



## Section 9. Emergency Management Accreditation Program

The Emergency Management Accreditation Program (EMAP) is a voluntary assessment and accreditation process for the emergency management programs of states, territories, tribes, and local governments. It provides the means for strategic improvement of and accreditation of emergency management programs. The State passed the EMAP assessment and became accredited on October 28, 2011.

### 9.1 Hazard Identification

Chapter 4, element 4.3.1 of the Emergency Management Standard requires a hazard identification (natural and human-caused hazards) and risk assessment (HIRA) for the State. According to the State’s EMAP Program Manager, the State Hazard Mitigation Plan (HMP) has been previously identified as the document that defines the hazards of concern to the State of New Jersey.

As summarized in Section 5.1 (State Risk Assessment Overview), the hazards of concern for the State of New Jersey were identified and approved by several interagency committees and subject matter experts at the State: Mitigation Core Team (MCT), State Hazard Mitigation Team (SHMT), New Jersey Office of Emergency Management (NJOEM) Planners, Emergency Support Function (ESF) leads, and Regional Operations Intelligence Center (ROIC) analysts. Consensus on these hazards was obtained through numerous meetings, telephone conversations, and email correspondence. Refer to Section 5.1 for additional details regarding the identification of hazards. Table 9-1 summarizes the natural and human-caused hazards identified for the State of New Jersey.

Table 9-1. State Hazards of Concern

| Hazards of Concern   |
|--|
| Animal Disease Events  |
| Civil Unrest   |
| Coastal Erosion (including enhanced discussion of beach protection) and Sea Level Rise   |
| Crop Failures  |
| Cyber Attacks  |
| Dam/Levee Failures   |
| Droughts   |
| Earthquakes  |
| Economic Collapse  |
| Fishing Failures   |
| Floods (riverine, coastal, storm surge, tsunami, and stormwater flooding caused by local drainage and high groundwater levels) |
| Geological Hazards (landslide and subsidence/sinkholes)  |
| Hazardous Substances (fixed sites, in-transit, offshore)   |
| Hurricanes and Tropical Storms   |
| Nor’Easters  |
| Nuclear Hazard   |
| Pandemics (including disease outbreak)   |



| Hazards of Concern   |
|--|
| Power Outages  |
| Severe Weather (high winds, tornadoes, thunderstorms, hail, and extreme temperature) |
| Terrorism  |
| Wildfires  |
| Winter Storms (snow, blizzards, and ice storms)                                      |

## 9.2 Risk Assessment

Chapter 4, element 4.3.1 of the Emergency Management Program requires states to assess the risks and vulnerability of people, property, environment, and its own operations from these hazards. Refer to Sections 5.2 through 5.23 which present the hazard profiles and vulnerability assessments for all identified hazards. Additional details are also captured in the consequence analysis discussed below.

## 9.3 Consequence Analysis

Chapter 4, element 4.3.2 of the Emergency Management Program requires states to include a consequence analysis for the hazards identified in the State HIRA. The consequence analysis assesses the impact on the following:

1. Public
2. First Responders
3. Continuity of operations (including delivery of services)
4. Property, facilities, and infrastructure
5. Environment
6. Economic conditions
7. Public confidence in governance

Table 9-2 presents in alphabetical order the consequence analysis for each hazard of concern for the State of New Jersey.



