM Mitigation Unit Resources

The NJOEM currently performs its assigned roles with the following staff configuration:

- 1 Enlisted Unit Head
- 2 Enlisted Troopers
- 2 Principal Planners (GIS)
- 1 Senior Planner
- Seasonal Interns

5.7.2 Evaluation of New Jersey State Hazard Mitigation Unit

Staffing has increased, however so has the workload. NJOEM continues to be hampered in addressing hazard mitigation initiatives in all its program goals.

In order to effectively perform the increasing number and complexity of tasks required for hazard mitigation planning, the NJOEM Mitigation Unit will require at least four additional staff, including:

- 2 additional Professional Planner
- 1 Professional Engineer
- 1 GIS specialist
- 1 Clerical staff

With limited staff, the Division continues to provide support in planning and project management.

The nation's most densely populated State is also home to a wide array of natural resources and therefore New Jersey must carefully balance development and preservation of the use of its land, coast and water. The State recognizes the



direct benefit of carefully planning land use in coordination with growth management and has passed laws regulating land use, preservation of land and water, floodplains, growth, and emergency management to protect the land. In addition, the State also recognizes that proper planning can reduce the potential for hazard to impact the State.

Staff from the New Jersey Office of Emergency Management Mitigation/Preparedness Unit worked with the State Hazard Mitigation Team to identify Agencies and Organizations that have programs or policies which impact hazard mitigation activities. The team then evaluated these programs and policies to develop a better understanding of State government activities and effectiveness related to hazard mitigation. The following state hazard mitigation capability table (See Table 5.4.1) is the result of this effort.

Appendix U of the 2008 Plan identifies the most significant State funded and/or State administered programs, policies, regulations or practices related to hazard mitigation or loss reduction by agency, department or organization. Some of the listed programs provide funding for various hazard mitigation activities. Other State and federal programs or initiatives may support or facilitate hazard mitigation or loss reduction. The team determined that, where possible, it would provide examples of mitigation support as a measure of effectiveness of the organizations, programs and policies. Also in the effectiveness section, the team determined which programs, policies and organizations support pre-hazard mitigation, post-hazard mitigation, or in some cases, both. Finally, while most of the programs and policies are existing programs, there have been a few new programs that are included, although evaluation is premature. More detailed information on these programs is available on the Department or Agencies website.

5.8 Evaluation of State Laws, Regulations, Policies and Programs related to Hazard Mitigation and Development in Hazard Prone Areas

In addition to evaluating the programs and policies capabilities of the State, the Mitigation Core Team (MCT) also identified Federal and State Laws and Regulations that impact hazard mitigation. The Team focused on the effectiveness of these statutes and regulations when implemented. If the Statutes or regulations have not been effective, the Team provided recommendations that could help improve them and if any progress or actions have been started to make those improvements.

5.8.1 Laws and Regulations

A synopsis of pertinent legislation follows:

**Table 5.8-1
Federal and State Mitigation Laws and Regulations
That impact the Development in Hazard Prone Areas**



Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>Disaster Mitigation Act of 2000 (DMA 2000) P.L. 106-390</p> <p>FEMA, Interim Final Rules, (IFR)44 CFR PART 201.4</p>	<p>DMA 2000 provides an opportunity for states, Tribes and local governments to take a new and revitalized approach to mitigation planning. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Act) by repealing the previous mitigation planning provisions (Section 409) and replacing them with a new set of mitigation plan requirements (Section 322). This new section emphasizes the need for state, Tribal, and local entities to closely coordinate mitigation planning and implementation efforts. Local mitigation plans and authorized up to 7% of HMGP funds available to a state to be used for development of state, Tribal, and local mitigation plans.</p> <p>Through the IFR, FEMA has prepared policy and procedures for the review and approval by the Agency of state and local emergency all hazard mitigation plans.</p>	<p>Effective legislation. The NJOEM Mitigation Unit is the lead agency within NJ to promote mitigation planning. The Law sets forth a more granular review of mitigation planning. Once approved, the applicant is eligible for applying for federal funds for mitigation of hazards. The rules provide detailed guidance on what applicants should include in a plan.</p> <p>The State has Hazards Mitigation Plan provides actions based on risk assessments and capabilities of the State to achieve and fund mitigation activities based on those actions. Both the Law and regulations have been effective in encouraging the Counties to prepare plans.</p>
<p>Robert T. Stafford Disaster Relief and Emergency Assistance Act</p>	<p>The Act provides an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from such disasters by—(1) revising and broadening the scope of existing disaster relief programs; (2) encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the States and by local governments; (3) achieving greater coordination and responsiveness of disaster preparedness and relief programs; (4)encouraging individuals, States, and local governments to protect themselves by obtaining insurance coverage to supplement or replace governmental assistance; (5)encouraging hazard mitigation measures to reduce losses from disasters, including development of land use and construction regulations; and (6) providing Federal assistance programs for both public and private losses sustained in disasters.</p>	<p>Effective legislation. From a mitigation perspective of the Act, the NJOEM Mitigation Unit is the lead agency that reviews, submits and then administers federal funding programs that mitigate hazards. These programs are extremely effective to help find projects that are cost beneficial to help reduce damages from hazards.</p>
<p>Bunning-Bereuter-Blumenaure Flood Insurance Reform Act of 2004</p>	<p>The Flood Insurance Reform Act of 2004 amended the 1994 National Flood Insurance Reform Act of 1968 to reduce losses to properties for which repetitive flood insurance claim payments have been made. The Act established a program for mitigation of severe repetitive loss properties. It gave FEMA the authority to fund mitigation activities for individual repetitive loss claims properties. The Act provides additional coverage for compliance with land use and control measures.</p>	<p>NJ DEP, Flood Control Division is the lead coordinator of New Jersey's NFIP efforts. NJOEM Mitigation Unit is the agency working with NJ communities with severe repetitive loss properties. This Statute is effective in that it helps NJ residents with affordable flood insurance and gives additional tools to the States and communities to mitigate severe repetitive loss properties.</p>

Section 5 - Mitigation Strategy



Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
State Laws		
<p>Freshwater Wetland Protection Act (N.J.S.A. 13 B:1)</p> <p>Freshwater Wetland Protection Rules (N.J.A.C. 7:7A)</p>	<p>NJ enacted this law to support development and enhancement of state, local wetland protection programs. Projects must clearly demonstrate a direct link to increasing a state's ability to protect wetland resources. Grants are federally funded and administered by the NJ DEP.</p> <p>Regulations to support the New Jersey freshwater wetlands program which protects freshwater wetlands, and upland areas within 150 feet of wetlands (sometimes called "buffers"), from development which will impair the wetlands.</p>	<p>NJ DEP reports to US EPA the amount of wetlands filled annually. Also, USACE nationwide permits require wetland mitigation be a part of the permit. (3-2007). NJ DEP current rule proposal requires mitigation for general permits that was not previously required. This current rule proposal is an effective measure to protect the State's wetland resources.</p>
<p>Flood Hazard Area Control Act (N.J.S.A. 58:16A-52)</p> <p>Flood Hazard Area Control Regulation (N.J.A.C. 7:13)</p>	<p>NJ enacted this law to delineate and mark flood hazard areas, to authorize the Department of Environmental Protection to adopt land use regulations for the flood hazard area, to control stream encroachments, to coordinate effectively the development, dissemination, and use of information on floods and flood damages that may be available, to authorize the delegation of certain administrative and enforcement functions to county governing bodies and to integrate the flood control activities of the municipal, county, State and Federal Governments.</p> <p>The intent of the regulations is minimize potential on and off site damage to public or private property caused by development which, at times of flood, subject structures to flooding and increase flood heights and/or velocities both upstream and downstream. These rules are also intended to safeguard the public from the dangers and damages caused by materials being swept onto nearby or downstream lands, to protect and enhance the public's health and welfare by minimizing the degradation of water quality from point and non point pollution sources and to protect wildlife and fisheries by preserving and enhancing water quality and the environment associated with the floodplain and the watercourses that create them.</p>	<p>Following a major rainstorm in the last days of March 2005 and another between Friday, April 1 and Sunday, April 3, 2005, the Delaware River overflowed its banks, flooding an estimated 3,500 homes and forcing the evacuation of more than 5,500 people. In response, Acting Governor Richard J. Codey formed a Flood Mitigation Task Force to study and implement measures to reduce future impacts of flooding in New Jersey Communities. On August 22, 2006, Governor Jon Corzine released the final report of the Flood Mitigation Task Force. The report called for amending the current Flood Hazard regulations and the NJDEP began a proposed rulemaking improving the regulations. The new rules went into effect in November, 2007. The new rules are discussed in more detail in below. NJDEP is the lead agency.</p>