Table 9-2. Consequence Analysis

| Hazard                | Impact on Public  | Impact on Responder   | Continuity of Operations  | Delivery of Services   | Property, Facilities, and Infrastructure   | Impact on Environment   | Impact on State Economy  | Public Confidence in the State's Governance  |
|-----------------------|---|---|---|--|--|---|--|--|
| Animal Disease Events | Potential significant consequences for the general public. Illnesses and death among pet owners and farmers during a severe event. Any individual can become infected (e.g., rabies or Lyme disease) and have serious consequences to human health. Contamination of food supplies and water from animal diseases will disrupt the normal public routine. | Highly trained personnel must respond to an animal disease hazard. A highly contagious or economically devastating animal disease may create a number of illnesses and deaths in response and support personnel, thus limiting the capabilities of personnel to handle the response. In addition, fear from coming in contact with entities that would put the responder and the responder's family at risk, will also limit capabilities of the disaster response. | The United States Department of Agriculture, New Jersey OEM, and the New Jersey Department of Health and Senior Services have robust continuity of operations plans that will go into effect during an animal disease hazard. | Road and bridge closures, as well as transit service disruptions to protect public safety, may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide, depending on the magnitude of the event and level of service disruptions. | Impact on property, other than livestock, will be minor due to the nature of the hazard. State officials may need to take additional steps to ensure proper prevention or spread of the disease to other locations including issuing quarantine orders on the property in question. The impact of animal disease on facilities will be minor due to the nature of the hazard. These areas may need to take additional steps to ensure proper prevention or spread of this disease to other locations. These steps may involve issuing a quarantine on the facility. The impact of animal disease on infrastructure will be minor due to the nature of the hazard. Large scale water suppliers who have become contaminated may be forced to shut down operations until their | Potential long term impacts on fish and wildlife. A serious event can completely deplete a species. | Potential to cause significant economic damage to the State, especially in agriculture and aquaculture which could result in long term economic impacts for farmers and state commerce. New Jersey ranked eighth in the nation in expanded wholesale value of floriculture crops with a value of \$178 million. The number of farms in New Jersey in 2010 was estimated to be 10,300. New Jersey agricultural land is estimated to be 730,000 acres. | Regardless of the animal(s) affected by a highly contagious or economically devastating event in New Jersey, the disease will severely impact animals raised, bred, or marketed in the State, instill fear among consumers, and bring into question the safety of meat and food products generated in New Jersey. This threat will necessitate swift response to any likely highly contagious or economically devastating event. |



| Hazard              | Impact on Public  | Impact on Responder  | Continuity of Operations  | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment   | Impact on State Economy  | Public Confidence in the State's Governance   |
|---------------------|---|--|---|---|--|---|--|---|
|                     |   |  |   |   | water supply is deemed safe.   |   |  |   |
| Civil Unrest        | The general population could serve as participants or targets in actions of civil unrest. Wide spread unrest could cause fear amongst the population and cause them to be absent from school or work activities. During an event, bystanders may be harmed due to the activities of participants. | Response to civil unrest events are generally handled at the local level. In a large event, the resources of a local jurisdiction may be exceeded. In this instance state resources would be activated to fill the need. During an event responders may become targets, this could hamper their effectiveness. | The outbreak of widespread rioting or looting could have impact on the State's ability to conduct its normal operations. Protesters could occupy government buildings and interrupt functions of government. Targeted attacks on government facilities could interrupt operations entirely. | The outbreak of widespread rioting or looting could have potential impact on the State's ability to provide services. | Private property often serves as a target in instances of civil unrest. Businesses can be targeted for looting or vandalism. If an event is particularly large, damages could reach the millions of dollars and take years to recover. Often in acts of civil unrest, government facilities become the focal point of protests or targets for vandalism. Damages suffered during an event or the inability of an employee to safely report to work may greatly reduce or shut down facility operations. Similar to government facilities, public and private infrastructure can become targets of civil unrest. Damages to transportation, communications, or utilities infrastructure could further exacerbate the situation. | Normally, civil unrest will have a minimum impact on the environment. However, in chemical or port facilities, if vandalism or large scale fires occur, the impact on the environment could be significant. | Civil unrest could prove economically crippling to the State. Large scale events are usually accompanied by wide spread absenteeism and damages to private property. | If an event is prolonged or is perceived to be mismanaged, it could greatly decrease public confidence in state governance. If the response is perceived as inadequate, individuals may attempt to protect their property by their own means and further degrade the situation. |
| Coastal Erosion and | Coastal erosion may   | In addition to the fire, police  | COOPs are a   | Road and bridge   | Coastal property market  | Coastal erosion   | The New Jersey coast   | Governmental response,  |