Section 5 - Mitigation Strategy



Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>Waterfront Development Statute (N.J.S.A. 12:5-1)</p> <p>Coastal Permit Program (N.J.A.C. 7:7)</p>	<p>This Law sets forth the requirements of filling or dredging of, or placement or construction of structures, pilings or other obstructions in any tidal waterway, or in certain upland areas adjacent to tidal waterways outside the area regulated under CAFRA. These requirements are fully explained in N.J.A.C. 7:7-2.3.</p> <p>These rules establish the procedures by which the Department of Environmental Protection will review permit applications and appeals from permit decisions the Waterfront Development Law.</p>	<p>This law is implemented through New Jersey's Coastal Zone Management Rules N.J.A.C. 7:7E-1.1 <u>et seq.</u> Since they were finalized in September 1980 these rules have effectively regulated developments in coastal high hazard areas, erosion hazard areas, flood hazard areas and permits issued required construction in accordance with the NFIP requirements in A and V zones. Effective November 5, 2007 the CZM rules incorporate the new and more stringent Flood Hazard Area Control Act rules standards, including protection of riparian buffers along tidal water courses that can be 50', 150' and 300' along environmentally sensitive (Category-1) waterways.</p>
<p>Safe Dam Act of 1981</p> <p>NJAC 7:24A - Dam Restoration and Inland Water Projects Loan Program Rules:</p>	<p>No municipality, corporation or person shall, without the consent of the Commissioner of Environmental Protection, build any reservoir or construct any dam, or repair, alter or improve existing dams on any river or stream in this State or between this State and any other state which will raise the waters of the river or stream more than five feet above its usual mean low water height.</p> <p>These rules are for the purpose of administering the Dam Restoration and Inland Water Projects Loan Program. This program is a low interest loan program to assist local government units, private lake associations, and private dam owners with the repair and restoration of dams and implementing inland water projects. The 1992 Green Acres, Clean Water, Farmland and Historic Preservation Bond Act made available \$15 million for dam restoration and inland water projects and the 2003 Dam, Lake, Stream, Flood Control, Water Resources and Wastewater Treatment Project Bond Act made available \$95 million for dam restoration projects. The Department awards and administers loans for projects in accordance with the adopted regulations.</p>	<p>Repairs of 95 high and significant hazard dams have already been funded. It is a revolving loan program so that as money is paid back into the program additional loan applications for future projects can be accepted.</p>



Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
Construction Permits (N.J.S.A. 13:1D-29 to 34)	The Law mandates timely decisions by the Department of Environmental Protection on construction permit applications to assure adequate public notice of procedures and to continue effective administration of the substantive provisions of other laws.	NJ, by this Law, DEP must issue permits in 90-days & over see fees & review process, including allowing for a 30-day extension. It has no environmental recourse unless a deadline is missed on making a decision (approve or deny) the permit is automatically issued without any special conditions. This does not apply to FWW rules, only coastal & flood hazard regs. NJDEP has processes to ensure that processing the permits under the law with very few issued by default. If necessary NJDEP requests the applicant to "waive" the 90-day law, or an application can be technically deficient which stops the 90 day clock for review.
Coastal Area Facility Review Act (CAFRA) (N.J.S.A. 13:19)	CAFRA applies to projects near coastal waters in the southern part of the State. The law divides the CAFRA area into pieces or zones, and regulates different types of development in each zone. Generally, the closer you are to the water, the more likely it is that your development will be regulated. The CAFRA law regulates almost all development activities involved in residential, commercial, or industrial development, including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation.	This law is implemented through New Jersey's Coastal Zone Management Rules N.J.A..C. 7:7E-1.1 <u>et seq</u> . Since they were finalized in September 1980 these rules have effectively regulated larger developments (25 residential units or more, 300 commercial parking spaces or more) in coastal high hazard areas, erosion hazard areas, flood hazard areas and permits issued required construction in accordance with the NFIP requirements in A and V zones. Effective July 1994 the CAFRA jurisdiction was expanded to include every single family residential development within 150' of the mean high water line, beach or dune. The threshold for regulation over commercial development was lowered to capture smaller commercial developments and the DEP gained authority over any disturbance to a beach or dune area or the placement of a structure in these areas. Effective November 5, 2007 the CZM rules incorporate the new and more stringent Flood Hazard Area Control Act rules standards, including protection of riparian buffers along tidal water courses that can be 50', 150' and 300' along environmentally sensitive (Category-1) waterways.
Environmental Aid Act (N.J.S.A. 13:1H – 1 to 7)	State aid may be granted by the department to a local environmental agency for any purpose that the agency is authorized to perform by law and for the preparation of an environmental index. An environmental index shall be a report on environmental conditions within the locality and community objectives concerning open areas, parks, water supply, solid waste, wildlife protection, soil resources, air pollution, water pollution and others. The department may provide technical assistance in addition to or in lieu of State aid to any local environmental agency for the purpose indicated in this act.	This program is very effective and there is no need for improvement. At http://www.state.nj.us/dep/esp/ projects funded by this grant are reported. Just a few examples of projects that support mitigation that have been funded in the past include Waterways Beach Monitoring and Management Strategy, Dune Project, Beach Protection and Storm Drainage Plan, Beach Storm Water Drainage Analysis, Stream Corridor/Greenway Protection Plan, Shoreline Bioengineering Demonstration and Outreach Project, Stream Pamphlet/Education Project.

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
Office of Environmental Services Matching Grants Program for Local Environmental Agencies (N.J.A.C 7:5)	The purpose of the funding dedicated under this act is to assist local environmental commissions and soil conservation districts with funding for a variety of local environmental projects including: community education projects; environmental resource inventories; beach monitoring and management projects; environmental trail designs; lake rehabilitation studies; stream and water quality testing; wellhead delineation; GIS mapping projects; NEPPS indicator projects; and surveys of threatened and endangered species. The maximum annual grant is \$2,500. Applicant must match at least 50% of the total cost of the project.	
N.J.S.A. 58:16a-101	The office of Emergency Management shall notify the emergency management organization in the counties, which shall then notify the local police departments in the event of a flood situation.	NJOEM does share all data with county level OEM offices. Weather alerts and notices are produced daily, 365 days a year. The local level OEM entities have access to the same data sources as NJOEM. Preparation for approaching events are generally concurrent. The majority of the time State level notifications to local level are redundant but are carried out regardless.
Forest Fire Prevention and Control Act (N.J.S.A. 13:9-44 to 44.10)	The Forest Fire Service is responsible to determine wildfire hazards, remove or cause to be removed brush, undergrowth or other material which contributes to wildfire hazards, maintain or cause to be maintained fire breaks. set backfires, plow lands, close roads and make regulations for burning brush, summon any male person between the ages of eighteen and fifty, who may be within the jurisdiction of the state, to assist in extinguishing fires, require the use of property needed for extinguishing fires, issue permits, collect extinguishment cost and fines for violations, control and direct all persons and apparatus engaged in extinguishing wildfires, have the right of entry upon lands to inspect and ascertain compliance and extinguish wildfires, investigate fires to determine cause, close the woods to all unauthorized persons in an emergency, arrest without warrant anyone violating the Forest Fire Laws.	The laws that apply are 13:9-2, 9-23 & 9-24. Unfortunately, there was never any administrative code added. There is no procedure for implementing mitigation work on private property without permission, either with absentee ownerships or those hostile to the mitigation. Also, Forest Fire mitigation efforts are not exempted in other environmental regulations. Certain mitigation efforts sometimes occur where there is threatened & endangered habitat, even when that habitat was caused by past prescribed burning operations (one mitigation effort used by FF). Lastly, regulations limit prescribed burning to narrow windows of opportunity. Larger windows would allow completion of more acres per year.