| Hazard         | Impact on Public   | Impact on Responder  | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure  | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance   |
|----------------|--|--|--|--|---|--|---|---|
| Sea Level Rise | impact homeowners and tourists located along the coast. While coastal erosion frequently occurs over a period of time, some events may be caused by other hazards such as hurricanes or tropical storms. | and normal emergency responders associated with any disaster event, beach lifeguards are called on to protect the public and enforce the necessary beach closures. | requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as coastal erosion and/or sea level rise scenarios/events. | closures, as well as transit service disruptions to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | values do not appear to be affected in the long term. However, in a 2000 report to the United States Congress, FEMA estimated that coastal erosion may cost property owners \$500 million a year in structural damages and loss of land. In New Jersey, construction of new residential development, reconstruction of existing residential development, and the conversion of single family dwellings into multi-unit dwellings continue in hazardous areas. | negatively impacts beaches, wetlands, marshes, and coastal habitats. With the loss of these environments, coastal communities may experience more frequent and destructive flooding, compromised water supplies and smaller or fewer beaches. Events that impact development or infrastructure may cause the release of hazardous substances into the environment such as heating fuel and sewage. Further, vegetative and construction material debris may accumulate on beaches and shorelines. These impacts may potentially increase as a result of climate change and sea level rise. | is an important part of the state's economy including the Atlantic City entertainment industry.   | on all levels – state, county and municipal, requires direct actions that must be immediate and effective to maintain public confidence.  |
| Crop Failures  | The effects of a crop failure on the population of New Jersey could be great. In the event of a crop failure, food supplies could be interrupted and there could be a rise in food                       | Due to the nature of the hazard few consequences should be expected for responders outside of those generated for the general public.                              | Due to the nature of the hazard, few consequences are expected to continuity of operations.  | Due to the nature of the hazard, few consequences are expected for delivery of services.   | A crop failure would destroy agricultural property. The specific affects would depend on the nature of the hazard and its duration. Due to the nature of the  | A crop failure could have a potentially severe impact on the environment if it were due to contamination by a foreign agent or a biological organism.  | The economic conditions of the State could be moderately affected by a crop failure. New Jersey's economy is somewhat dependent on agricultural | If the response to a crop failure was perceived to be mismanaged by the public it could lead to a loss in confidence in state governance. This coupled with a rise in food prices may lead to |



| Hazard                 | Impact on Public   | Impact on Responder   | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure   | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance  |
|------------------------|--|---|--|--|--|--|---|--|
|                        | prices. The thousands of farmers in which farming is their primary occupation will be impacted as their livelihood depends on crop production. Also, a wide spread failure due to contamination by a foreign agent or a biological organism could create doubts about the safety of the food supply.         |   |  |  | hazard few consequences are expected for facilities or infrastructure.   | In this event, large areas of agricultural crop land may have to be abandoned or watersheds may need to be monitored for contamination.  | production and consumers may see a rise in food prices in the event of a crop failure.  | acts of civil unrest.  |
| Cyber Attack           | Due to the widespread use of electronic devices and the reliance on technology to support daily functions the impact of a cyber attack would be significant. A cyber attack could disable the vast majority of systems which control critical infrastructure, traffic control systems, and basic activities. | Cyber attacks have the potential to interfere with emergency response communication and activities. Many first response agencies rely on technology to notify and route responders to the scene of the emergency. Additionally, 911 dispatch centers rely on technology which makes them vulnerable to cyber attacks. | Agencies that rely on electronic backup of critical files are vulnerable to cyber attacks. Thus, the ability to continue operations is impacted by cyber attacks.  | The delivery of services can be impacted by cyber attacks since governments rely, to a great extent, upon electronic delivery of services.                                   | Property, facilities, and infrastructure may become either uninhabitable or unusable as a result of a cyber attack. Further a cyber attack may also impact utility systems and critical infrastructure.                        | A cyber attack could impact the environment if a release of a hazardous material was triggered from the attack. Accidents involving hazardous materials also can occur due to a lack of traffic control device operations. | A cyber attack could greatly affect the economy. In an electronic-based, commerce society, any disruption to daily activities can have disastrous impacts to the economy. It is difficult to measure the true extent of the impact. | The government's inability to protect confidential personal data would impact confidence in the State. An attack would raise questions regarding the security of using electronic systems for government services. Also, an attack may jeopardize those in elected positions in the state. |
| Dam and Levee Failures | Dam and levee failures affect those within the hazard area and all of the surrounding areas. A flood event, including dam or levee failure, anywhere in the State becomes a major news event covered by the media.   | Fire and police, and emergency responders are called on to evacuate people from the flood area, close roads, pump out flooded basements, attend to the injured, and direct traffic away from the flooded area and roads.  | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services | Market value of flooded property is significantly reduced. Areas of repetitive flooding or within the path of a hazard area are generally shunned by new home purchasers in favor of less threatened home sites. Floods impact | Dam and levee failure events, impact the environment by: spreading pollution; overloading water and wastewater treatment plants; carrying silt and debris; and   | A dam or levee failure event drains resources of the state, county, and municipality. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government.             | Governmental response, on all levels – state, county, and local, requires direct actions that must be immediate and effective to maintain public confidence.   |