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>New Jersey Green Acres Land Acquisition Acts of 1961, 1971 and Green Acres Land Acquisition and Recreation Opportunities Act (N.J.S.A. 13: 8a 19-55 and 8B 1-9)</p> <p>Green Acres Program (N.J.A.C 7:36)</p>	<p>The Legislature enacted the New Jersey Acres Land Acquisition Acts in order to achieve, in partnership with others, a system of interconnected open spaces, whose protection will preserve and enhance New Jersey's natural environment and its historic, scenic, and recreational resources for public use and enjoyment.</p> <p>On November 3, 1998, New Jersey voters approved a referendum which creates a stable source of funding for open space, farmland, and historic preservation and recreation development, and on June 30, 1999, the Garden State Preservation Trust Act was signed into law. The law establishes, for the first time in history, a stable source of funding for preservation efforts.</p> <p>Green Acres assists local government units and nonprofits in their efforts to increase and preserve permanent outdoor recreation areas for public use and enjoyment, and conservation areas for the protection of natural resources such as waterways, wildlife habitat, wetlands, forests, and view sheds. A secondary benefit of these laws and rules is that flood prone properties are often purchased and not available for future development.</p> <p>These rules implement the Green Acres laws, governing the award of loans or matching grants, or both, to local government units for the acquisition or development of land, and 50 percent matching grants to nonprofits for the acquisition or development of land, for outdoor recreation and conservation purposes. These rules establish project eligibility requirements, application requirements, funding award categories and criteria, matching grant and loan terms, and program administrative requirements. The rules also contain procedures for the disposal, or diversion to a use other than recreation and conservation, of those lands acquired or developed with Green Acres funding or otherwise encumbered with Green Acres restrictions.</p>	<p>The program is effective</p> <p>Blue Acres was created with the passage of the Green Acres, Farmland, Historic Preservation and Blue Acres Bond Act of 1995. The bond act contains \$15 million for Inland acquisition in the Passaic River Basin, including repetitive loss properties.</p> <p>2007 Blue Acres Program for New Jersey</p> <p>Governor Corzine signed into law the "Green Acres, Farmland, Blue Acres, and Historic Preservation Bond Act of 2007" which will be presented to the voters at this November 2007 election. The bond act will provide \$12,000,000 for the state to acquire, for recreation and conservation purposes, lands in the floodway of the Delaware River, Passaic River, and Raritan River, and their respective tributaries, that have been damaged by, or may be prone to incurring damage caused by storm-related flooding or that may buffer or protect lands from such damage.</p> <p>Coastal Blue Acres (CBA) was created with the passage of the Green Acres, Farmland, Historic Preservation and Blue Acres Bond Act of 1995. The bond act contains \$15 million for grants and loans to municipalities and counties to acquire lands in coastal areas that have been damaged by storms that may be prone to storm damage, or that buffer or protect other lands from storm damage, for recreation and conservation purposes.</p>

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>Wetlands Act of 1970 (N.J.S.A. 13:9A – 1 to 10)</p> <p>Coastal Zone (CZM) rules Program (N.J.A.C. 7:7E)</p>	<p>1970 the New Jersey Legislature declared that one of the most vital and productive areas of our natural world is the so-called "estuarine zone," that area between the sea and the land; that this area protects the land from the force of the sea, moderates our weather, provides a home for water fowl and for of all our fish and shellfish, and assists in absorbing sewage discharge by the rivers of the land it is necessary to preserve the ecological balance of this area and prevent its further deterioration and destruction by regulating the dredging, filling, removing or otherwise altering or polluting.</p> <p>CZM rules mandate the use and development of coastal resources, to be used primarily by the Land Use Regulation Program in the Department in reviewing permit applications under the Coastal Area Facility Review Act (CAFRA), N.J.S.A. 13:19-1 et seq. (as amended to July 19, 1993), Wetlands Act of 1970, N.J.S.A. 13:9A-1 et seq., Waterfront Development Law, N.J.S.A. 12:5-3, Water Quality Certification (401 of the Federal Clean Water Act), and Federal Consistency Determinations (307 of the Federal Coastal Zone Management Act). The rules also provide a basis for recommendations by the Program to the Tidelands Resource Council on applications for riparian grants, leases and licenses.</p>	<p>NOAA has oversight of the funds received for the Coastal Zone Management and NJDEP administers the regulatory program. NJDEP must report to NOAA twice a year grant activities (Status, implementation, completion)</p>
<p>Pineland Protection Act (N.J.S.A. 13:18A-30 to 49)</p>	<p>In 1979 the New Jersey Legislature declared the protection of the NJ Pinelands and established a regional planning and management commission empowered to prepare and oversee the implementation of a comprehensive management plan for the pinelands area. The Legislature further declared that a certain portion of the pinelands area is especially vulnerable to the environmental degradation of surface and ground waters which would be occasioned by the improper development or use thereof; that the degradation of such waters would result in a severe adverse impact upon the entire pinelands area; that it is necessary to designate this portion as a preservation area, wherein more stringent restrictions on the development and use of land should be utilized and public acquisition of land or interests therein should be concentrated</p>	<p>Under the Pinelands Comprehensive Management Plan are established Management Programs and Minimum Standards that are intended to provide protection of wetlands, vegetation, fish and wildlife, water quality management and forest fire management. Flood and wildfire mitigation is a secondary benefit of the development constraints placed on environmentally sensitive areas.</p>

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
Pinelands Comprehensive Management Plan (CMP) (N.J.A.C. 7:50)	The CMP implements the regulations and standards designed to promote orderly development of the Pinelands so as to preserve and protect the significant and unique natural, ecological, agricultural, archaeological, historical, scenic, cultural and recreational resources of the Pinelands. The Pinelands Commission bears the ultimate responsibility for implementing and enforcing the provisions of the Pinelands Protection Act and this Plan.	Under the Pinelands Comprehensive Management Plan are established Management Programs and Minimum Standards that are intended to provide protection of wetlands, vegetation, fish and wildlife, water quality management and forest fire management. Flood and wildfire mitigation is a secondary benefit of the development constraints placed on environmentally sensitive areas.
New Jersey Pollutant Discharge Elimination System Stormwater Regulation Program (NJPDES) Rules (N.J.A.C. 7:14A).	These NJPDES Rules are intended to address and reduce pollutants associated with existing stormwater runoff. These NJPDES Rules govern the issuance of permits to entities that own or operate small municipal separate storm sewer systems, known as MS4s. The permit program establishes the Statewide Basic Requirements that must be implemented to reduce nonpoint source pollutant loads from these sources. The Statewide Basic Requirements include measures such as: the adoption of ordinances (litter control, pet waste, wildlife feeding, proper waste disposal, etc.); the development of a municipal stormwater management plan and implementing ordinance(s); requiring certain maintenance activities (such as street sweeping and catch basin cleaning); implementing solids and floatables control; locating discharge points and stenciling catch basins; and a public education component.	Guidance for the development of Municipal Mitigation Plans was developed and made available in February 2006. Additionally, the Department developed guidance for the Special Water Resources Protection Area (SWRPA) Functional Value Analysis, which is required by the Stormwater Management Rules, of proposed encroachments into the SWRPA adjacent to all Category One waters, which requires a 300-foot buffer. Also provided for guidance documents are to assist municipalities in complying with their Municipal Stormwater General Permit.
Stormwater Management Rules (N.J.A.C. 7:8)	These Rules set forth the required components of regional and municipal stormwater management plans, and establish the stormwater management design and performance standards for new (proposed) development. The design and performance standards for new development include groundwater recharge, runoff quantity controls, runoff quality controls, and buffers around Category One (C1) waters.	The program was developed in response to the U. S. Environmental Protection Agency's Phase II rules published in December 1999. The department issued final stormwater rules on February 2, 2004 and four NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). There are 462 Tier A municipalities and 100 Tier B municipalities. The general permits address stormwater quality issues related to new development, redevelopment and existing development by requiring municipalities to implement a number of Statewide Basic Requirements (SBRs). All municipalities have a local stormwater coordinator and the department has case managers assigned to each municipality for compliance assistance (see below).

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>Sewage Infrastructure Improvement Act Grants (N.J.A.C. 7:22)</p>	<p>New Jersey Sewage Infrastructure Improvement Act establishes comprehensive requirements for the Department and municipalities/authorities to address combined sewer overflows and stormwater management.</p>	<p>MONETARY ASSISTANCE PROVIDED: To offset some of the costs associated with permit requirements, the state had allocated \$12 million in grant monies to municipalities and counties during fiscal years 04 and 05. Due to the fiscal constraints, there were no additional grants available for subsequent fiscal years. However, the department does provide below-market interest rate loans through the Environmental Infrastructure Financing Program to municipalities for capital improvements such as street sweepers, salt storage structures, and vehicle washing equipment.</p> <p>PERMITTING RESPONSIBILITIES: The program issues the Tier A and Tier B Municipal Stormwater General Permits to regulated municipalities and provides technical assistance and outreach. Municipal program case managers are assigned to all municipalities within the respective county and may be reached through our office.</p> <p>To prioritize wastewater projects under the Environmental Infrastructure Financing Program, the division uses a point system, which ranks projects based on the nature of the wastewater problem. The point values reflect the relative priority of the water uses, with drinking water and recreational uses being the highest priorities. Projects receive points that correlate with an area's existing water quality when compared with the Department's water quality standards. The more polluted an area is, the higher the ranking points it receives. It is placed on a priority list in rank order. In the case of a tie, areas designated by the State Planning Commission receive highest priority and, if still tied, the higher priority is given to the project that serves the greater number of people.</p> <p>Funding from the Environmental Infrastructure Financing Program is made available to projects in the order they appear on the list.</p>
<p>Water Pollution Control Quality Act (N.J.S.A. 58:10A-1 to 60)</p> <p>Water Quality</p>	<p>This Act phased out the Construction Grants Program and required states to establish a State Revolving Fund (SRF) Loan Program. The last year in which construction grants were made for new projects in New Jersey was 1989. Grant awards are available currently to cover increased allowable costs for projects that previously received a construction grant.</p> <p>The current rules became effective on October</p>	<p>This Act is implemented through a number of regulations and programs throughout the Department including, but not limited to Freshwater Wetlands Protection Act (NJAC 7:7A), Stormwater Management (NJAC 7:8), Water Pollution Control (NJAC 7:9), Surface Water Quality Standards (NJAC 7:9B), Safe Drinking Water Act (NJAC 7:10), Safe Drinking Water Act (NJAC 7:10), Flood Hazard Control Act (NJAC 7:13), Pollutant</p>