| Hazard   | Impact on Public   | Impact on Responder   | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure  | Impact on Environment  | Impact on State Economy  | Public Confidence in the State's Governance  |
|----------|--|---|--|--|---|--|--|--|
|          |  |   | such as dam and levee failure events.  | efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions.   | roads and bridges, schools, hospitals, either directly or indirectly, making access much more difficult. Detours and road closures also add to the cost of the flood event caused by a dam or levee failure event. Transportation, communications and the general operation of governmental services may be disrupted by a flood incident. In most reported flood incidents roads and bridges have been reported as the major infrastructure elements impacted by a flood. In addition, dam or levee failure by its nature damages facilities and infrastructure. | disturbing the wildlife and natural areas.   |  |  |
| Droughts | Drought can affect those locally, regionally or statewide. A drought event usually takes a long time to develop, can be anywhere in the state and becomes a major news event covered by the media. | Fire and police, and emergency responders are called on to evacuate people to shelter areas, suppress fires, attend to the injured, and direct traffic away from possible wildfire areas. For Presidential declared disasters, emergency response costs are significant reimbursement elements. | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as drought events. To date, there have been few or no drought incidents that have shut down state, county, or municipal governmental operations. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be impacted. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | Market value of property in a drought area is not significantly reduced. Drought has little impact on facilities. Transportation, communications and the general operation of governmental services may be disrupted by a drought incident. In most reported drought incidents water delivery systems and forest areas are impacted   | Droughts impact the environment by: causing wildfires; overloading water and wastewater treatment plants; creating dust storms; and disturbing the wildlife and natural areas. | A drought drains state, county, and local resources. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government. | Governmental response, on all levels – state, county, and local, requires direct actions that must be immediate and effective to maintain public confidence. |



| Hazard            | Impact on Public  | Impact on Responder   | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure   | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance   |
|-------------------|---|---|--|--|--|--|---|---|
| Earthquakes       | Earthquakes affect those in the event area and, depending on the size and impact, can affect all of the surrounding areas and the state as a whole. An earthquake event anywhere in the state becomes a major news event covered by the media.                    | Fire and police, and emergency responders are called on to evacuate people from the area, close roads, attend to the injured, and direct traffic away from the impacted area and roads. For Presidential declared disasters, emergency response costs are significant reimbursement elements.     | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such earthquake events. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. To date, there have been few or no earthquake incidents that have shut down state, county, or local governmental operations. | Earthquakes impact roads and bridges, schools, hospitals, directly or indirectly making access much more difficult. Detours and road closures also add to the cost of the event. Transportation, communications, and the general operation of governmental services may be disrupted by an incident. In predicted incidents, roads and bridges, would be the major infrastructure elements impacted. | Earthquakes impact the environment more so than other land disturbances. In summary, earthquake events may trigger landslides, mudslides, slope failure, dam failures and tsunamis.                                | An earthquake would severely drain state, county, and local resources. Even if some costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government.   | Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence.   |
| Economic Collapse | A complete economic collapse would impact the entire population. A collapse would be characterized by extreme poverty and high unemployment. Normal daily activities would likely subside or stop completely. Malnutrition and famine may also affect the public. | The first responder community would be impacted by economic collapse. Crime, calls for medical assistance, and building fires would increase as the event occurred. First responders would have to deal with an increased demand for service while staff and equipment resources may be depleted. | Economic collapse may impact continuity of operations. Sustaining operations will be severely limited due to economic conditions. Without funding to build redundancies into systems, continuity would not occur.                                    | Economic collapse would impact ability to deliver services. With a decreased tax-base to fund programs, agencies may not be able to continue to offer assistance.  | Property, facilities, and infrastructure would all be negatively impacted by an economic collapse. Facilities would degrade from lack of repair and maintenance. Infrastructure such as roads and bridges may become unsafe for transportation, and power plants may be operated   | While the environment would not sustain a direct impact, it would be affected by lack of maintenance. Areas may become overgrown or unhealthy, since cities and towns could no longer fund environmental programs. | Complete economic collapse would cause the economy of New Jersey to cease normal activities. Hyper-inflation and low production are results of an economic collapse. Recovery from an economic collapse would take decades to occur. Full recovery from economic collapse may never | Economic collapse would erode public trust in state government. This was witnessed during the Great Depression and the Great Recession. During these periods approval ratings fell to all-time lows and many elected officials were relieved of their duties. |





| Hazard           | Impact on Public   | Impact on Responder   | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure   | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance   |
|------------------|--|---|--|--|--|--|---|---|
|                  |  |   |  |  | beyond their expected safe use age. The number of abandoned properties would likely increase, leading to greater concerns for civil disturbances and criminal activity.  |  | occur.  |   |
| Fishing Failures | The effects of a fishing failure on the population could be great. In the event of a fishing failure, food supplies could be interrupted and the public could experience a rise in overall food prices. Fishermen whose primary occupation is fishing will be negatively impacted. Also, a wide spread failure due to contamination by a foreign agent or a biological organism could create doubts about the safety of the food supply. | Due to the nature of the hazard few consequences should be expected for responders outside of those generated for the general public.   | Due to the nature of the hazard few consequences should be expected for continuity of operations.  | Due to the nature of the hazard, few consequences should be expected in the realm of delivery of services.   | Due to the nature of the hazard few consequences should be expected for property, facilities or infrastructure. There may be secondary effects on fishing related property (for example, boats and processing facilities) created by the hazard. | A fishing failure could have a potentially severe impact on the environment if it were due to contamination by a foreign agent or a biological organism. If a massive fish kill was associated with the event clean up and recovery could take months. | The economic conditions of the State could be greatly affected by a fishing failure. New Jersey's economy is partially dependent on the fishing industry. The impacts could be severe on coastal towns that rely on the fishing industry. Also, a fishing failure may have an impact on the tourism industry. | If the response to a fishing failure was seen to be mismanaged by the public it could lead to a loss in confidence in state governance. This coupled with a rise in food prices may lead to acts of civil unrest. |
| Floods           | Floods affect those in the immediate and surrounding areas not only in the watershed but the state as a whole. A flood event anywhere in the state becomes a major news event covered by the media. Public awareness of the  | Fire and police, and emergency responders are called on to evacuate people from the flood area, close roads, pump out flooded basements, attend to the injured, and direct traffic away from the flooded area and roads. For Presidential declared disasters, | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence of this hazard. If they do occur, the ability to deliver goods and | Market value of flooded property is significantly reduced. Areas of repetitive flooding are generally shunned by new home purchasers in favor of less threatened home sites. Floods impact roads and bridges, schools, hospitals, in             | Floods, by their nature impact the environment by: spreading pollution; overloading water and wastewater treatment plants; carrying silt and debris; and disturbing the  | A flood drains resources of the state, county and municipality. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government.   | Governmental response, on all levels – state, county and municipal, requires direct actions that must be immediate and effective to maintain public confidence.   |



| Hazard   | Impact on Public  | Impact on Responder  | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure   | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance   |
|--|---|--|--|--|--|--|---|---|
|  | flood hazard is heightened. Flood insurance coverage in the state is already among the highest in the nation.   | emergency response costs are significant reimbursement elements.   | such as flood events. To date, there have been few or no flood incidents that have shut down state, county or municipal governmental operations.   | services efficiently will be impacted at the local level, regionally, or statewide depending on the magnitude of the event and level of service disruptions.   | some cases directly and in others making access much more difficult. Detours and road closures also add to the cost of the flood event. Transportation, communications and the general operation of governmental services may be disrupted by a flood incident. In most reported flood incidents roads and bridges have been reported as the major infrastructure elements impacted by a flood.  | wildlife and natural areas.  |   |   |
| Geologic Hazards (Landslide, Subsidence/Sinkholes) | Geologic land disturbances affect those in the event area and, depending on the size and impact, can affect all of the surrounding areas and the state as a whole. An earthquake or sinkhole event anywhere in the state becomes a major news event covered by the media. | Fire and police, and emergency responders are called on to evacuate people from the area, close roads, attend to the injured and direct traffic away from the impacted area and roads. For Presidential declared disasters, emergency response costs are significant reimbursement elements. | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as geologic hazard events (landslide, subsidence/sinkholes). | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence of this hazard. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | Market value can be significantly reduced. Areas of known or repeated geologic land disturbance are generally shunned by new home purchasers in favor of less threatened home sites. Geologic land disturbance impact roads and bridges, schools, hospitals, directly or indirectly making access much more difficult. Detours and road closures also add to the cost of the event. Transportation, communications, and the general operation of governmental services may be disrupted by an incident. In predicted | A landslide or subsidence/sinkhole event will alter the landscape. In addition to changes in topography, vegetation and wildlife habitats may be damaged or destroyed, and soil and sediment runoff will accumulate downslope potentially blocking waterways and roadways and impacting quality of streams and other water bodies. | Major geological hazard events drain state, county and local resources. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government. | Governmental response, on all levels – state, county and municipal, requires direct actions that must be immediate and effective to maintain public confidence. |