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
<p>Management Planning Rules (N.J.A.C. 7:15)</p>	<p>2, 1989. These rules serve two basic functions: they establish the Department's general regulatory framework for water quality planning and supplement other Department rules pertaining to wastewater management.</p>	<p>Discharge Elimination System (NJAC 7:14A), and Water Quality Management (NJAC 7:15). Through these rules DEP regulate development location and intensity of uses, protect floodplain capacity and riparian buffers, fund restoration of lakes and streams, fund infrastructure improvements that primarily provide environmental health, but secondarily provide mitigation in the form of reduced losses due to infrastructure failure. An integral component of area-wide WQMPs are Wastewater Management Plans (WMPs). WMPs are the vehicle through which the continuing planning process integrates local and regional planning into the area-wide WQMPs. The intended purpose of the WMPs is to project future development and estimate the wastewater management needs associated with that development. These plans could also provide the vehicle to ensure that sewer service was not extended into areas inconsistent with State Development and Redevelopment Plan State Planning Area designations and environmentally sensitive areas. Municipalities were to have WMP prepared, reviewed and updated every six years, many WMP jurisdictions either never completed a WMP or have not updated the WMP. Therefore, through Executive Order 109, NJDEP has undertaken a rulemaking to further strengthen and improve the rules.</p>
<p>Tidelands Act (N.J.S.A 12:3)</p>	<p>Tidelands, also known as "riparian lands" are lands now or formerly flowed by the tide of a natural waterway. This includes lands that were previously flowed by the tide but have been filled and are no longer flowed by the tide. These lands are owned by the people of the State of New Jersey. You must first get permission from the State to use these lands, in the form of a tidelands license, lease or grant, and you must pay for this use.</p>	<p>Effective legislation. NJDEP</p>

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Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
New Jersey Civilian Defense and Disaster Control Act	The purpose of this act is to provide for the health, safety and welfare of the people of the State of New Jersey and to aid in the prevention of damage to and the destruction of property during any emergency as herein defined by prescribing a course of conduct for the civilian population of this State during such emergency and by centralizing control of all civilian activities having to do with such emergency under the Governor and for that purpose to give to the Governor control over such resources of the State Government and of each and every political subdivision thereof as may be necessary to cope with any condition that shall arise out of such emergency and to invest the Governor with all other power convenient or necessary to effectuate such purpose.	Effective legislation. NJOEM
N.J.A.C. § 17	The Governor is authorized to enter into agreements with the governors of any of the states bordering on New Jersey for the protection in the event of emergency of any or all interstate bridges, tunnels, ferries and other communications facilities.	Effective legislation. NJ Governor
N.J.S.A. 52:14E-11 (3-10-2003) The Fire Service Resource Emergency Deployment Act	This Act allows for the Fire Division within the Department of Community Affairs to deploy fire assets to a pre-designated location in advance of a disaster or emergency as well as move assets to a pre-designated location to avoid assets being damaged	NJ Community Affairs, Fire Service Division. This has been used successfully in every disaster since the Act was passed.
NJSA 52:27D-126.3 Emergency Building Inspection Act	Enacted on January 17, 2007, this Act to addresses how building code officials would be compensated if called to support damage assessment outside of their jurisdiction.	NJ Community Affairs, Office of Regulatory Affairs.
N.J.S.A. 58:16A-66 et seq	The Commissioner of the Department of Environmental Protection shall in consultation with the United States Army Corps, of Engineers and in coordination with the Office of Emergency Management in the Division of State Police, develop a flood early warning system.	NJDEP/NJOEM have led the efforts for the development of the flood early warning system The NJOEM and several of the counties in the central and northern tier of the State above the coastal plain have live rain, stream and flood gages. In the back bays and along tidal waters in 14 coastal counties the USGS manages the NJ Tide Telemetry System. All systems transmit telemetry continuously to the NWS, USGS, State Climatologist (NJNet), NJDEP, NJOEM and all affected Counties and many municipalities. These systems were created and installed with Federal assistance through NOAA and the USACOE. O&M is currently done by contractor support with direct funding through our Federal partners, and matching funds via the OHSP and the OAG. NJOEM provides limited pass-through grants for expansion of



Statute and Corresponding Regulations	Description	Agency Oversight And Effectiveness
		<p>these systems every year to keep it growing and protecting an ever expanding population base. Data received is used by all agencies when flooding is forecasted, but particularly by the NWS to both monitor precipitation and flood levels in comparison to forecast data in order to provide enhanced pinpoint forecasting. Depending on the types of data receivers at the agency and individual level, flood messages can be received by computer, PDA, cell phone, Blackberry and pagers, alerting emergency managers immediately. Receiving such alerts is limited only by the decision on the part of the each respective agency in issuing such devices to their emergency services community. For the Passaic and Raritan basins a flood warning users group was formed over ten years ago and has since expanded to include participation from all the agencies listed earlier as well as interested counties with monitoring systems in other areas of the Stat</p>

While many of the statutes and corresponding regulations continue to be effective tools in support of hazard mitigations, some of the regulations have been updated since the original plan to help with compliance, enforcement and improved protections. Two of these are the new regulations to implement the Flood Hazard

Flood Hazard Area Control Act Rules

Since the approval of the previous plan, the State of New Jersey implemented new rules that repealed the State's existing Flood Hazard Area Control Act rules (N.J.A.C. 7:13) and replace them with comprehensive new rules that will better protect the public from the hazards of flooding. The new rules incorporate significantly more stringent design and construction standards for activities in flood hazard areas in order to reduce flood damage potential and prevent increases in flooding due to development. The rules also reflect a number of recommendations of the draft Report on Delaware River Flood Mitigation and include the following measures:

1. Preserving existing flood storage along inland waterways, which is necessary to prevent future increases in flooding, by implementing a Statewide 0% net-fill standard
2. Preserving natural, vegetated stream corridors by implementing buffers along surface waters, the width of which (50-ft, 150-ft or 300-ft) is dependent on the environmental sensitivity of the water being protected
3. Allowing the use of Federal flood mapping in communities where no State flood mapping is available, and providing a simplified method to approximate flood depths in communities where no State or Federal flood mapping is available
4. Requiring floor elevations and roadway surfaces to be set at least one foot above the State's flood hazard area design flood elevation in order to provide increased flood protection for buildings and public roadways
5. Creating 46 permits-by-rule and 16 general permits to both facilitate and encourage projects that have no adverse impact on flooding and the environment, including a permit-by-rule for elevating homes, which requires

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- no prior NJDEP approval, and a free, expedited general permit for the reconstruction and elevation of homes damaged by flooding
6. Amending the Coastal Permit Program rules (N.J.A.C. 7:7) and Coastal Zone Management rules (N.J.A.C. 7:7E) to incorporate equivalent flood protection and stream buffers to all waters and flood hazard areas Statewide.

Water Quality Planning Rules

On April 23, 2007, the Department announced proposed changes to the Water Quality Management Planning rules that would be published in the May 21, 2007 New Jersey Register. The proposed rule amendments:

- Establish clear standards for delineating appropriate sewer service areas to protect environmentally sensitive areas as well as clear, environmentally protective standards for the review of WQMP amendments.
- Set forth clear standards to require identification of adequate wastewater management alternatives, address water supply, and control nonpoint source pollution (including controls related to stormwater, riparian zones and steep slopes).
- Reassignment of wastewater management planning responsibility to the County Boards of Chosen Freeholders to reduce WMP agencies to a manageable number and afford a regional approach to water resource planning.
- Withdrawal of sewer service areas and re-designation as general wastewater service area of less than 2,000 GPD (septic) where the applicable WMP is not in compliance with the mandatory update schedule contained in the rules.
- A requirement that municipalities pass an ordinance designed to assure septic maintenance.
- A requirement that updated WMPs address septic density in a manner that demonstrates compliance with a 2 mg/L (ppm) nitrate planning target on a HUC 11 watershed basis, and
- Improve consistency with the State Development and Redevelopment Plan

In addition to the program, policy, legal, and regulatory capabilities assessed, the MCT reviewed New Jersey capabilities based upon the type of hazard. This section provides a brief description of that assessment.