| Hazard   | Impact on Public  | Impact on Responder   | Continuity of Operations  | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment   | Impact on State Economy   | Public Confidence in the State's Governance  |
|--|---|---|---|---|--|---|---|--|
|  |   |   |   |   | incidents roads and bridges would be the major infrastructure elements impacted.   |   |   |  |
| Hazardous Substances (Fixed Sites, In-Transit, Offshore) | A serious hazardous waste event that takes place at a fixed site can have a great impact on the public surrounding the site. The impact will depend upon the nature of the hazardous waste, the amount of contact an individual has with the chemical, and any other explosion or fire associated with the event. Immediate notification to the public regarding the hazardous waste event is vital in maintaining public safety. | The immediate first responders on scene may be hesitant to perform their duties due to the nature of a hazardous waste event. If the proper precautions and personal protective equipment is not used responders can put their health and lives in danger during a hazardous waste event. Any type of long or short term contact with a chemical can be hazardous to a responder. | A hazardous waste event occurring at a fixed site will have an impact on the continuity of operations in the immediate area of the event. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | Real property may become generally unusable due to contamination depending on the nature of the hazardous waste event. Also, it may be impossible to occupy industrial or business sites due to contamination. Facilities in the immediate vicinity of a hazardous waste event could become temporarily or permanently uninhabitable due to contamination. Public and private infrastructure could be shut down or destroyed by a hazardous waste event. The type of infrastructure destroyed would depend on the nature of the event and the extent of its effects. | The impact on the environment will depend on where the event is located and the extent of the contamination. The animals, plants and other wildlife surrounding the hazardous waste event will be impacted. Groundwater and soil can become contaminated when exposed to hazardous material which makes cleanups very costly. | Hazardous wastes can be particularly destructive to an economy. A hazardous waste event can leave localities or entire regions uninhabitable. They can destroy facilities and contaminate water and food stocks. Areas that have been affected by an event are also not attractive to tourists. | A government's inability to contain hazardous waste events can sew widespread fear and panic in a population and cause them to lose confidence in their elected officials. |



| Hazard                     | Impact on Public  | Impact on Responder   | Continuity of Operations  | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment   | Impact on State Economy  | Public Confidence in the State's Governance   |
|----------------------------|---|---|---|---|--|---|--|---|
| Hurricane/ Tropical Storms | The New Jersey shore is a tourist and vacation destination. Since hurricane season also corresponds to the summer vacation season, the public includes large numbers of vacationing families – both New Jersey residents and out-of-state tourists. To protect residents and tourists, coastal evacuation routes have been established and are activated when necessary. Storm watches and warnings are posted. | In addition to the fire, police, and normal emergency responders associated with any disaster event, beach lifeguards are called on to protect the public and enforce the necessary beach closures. | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as hurricanes or tropical storms. To date, there have been few, if any, hurricane, or tropical storms that have shut down governmental operations for any significant time. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | Residential properties and commercial properties impacted or destroyed by a coastal event rebuild quickly after an incident. Market value of coastal properties do not appear to be effected long term. Coastal incidents impact roads, bridges, schools, and hospitals in the same way as floods. There is the added problem of drifting sand from storm surges and winds. Transportation, communications, and the general operation of governmental services may be disrupted by a coastal incident. In most reported cases sand-covered roads and bridges have been reported as impacted infrastructure elements. | Beach erosion is the major environmental impact from hurricanes and tropical storms. Refer to the Coastal Erosion hazard. | The New Jersey coast is an important part of the state's economy including the Atlantic City entertainment industry. Hurricanes and tropical storms can greatly affect the coast. The "economic" environment recovery is supported by state and United States Corps of Engineers beach restoration programs. | Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence. |
| Nor'Easters                | Nor'Easters can have a significant impact on the coast. To protect coastal residents, coastal evacuation routes have been established and are activated when necessary. Storm watches and warning are posted.   | In addition to the fire, police, and normal emergency responders associated with any disaster event, beach lifeguards are called on to protect the public and enforce the necessary beach closures. | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as Nor'Easter events. To date, there have been few, if any,   | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or   | Residential properties and commercial properties impacted or destroyed by a Nor'Easter event rebuild quickly after an incident. Market values of properties do not appear to be affected in the long term. Nor'Easters impact roads, bridges, schools, and hospitals in the same way as floods.  | Beach erosion is the major environmental impact from Nor'Easters. Refer to the Coastal Erosion hazard.                    | The New Jersey coast is an important part of the state's economy including the Atlantic City entertainment industry. Nor'Easters can greatly affect the coast.   | Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence. |