Storms and Flooding

By far, the most repetitive types of disaster affecting New Jersey is flooding caused by storms. The NJOEM has established a strong working group with all 21 County OEMs to utilize HURREVAC software for tracking hurricanes. HURREVAC allows NJOEM and counties to work as a unified team, coordinating notification, communication, activations, public warning, and evacuation and sheltering. By operating together, the State and the counties serve the public better by providing the same advisories and actions.

As part of this effort, an extensive set of email groups has been established and used for all types of communications and warnings. Particularly when an approaching hurricane warrants monitoring, NJOEM send out emails with State EOC status information and advice embedded in jpeg files to keep all emergency managers statewide on board with our direction. NJOEM also utilizes conference calling with the NWS and County Emergency Management Offices to share specific information and needs. Resources are deployed as early as possible to prepare for storm impacts.

Public warning systems have been established in key municipalities along the Atlantic coast. Weather monitoring stations, tide telemetry gages, river and rain gages, and consolidated computer-based software have been acquired all for the purpose of covering the entire State with local-level monitoring. New Jersey is one of the few states in the Nation to have its own WeatherNet. Each year, New Jersey funds further expansion of these systems.



Data from these systems have provided the NJOEM and county and local planners with valuable hazard and vulnerability information. Many small local projects have been funded justified by flood potential and flood damages. This same information also helped to analyze flood inundation maps used by the NJOEM Preparedness Unit in developing Reverse Lane plans and strategies for hurricane evacuation. New Jersey now has four fully function plans, one each for the coastal counties of Cape May, Atlantic, Ocean and Monmouth, involving five State and Interstate highways. These plans are periodically exercised to validate their operational readiness.

Several different types of public information methods were employed over the past few years, all targeted at educating the public about hazards and most importantly, what individuals can do to both prepare and protect their lives and property. Brochures, magnets, full size signage, handouts and other items have been purchased and distributed, some in bi-lingual formats. This effort has been extremely well received, and has extended to other projects such as establishing hurricane insurance programs and the distribution of emergency information through real estate brokers for summer vacationers.

Many large-scale projects and programs are continuing, Dune replenishment, dune fortification, bulkheading, fencing, grass plantings and grading all have helped to build up New Jersey beach fronts to better protect against storm surge and wave action. Inland, flood control measures are being implemented along rivers, creeks and culverts. Many jurisdictions have instituted regular stream and culvert cleaning and tree trimming programs just prior to storm seasons in spring and fall. Structural elevations have been done in many cases where properties can be maintained. Unavoidable repetitive losses have led to alternative mitigation efforts such as property acquisition and relocation.

For the past five years, NJOEM and other NJ Agencies utilize HAZUS software to combine soils, demographic and infrastructure data to estimate losses and vulnerabilities from natural hazards. This software also allows policy makers to target stricter development standards for targeting hazard mitigation. The NJOEM has joined the New York Consortium on Earthquake Mitigation, along with New York City, New York State, the New Jersey Geological Survey, Columbia and Princeton Universities and several counties in the metro-NY area. This Consortium is concentrating efforts on assessing the vulnerabilities of the metro-NY area and what can be done to better protect life and property by running model simulations. These computer exercises reveal which areas fail first, how damages result, and what economic and socioeconomic effects result, giving a comprehensive picture of total impact.

Forest Fires

Wildfires were a major concern in years when drought was prevalent. Several large fires struck the Pine Barrens and other forested areas. Fire services have employed isolation and pre-burn techniques to limit the total acreage affected. This has had excellent results, and our forests have rebounded well. Fire coordinators continue these programs throughout the dry season.

Dam Failures

The NJDEP has a group dedicated to administering a strict and regulated dam emergency planning initiative with all dam owners and operators in the State. Emergency notification and public warning systems are a required element of these plans. Inspections and fortification programs have been instituted to deal with aging dams as well as increased at-risk (downstream) populations. The NJOEM reviews these plans, paying particular attention to immediate notification systems and emergency response actions.



5.9 State Funding Capabilities for Hazard Mitigation Projects

In addition to identifying and evaluating the State's capabilities to address mitigation, another key component to mitigation is funding. As part of the 2008 plan update, the planning team reviewed current sources of federal, State, local or private funding, and tried to identify other potential sources of mitigation funding. Table 5.8-1 summarizes these funding sources, potential availability, applicability of pre- or post-disaster requirements, and the type of funding that is available.

**Table 5.9-1
Funding Sources Available for Mitigation Activities**

Funding Source	Description
FEMA Federal Disaster Mitigation Funding that require an approved Hazard Mitigation Plan	
FMA	<p>Availability: Pre Disaster</p> <p>Description: To implement cost-effective measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under the National Flood Insurance Program (NFIP).</p> <p>Funding: In FY 2007, there was \$31 Million available in a nationwide competition.</p>
HMGP	<p>Availability: Post-Disaster</p> <p>Description: To provide funds to States, territories, Indian Tribal governments, and communities to significantly reduce or permanently eliminate future risk to lives and property from natural hazards. HMGP funds projects in accordance with priorities identified in State, Tribal or local hazard mitigation plans, and enables mitigation measures to be implemented during the recovery from a disaster.</p> <p>Funding: a State has a FEMA-approved <i>Standard</i> State Mitigation plan, HMGP funds are available based on up to 15% for amounts not more than \$2 Billion.</p>
PDM	<p>Availability: Pre-Disaster</p> <p>Description: To provide funds to states, territories, Indian Tribal governments, and communities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations.</p> <p>Funding: Nationwide competition, total funding available – FY 2007 was \$100 Million.</p>
SRL	<p>Availability: Pre Disaster</p> <p>Description: To reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential properties and the associated drain on the National Flood Insurance Fund (NFIF) from such properties.</p> <p>Funding: FEMA is combining the \$ 40 \$40 million FY 2006 and \$40 million FY 2007 funds for a total of \$160 million available.</p>
RFC	<p>Availability: Pre Disaster</p> <p>Description: To reduce or eliminate the long-term risk of flood damage to structures insured under the National Flood Insurance Program (NFIP) that have had one or more claim payment(s) for flood damages.</p> <p>Funding: Nationwide competition for a total of \$10 million</p>

Other Available Federal Funds	
Fire Management Assistance Grant Program	<p>Availability: Post Disaster</p> <p>Description: Assistance 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.</p> <p>Funding:</p>
The Community Development Block Grant (CDBG)	<p>Availability: Pre or Post Disaster</p> <p>Description: Federal grant provided to CDBG "entitlement communities" (typically municipalities</p>



	<p>with populations over 50,000 and urban counties with populations over 200,000) and to all states.</p> <p>Funding: Varies</p>
Reimbursement for Firefighting on Federal Property	<p>Availability: Post Disaster</p> <p>Description: Provides reimbursement only for direct costs and losses over and above normal operating costs.</p>
National Dam Safety Program	<p>Availability: Pre Disaster</p> <p>Description: National Dam Safety Program (NDSP). The NDSP, which is led by FEMA, is a partnership of the states, federal agencies, and other stakeholders to encourage individual and community responsibility for dam safety.</p> <p>The NDSP, which was formally established by the Water Resources and Development Act of 1996, includes:</p> <p>Funding: Grant Assistance to the States: Provides vital support for the improvement of the state dam safety programs that regulate most of the 79,500 dams in the United States.</p>
Land and Water Conservation Fund (LWCF)	<p>Availability: To States, Local and conservation organizations</p> <p>Description: Funding to States for outdoor recreational development, renovation, land acquisition and planning.</p> <p>Funding: LWCF is authorized at \$900 million annually, a level that has been met only twice during the program's 40-year history. The program is divided into two distinct funding pots: State grants and Federal acquisition funds. In FY 2005, the federal acquisition pot received \$166 million and the state grants program received \$92.5 million for a total of \$258.5 million. In FY 2006 the federal pot received \$114.5 and the state grants received \$30 million. FY 2007 was similar to the year before receiving \$113 million for federal acquisition and \$30 million for state grants.</p>
The Forest Legacy Program (FLP)	<p>Availability: Participation in Forest Legacy is limited to private forest landowners.</p> <p>Description: Federal program in partnership with States, supports State efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, FLP is an entirely voluntary program. To maximize the public benefits it achieves, the program focuses on the acquisition of partial interests in privately owned forest lands. FLP helps the States develop and carry out their forest conservation plans. It encourages and supports acquisition of conservation easements, legally binding agreements transferring a negotiated set of property rights from one party to another, without removing the property from private ownership. Most FLP conservation easements restrict development, require sustainable forestry practices, and protect other values.</p> <p>Funding: To qualify, landowners are required to prepare a multiple resource management plan as part of the conservation easement acquisition. The federal government may fund up to 75% of project costs, with at least 25% coming from private, State or local sources. In addition to gains associated with the sale or donation of property rights, many landowners also benefit from reduced taxes associated with limits placed on land use. In 2008, NJ has one project funded: Sparta Mountain South \$2,474,000.</p>
Transportation Trust Fund	<p>Availability: Pre and Post Disaster</p> <p>Description: Grants are funded by the Transportation Trust Fund through a competitive application based process administered by the Local Aid District Offices.</p> <p>Funding: \$78.75M in TTF funding was available in the FY 2008 Municipal Aid Program.</p> <p>Description: County Aid Program- Administer the County Aid Program for road and bridge infrastructure improvements under county jurisdiction. Each County receives an annual formula based allotment that takes into consideration county road lane mileage and population. The County Aid Program is funded through the Transportation Trust Fund and provides funding for</p>