| Hazard          | Impact on Public  | Impact on Responder  | Continuity of Operations   | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment   | Impact on State Economy  | Public Confidence in the State's Governance   |
|-----------------|---|--|--|---|--|---|--|---|
|                 |   |  | Nor'Easters that have shut down governmental operations for any significant time.  | statewide depending on the magnitude of the event and level of service disruptions.   | Transportation, communications and the general operation of governmental services may be disrupted by a Nor'Easter.  |   |  |   |
| Nuclear Hazards | The effect of a radiological event on the public varies. The length and severity of exposure is a key factor in determining the impact to human life. If food or water supplies have been tainted with radiological material the public will suffer greatly if food or water is ingested. | Responders may come in contact with radiation if the proper precautions are not taken. Exposure to radiation can cause long-term illnesses and death. Response by personnel may be hampered due to radiation levels, damaged infrastructure and secondary incidents. | A perimeter surrounding the radiological event will be established that will not allow movement into the contaminated area. Continuity of operations within this perimeter will be hampered. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. Delivery of services can be impacted on the roadways from traffic caused by mass evacuations. | Real property may become irradiated and general unusable. Large sections of the housing stock may become permanently uninhabitable. Also, it may be impossible to occupy industrial or business sites due to contamination. Facilities in the immediate vicinity of a nuclear hazard event could become temporarily or permanently uninhabitable due to radiological contamination. Also, facilities' electrical systems can be irreparable damaged due to interacting with an electromagnetic pulse. Public and private infrastructure could be shut down or destroyed by a nuclear event. They type of infrastructure destroyed would depend on the nature | The impact on the environment depends on where the event is located and the extent of irradiation. The plants, animals and other wildlife surrounding the radiological event will certainly be impacted. Groundwater and soil can become contaminated when exposed to radiological material which makes cleanups very costly. | Nuclear hazards can be particularly destructive to economic conditions. A nuclear/radiological event can leave localities or entire regions uninhabitable. They can destroy facilities and contaminate water and food stocks. Areas that have been affected by an event are also not attractive to tourists. | The psychological fallout of a nuclear hazard event can be as devastating as their physical effects. A government's inability to contain nuclear events can sew widespread fear and panic in a population and cause them to lose confidence in their elected officials. |



| Hazard   | Impact on Public  | Impact on Responder  | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure  | Impact on Environment  | Impact on State Economy   | Public Confidence in the State's Governance   |
|----------|---|--|--|--|---|--|---|---|
|          |   |  |  |  | of the event and the extent of its effects.   |  |   |   |
| Pandemic | Either through mortality and morbidity of the disease or the psychosocial impact is anticipated that a pandemic event would have far ranging impacts on the citizens of New Jersey. | First responders are not exempt from the effect of pandemic diseases. In fact those with direct patient contact, for example, Emergency Medical Technicians and healthcare providers, are at a greater risk to contract the disease through their occupational exposure. | The impact of a pandemic is dependent on a number of factors including the higher the actual (or perceived higher than actual) levels mortality or morbidity, the greater impact the pandemic will have on continuity of operations. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. Measures put in place to limit the spread of a disease may directly impact mass gatherings, delivery of goods, and embargo of foods, among other things. | A pandemic will have little impact on property with the exception that due to increased absences, maintenance of facilities and physical plants may be compromised. Increased absences may also contribute to the loss of basic services such as garbage collection, repairs to infrastructure (for example, telephone and cable). Although a pandemic would not have a direct effect on facilities increased employee and staff absences could, and most likely would, have an effect on facility operations especially where staff are critical. At healthcare facilities, a pandemic would most certainly have a direct effect. Loss of staff due to absences would impact a facility's ability to operate affecting patient care. As indicated above, a pandemic has the potential to, through increased absences; affect every critical infrastructure sector in | The type of pandemic will determine the severity of any effect on the environment. Diseases transmitted from man to animals or animals to man (zoonotic) may have agricultural impacts. With more catastrophic disease pandemics the necessity for mass burials of animals or humans could impact the environment. | The specific mortality and morbidity of the pandemic would define the state economic impact. A disease with a high mortality or morbidity rate would have catastrophic economic impacts. The loss of the ability to acquire goods and services would affect the entire population. As the pandemic worsened the economic effects would compound potentially causing a breakdown of society at its most basic levels. Pandemics come in "waves". Depending on the specific disease the lull between waves may vary. The ability of certain segments of the economy to recover before the next wave "hits" may determine economic survival. | Every level of state government will be impacted by the pandemic. The ability to maintain public confidence in the wake of the potential or real loss of basic services will affect all levels. The ability to respond to requests for assistance from the public and private sectors will directly affect the confidence those sectors have in government. |