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	eligible costs of projects included in the County's approved Annual Transportation Program. Funding: \$78. 75M in TTF funding was available in the FY 2008 County Aid Program.
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State Grant and Loan Funds	
Environmental Infrastructure Financing Program	<p>Availability: Pre or Post Disaster</p> <p>Description: Borrowers receive loans in two equal parts: Approximately one half to three quarters comes from a zero interest State Revolving Fund (SRF) maintained by the DEP. The other portion comes from proceeds of highly rated tax-exempt revenue bonds sold by the Trust. Combining these two funds results in a loan that is 50 to 75% lower than traditional loan rates.</p> <p>Funding: Is available for qualified borrowers.</p>
Pinelands Infrastructure Trust Fund	<p>Availability: Pre or Post Disaster</p> <p>Description: This program provides funding for infrastructure projects needed to accommodate existing and future needs in the 23 designated Pinelands Regional Growth Areas.</p> <p>Funding: Funding is available for the construction of new collection systems, interceptors, and the expansion/upgrade of wastewater treatment facilities. Projects certified under this program generally receive a grant for 40 percent of the allowable project costs and a loan for 20 percent of the allowable project costs from the Department. Loans for the remaining project costs may also be received from the Trust.</p>
Meadowlands Infrastructure Trust Fund	<p>Availability: Pre or Post Disaster</p> <p>Description: is a regional zoning and planning agency established by an act of New Jersey State Legislature in 1969. Its founding mandates are to protect the delicate balance of nature, to provide for orderly development, and to manage solid waste activities.</p> <p>Funding: Grants available for stormwater management, updating GIS systems, affordable housing planning, and solid waste disposal for the Counties and Municipalities that are under this Commission.</p>
Green Acres Program	<p>Availability: Pre or Post Disaster</p> <p>Description: The Garden State Preservation Trust leverages this \$98 million in constitutionally dedicated funds to issue bonds and to make the maximum dollars available through three Today, New Jersey has the largest preservation program in the nation for a geographic area of this size. It is financed with Garden State Preservation Trust funds through three partnering agencies: The Green Acres Program, a division of the Department of Environmental Protection to preserve natural lands and recreational parks. The Farmland Preservation Program, administered by the independent State Agriculture Development Committee to acquire the development rights on privately owned farmland. Historic Preservation, administered by the independent New Jersey Historic Trust to provide matching grants to save important historic buildings.</p> <p>Funding: Garden State Preservation Trust Fund Account (Trust Fund) which will receive \$98 million annually for ten years. From FY 2010 through and including FY 2029, debt service on the bonds shall be satisfied by funds deposited into the trust fund from the general fund. These funds will not exceed \$98 million during a Fiscal Year. The bill will allow projects funded under the Trust Fund to begin immediately by allowing \$90 million to be appropriated through the appropriations act for FY 2000.</p>
NJ Small Communities Development Block Grants	<p>Availability: Pre or Post Disaster</p> <p>Description: Provide funds for economic development, housing rehabilitation, community revitalization and public facilities designated to benefit people of low and moderate-income or to address recent local needs for which no other source of funding is available to non-entitlement Counties and Municipalities.</p> <p>Funding: Varies</p>
NJ Open Space Program	<p>Availability: To Counties and Municipalities that have passed a tax assessment on property owners to help purchase land in their community.</p>

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	<p>Description: 53 towns and 13 counties collect 1 to 5 cents on each \$100 of assessed property value. State law requires that the money go to a dedicated trust fund for open space and parks, farmland development easements and historic preservation.</p> <p>Funding: Varies based on county tax amount and assessments of property.</p>
New Jersey Conservation Foundation (NJCF)	<p>Description: NJCF is a private, not-for-profit organization. Through acquisition and stewardship NJCF protects strategic lands, promotes strong land use policies, and forges partnerships to achieve conservation goals. Since 1960, NJCF has protected over 100,000 acres of natural areas and farmland in New Jersey – from the Highlands to the Pine Barrens to the Delaware Bay, from farms to forests to urban and suburban parks.</p> <p>Funding: Provides support through knowing and understanding the many type of grants and programs that exist to help fund land preservation activities.</p>



5.10 General Description and Analysis of the Effectiveness of Local Mitigation Policies, Programs and Capabilities

New Jersey has 21 Counties comprised of 566 Municipalities and follows a “home rule” philosophy that each municipality is responsible for local enforcement of building codes, floodplain management, emergency management and zoning local ordinances. In order to ensure a minimum set of standards, NJ has passed laws and regulations mandating each municipality adopt local ordinances with the same basic criteria so jurisdictions may add additional requirements, but cannot have fewer requirements than the State. Having each Municipality with a core set of policies, programs and capabilities at its disposal, allows for more effective mitigation against hazards, regardless of its relative size, population or wealth. While local mitigation policies, programs and capabilities will be discussed in detail in local and multi-jurisdictional hazard mitigation plans that are now being prepared, New Jersey mandates compliance with the Municipal Land Use Law, Uniform Construction Codes, Floodplain Management, and Growth Management, and strongly encourages land and water preservation through incentive programs. These mandates translate into local ordinances, policies or programs that regulate and enforce how zoning, building and open space in the Municipalities. Table 5.10-1 highlights the State Laws that drive the State’s policies to support local jurisdictions’ ability to impact hazard mitigation.

**Table 5.10-1
New Jersey Policies that Impact Local hazard Mitigation Efforts**

Land Use Planning Policy	
Description	State of New Jersey Municipal Land Use Law (MLUL) L.1975, c. 291, s. 1, eff. Aug. 1, 1976, is the legislative foundation of the land use process, including decisions by Planning Boards and Zoning Boards of Adjustment, in the State of New Jersey. It defines the powers and responsibilities of boards and is essential to their functions and decisions. It also provides the required components of a municipal Master Plan.
Applicability	Every municipal agency shall adopt and may amend reasonable rules and regulations, not inconsistent with this act or with any applicable ordinance, for the administration of its functions, powers and duties.
Effectiveness	The MLUL requires that each municipality prepare a comprehensive plan and update that plan every 6 years. These plans help jurisdictions review their land use plans and policies with public participation.
Floodplain Management Policy	
Description	NJ State Law Flood Hazard Area Control Act (N.J.S.A. 58:16A-52)The National Flood Insurance Act of 1968 is a federal program (NFIP) enabling property owners in participating communities to purchase insurance as protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. As further incentive for communities to surpass the NFIP basic requirements, the Community Rating System (CRS) recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.
Applicability	The Act and regulations attempts to minimize damage to life and property from flooding caused by development within fluvial and tidal flood hazard areas, to preserve the quality of surface waters, and to protect the wildlife and vegetation that exist within and depend upon such areas for sustenance and habitat. While it does not require local adoption, as it is enforced by the NJ Department of Environmental Protections, the floodplain ordinances of each municipality need to be reviewed to be in compliance with this new regulations.



Effectiveness	<p>Flood Hazard Control Act: Regulations for the Flood Hazard Control Act were adopted in November, 2007 so it is difficult to quantify the effectiveness at this time.</p> <p>NFIP: There are 546 municipalities that participate in the NFIP in the State of New Jersey. 45 of the 566 municipalities participate in the CRS program. 9 communities with a Class 9 rating (5% premium reduction); 23 with a Class 8 rating (10% premium reduction); 11 with a Class 7 rating (15% premium reduction) and 2 with a Class 6 rating (20% premium reduction). The avg. savings per policy holder is about \$87.00 per year or a total community savings of about \$9,384,397 per year. The NJ Dam Safety program, new state stormwater management requirements, and the development of all hazard mitigation plans, are some of the efforts at the State level that are available to provide CRS credits for all NJ municipalities.</p>
Building Codes Policy	
Description	<p>Uniform Construction Code (Uniform Construction Code Act of 1975) requires all jurisdictions to have current land use master plans (reexamined every six years), zoning and other land development ordinances. The UCC adopts up-to-date building codes as its Building Subcode and One- and Two-Family Subcode. These Subcodes contain requirements that address construction in both A and V flood zones.</p> <p>Also, all new construction is required to comply with the UCC for flood zone construction. In the shore communities, older at grade structures have been routinely razed and replaced with new and often larger structures, all now conforming to the NFIP's requirements for A-zone and V-zone construction. Thus, through the building boom of the 1990's and into the new millennium, there have been thousands of structures modified to FEMA's more stringent requirements or newly constructed to the up-to-date Building Subcodes of the Uniform Construction Code, especially with respect to homes built on piling at or above the base flood elevation for that zone. This in itself is a form of mitigation. However, there are still thousands of older homes still at grade that remain vulnerable to the ravages of coastal storms and hurricanes.</p>
Applicability	NJ State Law requires that all municipalities adopt ordinances that follow the UCC.
Effectiveness	Considered among the most effective elements in a mitigation program, because building codes mandate best practices and technology, much of which is designed to reduce or prevent damage from occurring when structures are under stress.
Growth Management Policy	
Description	Land preservation and recreation comprise one of the cornerstones of NJ's smart growth policy. The NJ Statewide Comprehensive Outdoor Recreation Plan (SCORP), provides statewide policy direction to the State, local governments and conservation organizations in the preservation of open space and the provision of public recreation opportunities. The State Plan was prepared and adopted by the State Planning Commission according to the requirements of the State Planning Act of 1985 as amended (N.J.S.A. 52:18A-196 et seq.) to serve as an instrument of state policy to guide state agencies and local government in the exercise of governmental powers regarding planning, infrastructure investment and other public actions and initiatives that affect and support economic growth and development in the State.
Applicability	Green Acres Program, Open Space Tax Program and Development and Redevelopment Plan The State Planning Act has enhanced the traditionally limited role of county land-use planning and control. Also provides tools for Municipalities when preparing their master land use plans and better opportunity for a comprehensive approach to planning so not to harm or be in conflict with neighboring Municipalities' plans.
Effectiveness	NJ residents have consistently voted for open space and recreation referendums at the State and local levels. In 2007 all 21 Counties and 231 Municipalities assessed a special tax for land preservation and recreation purposes.

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Shoreline Management Policy	
Description	Coastal Area Facility Review Act (N.J.S.A. 13:19). The CAFRA Law regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation.
Applicability	CAFRA applies to projects near coastal waters in the southern part of the State. The law divides the CAFRA area into pieces or zones, and regulates different types of development in each zone. Generally, the closer you are to the water, the more likely it is that your development will be regulated. The CAFRA law regulates almost all development activities involved in residential, commercial, or industrial development, including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation.
Effectiveness	This Law helps local communities strengthen local shoreline ordinances to provide for sufficient shoreline buffers, setbacks and appropriated design to avoid or limit development on unstable shoreline slopes and infrequently flooded areas. However, many communities have not passed these types of ordinances due to intense political pressure to build along their coastal boundaries. This law is implemented through New Jersey's Coastal Zone Management Rules N.J.A.C. 7:7E-1.1 <i>et seq.</i> Since they were finalized in September 1980 these rules have effectively regulated larger developments (25 residential units or more, 300 commercial parking spaces or more) in coastal high hazard areas, erosion hazard areas, flood hazard areas and permits issued required construction in accordance with the NFIP requirements in A and V zones. Effective July 1994 the CAFRA jurisdiction was expanded to include every single family residential development within 150' of the mean high water line, beach or dune. The threshold for regulation over commercial development was lowered to capture smaller commercial developments and the DEP gained authority over any disturbance to a beach or dune area or the placement of a structure in these areas. Effective November 5, 2007 the CZM rules incorporate the new and more stringent Flood Hazard Area Control Act rules standards, including protection of riparian buffers along tidal water courses that can be 50', 150' and 300' along environmentally sensitive (Category-1) waterways.
Critical Area Protection Policy	
Description	Green Acres Program; Blue Acres Program; Historical Preservation Program; Farmland Preservation
Applicability	These programs provide the funding necessary for the State, Municipalities and Counties to purchase land for open space preservation and recreation.
Effectiveness	\$3.3 billion public investment in open space preservation and recreation by the State since 1961.

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The SHMT also works with Counties and Municipalities that are interested in adopting policies or programs to positively impact hazard Mitigation. Model ordinances or information and potential funding sources have been provided to interested jurisdictions in the areas of property acquisition programs, CRS programs, incorporating Mitigation into Capital Improvement Processes and Plans, tree pruning programs, stream maintenance programs, using GIS and updating Floodplain maps and studies.

5.10.1 Project Awards and Implementation

From the county to the municipal entities, the ability to efficiently meet hazard mitigation requirements is mixed. New Jersey is completely incorporated into 566 municipalities, so overall County control of mitigation planning is sometimes problematic. Coordination of overall emergency management planning is more efficient and streamlined. In the development of local, multi-jurisdictional Hazard Mitigation Plans, where municipal activity is critical to build larger multi-



jurisdictional plans, disparities in available resources become evident and support for obtaining best available data and information can be problematic due to the many Municipalities and their limited resources that are integral to the planning processes.

In order to further facilitate hazard mitigation planning efforts, the New Jersey Office of Emergency Management works in cooperation with the Governor's Office and through the New Jersey State League of Municipalities to provide direction and technical assistance in the development of local and multi-jurisdictional plans and projects.

With the assistance of NJOEM a number of New Jersey local jurisdictions have been successful in obtaining funds for mitigation projects. As these success stories continue, more jurisdictions will recognize the potential for mitigating hazards in their communities. Tables 5.9-2 and 5.9-3 list mitigation projects awarded to New Jersey Communities in 2006 and 2007, respectively.

Table 5.10.2
2005 – 2007 Hazard Mitigation Planning and Project Grants

Year	Jurisdiction	Activity	Funding source	FEMA \$ Award	Other \$ Funds	Total \$
2005	Burlington County	Plan	FMA	\$ 63,700	\$ 21,233	\$ 84,933
2005	Burlington County	Plan	HMGP-1530	\$ 71,899	\$ 23,966	\$ 95,865
2005	Essex	Plan	PDM	\$ 1,176,187	\$ 392,062	\$ 1,568,250
2005	Hudson	Plan	PDM	\$ 879,999	\$ 303,600	\$ 1,183,600
2006	Harmony	Acquisition (#)	FMA	\$ 674,640	\$ 224,880	\$ 899,520
2006	Wayne	Acquisition	FMA	\$ 5,749,500	\$ 1,016,500	\$ 6,766,000
2006	Harmony	Acquisition (#)	HMGP-1530	\$ 858,900	\$ 286,300	\$ 1,145,200
2006	Harmony	Elevation (#)	HMGP-1563	\$ 372,300	\$ 124,100	\$ 496,400
2006	Pohatcong	Acquisition (2)	HMGP-1563	\$ 366,550	\$ 121,850	\$ 487,400
2006	Fairfield	Elevation (5)	HMGP-1588	\$ 103,073	\$ 64,358	\$ 257,431
2006	Carney Point	Flood Control	PDM	\$ 1,221,069	\$ 407,023	\$ 1,628,092
2006	Little Falls	Acquisition (#)	RFC	\$ 1,900,000	0	\$ 1,900,000
2006	Monmouth	Plan	PDM	\$ 345,375	\$ 103,615	\$ 448,990
2006	Somerset	Plan	PDM	\$ 199,000	\$ 59,700	\$ 258,700
2007	Brigantine	Pump Station	FMA	\$ 750,000	\$ 250,000	\$ 1,000,000
2007	Harmony	Acquisition (7)	FMA	\$ 2,200,000	\$ 733,000	\$ 2,933,000
2007	Little Falls	Acquisition (4)	RFC	\$ 1,500,000	0	\$ 1,500,000
2007	Frenchtown	Acquisition (1)	RFC	\$ 1,000,000	0	\$ 1,000,000
2007	Lambertville	Flood Control	HMGP-1694	\$ 150,000	\$ 50,000	\$ 200,000
2007	Atlantic County	Plan	PDM	\$ 165,000	\$ 55,000	\$ 220,000
2007	S. Delaware *	Plan	PDM	\$ 463,000	\$ 155,000	\$ 618,000
2007	Cape May County	Plan	PDM	\$ 474,000	\$ 158,000	\$ 632,000
2007	Middlesex	Plan	PDM	\$ 200,000	\$ 66,000	\$ 266,000
2007	Morris	Plan	PDM	\$ 300,000	\$ 100,000	\$ 400,000
2007	Passaic	Plan	PDM	\$ 225,000	\$ 75,000	\$ 300,000
2007	Union	Plan	HMGP-1694	\$ 375,000	\$ 125,000	\$ 500,000
2007	Wayne	Acquisition	HMGP-1694	4,509,072	1,503,024	6,012,096
2007	DEP Forest Service	GIS Planning	HMGP-1694	59,772	19,924	79,696
Total				\$26,353,036.00	\$6,439,135.00	\$32,881,173.00

* S. Delaware – Regional Planning Grant for Camden, Cumberland, Gloucester and Salem Counties

The listings below represent the increased interest expressed by local jurisdictions in mitigation projects. With the preparation, submission and anticipated approval of county and local plans, interest in project development has increased dramatically since the 2008 New Jersey All Hazards Plan Approval.

Since final FEMA funding approval has not been fully made, the list includes all of the applications received as of July 1, 2010



Table 5.10.3

2008 – 2009 approved Hazard Mitigation Planning and Project Grants submitted pending FEMA approval

FY	Applicant	Project	FEMA Source	Total Project	FEMA Funds	Non-Federal
2008/9	Little Falls	Elevation (#)	SRL	364,770	364,770	0
2008/9	N. Delaware*	Plan	PDM	618,000	463,000	155,000
2008/9	Essex County	Bridge Upgrade	PDM-L	666,666	500,000	166,666
2008/9	Trenton	Flood Proofing	PDM-L	800,000	500,000	300,000
Total				2,449,436	1,827,770	621,666

*N. Delaware - Regional Planning Grant for Hunterdon, Mercer, Sussex and Warren Counties

Table 5.10-4

2008 – 2009 Hazard Mitigation Project Grants submitted pending FEMA approval

2008/9	Fairfield	Elevation (#)	RFC			
2008/9	Lambertville	Drainage	PDM			
2008/9	Monmouth County	Shelter	PDM			
2008/9	Neptune	Tide Gates	PDM			
2008/9	Oceanport	Drainage	PDM			
2008/9	Oceanport	Drainage	FMA			
2008/9	Union Beach	Road Elevation	PDM			
2008/9	Wayne	Acquisition	FMA			
2008/9	Wayne	Acquisition	RFC			
2008/9	Wildwood	Elevation	RFC			

Table 5.10-5

2010 Approved FEMA Hazard Mitigation Assistance Applications

FY	Applicant	Project	FEMA Source	Total Project	FEMA Funds	Non-Federal
2010	Nutley	Flood Mitigation	RFC	1,664,000	1,664,000	0
2010	NJ OEM	Grant Mangmnt	PDM	10,502	7,877	2,625
2010	NJ OEM	Grant Mangmnt	RFC	166,400	166,400	0
2010	Lambertville	Backflow Valve	FMA	194,467	145,850	48,616
2010	NJ OEM	Grant Mangmnt	SRL	2,050,120	1,845,108	205,012
2010	Nutley	Flood Mitigation	FMA	2,473,500	1,855,125	618,375
2010	Wayne	Acquisition	SRL	20,501,200	18,455,108	2,050,120
2010	Ocean	Flood Mitigation	FMA	3,843,099	2,882,324	96,774
2010	Wayne	Acquisition	FMA	3,999,980	2,999,985	999,995
2010	NJ State DEP	Abandoned Mine	PDM	356,089	267,064	89,025
2010	NJ OEM	Grant Mangmnt	FMA	399,998	300,000	100,000
2010	Trenton	Project	PDM-L	400,000	300,000	100,000
2010	Neptune	Outfall Valve	PDM	694,206	520,654	173,551
Total				36,753,561	31,409,495	4,484,093

Table 5.10-6

2010 Pending and/or Submitted FEMA Hazard Mitigation Assistance Applications

2010	Lambertville	Flood Mitigation	PDM			
2010	Monmouth County	Shelter	PDM			
2010	Ocean	Flood Mitigation	RFC			
2010	Princeton	Acquisition	RFC			
2010	Stockton	Acquisition	RFC			
2010	Union Beach	Road Elevation	PDM			



2010 HMGP Applications under four consecutive disasters (DR-1867; DR-1873; DR-1889 ; DR-1897)

Note: Funding applications have been prepared for submission and will be revised with FEMA approval of grant funds.

Table 5.10-7
Hazard Mitigation Planning and Project Grants submitted pending FEMA approval

FEMA 2009-2011 Mitigation Project Grants						
Sub Applicant/Project	Co	FEMA Funding	Estimated FEMA Funds *	Type		
				Acq	Elev	Flood Control
Wayne Township – Acquisition	PA	FMA 09	3,999,980	28	0	0
Nutley Township – Acquisition	ES	FMA 10	640,875	1	0	0
Lambertville City – Ely Creek	HN	FMA 10	145,850	0	0	1
Neptune Township – Valve/Bulkhead	MO	FMA 10	430,176	0	0	1
Ocean Township – Poplar Village	MO	FMA 10	3,346,125	32	0	0
NJDEP/Harmony – Acquisition	ES	FMA 11	3,562,500	24	0	0
Absecon City – Highland Ave Flood Control	AT	HMGP 1867	891,350	0	0	1
Absecon City –Waterfront Shore Protection	AT	HMGP 1867	581,700	0	0	1
Galloway Township – Pomona Pond Drain	AT	HMGP 1867	220,945	0	0	1
Longport Borough – Elevation	AT	HMGP 1867	150,000	0	1	
Pleasantville Borough – Edgewater Ave	AT	HMGP 1867	230,086	0	0	1
Pleasantville Borough – Lincoln Ave Drain	AT	HMGP 1867	198,806	0	0	1
Commercial Township – Laurel Lake Drain	CU	HMGP 1867	681,550	0	0	1
Spring Lake Borough – Outfall Valve	MO	HMGP 1867	600,000	0	0	1
Ocean County – Plan Development	OC	HMGP 1867	273,000	0	0	0
Cape May City – Hope/Corson Drainage	CM	HMGP 1873	575,000	0	0	1
Little Falls Township – Fairfield Ave Pump	PA	HMGP 1873	995,000	0	0	1
Riverside Township – Monroe St. Flood	BU	HMGP 1889	30,000	0	0	1
West Wildwood Borough – Road Elevation	CM	HMGP 1889	390,000	0	0	1
Commercial Township – Berry Ave Flood	CU	HMGP 1889	240,000	0	0	1
Sea Bright Borough – Bulkhead	MO	HMGP 1889	995,000	0	0	1
Atlantic City – Baltic Ave Flood Control	AT	HMGP 1897	4,300,000	0	0	1
Woodbine Borough – Downtown Drainage	CM	HMGP 1897	1,426,942	0	0	1
Millville City – Columbine Drainage	CU	HMGP 1897	166,734	0	0	1
Vineland City – Northeast Flood Control	CU	HMGP 1897	600,000	0	0	1
Parsippany Township – New Road Elevation	MR	HMGP 1897	394,082	0	0	1
Neptune Township Outfall valve/bulkhead	MO	PDM 10	508,441	0	0	1
NJDEP Abandoned Mine Study Plan	Reg	PDM 10	267,064	0	0	0

FEMA 2009-2011 Mitigation Project Grants						
Sub Applicant/Project	Co	FEMA Funding	Estimated FEMA Funds *	Type		
				Acq	Elev	Flood Control
Monmouth County – Plan Update	MO	PDM 11	300,000	0	0	1
Neptune Township – Outfall	MO	PDM 11	835,529	0	0	1
Essex County – Mill Street Bridge	ES	PDM-L 09	500,000	0	0	1
Trenton City – Waterworks	ME	PDM-L 09	500,000	0	0	1
Trenton City – Assunpink Greenway – Acq	ME	PDM-L 09	300,000	1	0	0
Little Falls Township – Elevation	PA	RFC 09	364,770	0	5	0
Nutley Township – Acquisition	ES	RFC 10	1,664,000	2	0	0
Princeton Township – Acquisition	ME	RFC 11	664,525	1	0	0
Sea Bright – Elevation	MO	SRL 10	216,936	0	10	0
NJDEP Lincoln Park – Acquisition	MR	SRL 10	3,673,134	15	0	0
Little Falls Township – Acquisition	PA	SRL 10	5,973,120	34	0	0
Wayne Township – Acquisition	PA	SRL 10	18,451,080	77	0	0
NJDEP – Passaic River Basin – Acquisition	Reg	SRL 10	2,763,900	8	0	0
Fairfield Township – Acquisition	ES	SRL 11	1,045,237	3	0	0
NJDEP – Acquisition Lincoln Park	MR	SRL 11	6,625,800	31	0	0
Pequannock Township – Acquisition	MR	SRL 11	4,989,200	22	0	0
Pompton Lakes Borough – Elevation	MR	SRL 11	4,592,700	0	27	0
Lincoln Park Borough – Elevation	PA	SRL 11	4,489,200	0	29	0
Little Falls Township – Elevation	PA	SRL 11	5,643,270	0	33	0
Totals		47 Projects	90,433,607	279	105	20