| Hazard        | Impact on Public  | Impact on Responder   | Continuity of Operations  | Delivery of Services  | Property, Facilities, and Infrastructure  | Impact on Environment   | Impact on State Economy  | Public Confidence in the State's Governance   |
|---------------|---|---|---|---|---|---|--|---|
|               |   |   |   |   | New Jersey. Through cross-sector interdependencies, the failure of one sector may cause the failure of others.  |   |  |   |
| Power Outages | The effects of a power outage on the public could be widespread. Power outages can lead to instances of civil disturbance, including looting. Also, the effects of the power outage can vary based on the nature of the event and the time of year in which the event occurs. | The ability of responders to conduct their duties can be affected in multiple ways. Without a consistent power source responders may be unable to charge equipment or operate critical systems, such as computer networks or communications devices. Response efforts could be hampered by the traffic delays caused by inoperable signals. | The State of New Jersey's offices and departments maintain continuity of operations plans and would enact them. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as power outage events. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. Normal operations would be affected and could lead to a drop in level of services or inability to provide certain services. | In the event of a power outage, the electrical network could be damaged. Transformers and sub stations can be damaged in a domino effect from overloading. Real property and personnel assets also are at risk due to secondary incidents, such as fires and looting. Most government facilities face the same issues as private facilities. Facilities could lose the ability to conduct normal business if a backup generator is not available. Some facilities are highly vulnerable to power failure, such as hospitals and correctional facilities. Infrastructure can be affected, shut down, or irreparably damaged to a power failure. A power failure in an area can | Power outages are not generally a threat to the environment, unless, there is a major secondary incident. | A widespread, prolonged power outage would cause extensive impacts to the economy of New Jersey. New Jersey hosts the busiest commuter rail network in the country, which operates primarily on electricity. Disruption in the rail network would mean that thousands of workers would not be able to travel to their jobs. Other factors include New Jersey's chemical industry and pharmaceutical industry which rely heavily on power for manufacturing purposes. | The inability to return power to residents would be catastrophic to the State of New Jersey's public confidence. Residents would fear for the health and welfare and this would damage the credibility of the State as a governing authority. |



| Hazard                | Impact on Public   | Impact on Responder  | Continuity of Operations   | Delivery of Services   | Property, Facilities, and Infrastructure  | Impact on Environment   | Impact on State Economy   | Public Confidence in the State's Governance  |
|-----------------------|--|--|--|--|---|---|---|--|
|                       |  |  |  |  | <p>cause a cascading effect, damaging components in other parts of the electrical grid. Water systems can suffer complete shut down and backups that can cause significant damage.</p> <p>Transportation and traffic systems can see widespread interruptions, as many of these systems require electricity to operate (for example, commuter rail trains and traffic signals).</p>   |   |   |  |
| Severe Winter Weather | <p>Winter storms can affect regions or the state as a whole. An event anywhere in the state becomes a major news event covered by the media. Warnings and advice of upcoming events is made available in advance of the approaching storm.</p> | <p>Fire and police, and emergency responders are called on to evacuate people from the snow impacted area, operate shelters, attend to the injured, close roads, and direct traffic around closed areas. For Presidential declared disasters, emergency response costs are significant reimbursement elements.</p> | <p>To date, there have been a few winter storm incidents that have shut down state, county, or municipal governmental operations for more than a day or two.</p> | <p>Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions.</p> | <p>A winter storm has little effect, if any, on property values. Major damage can be caused by heavy snow and ice loads. Winter storm snow and ice impact roads and bridges, schools, hospitals, directly or indirectly, making access much more difficult. Detours and road closures also add to the cost of the event. Transportation, communications, and the general operation of governmental services may be disrupted by a winter storm incident. In most reported incidents</p> | <p>The environmental impacts of a severe winter weather event are associated with the heavy snow and/or ice accumulations that can bring down vegetation and tree limbs. The rapid snowmelt may lead to flood events causing further environmental impacts.</p> | <p>A winter storm event drains state, county and local resources. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government.</p> | <p>Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence.</p> |





| Hazard  | Impact on Public   | Impact on Responder  | Continuity of Operations   | Delivery of Services  | Property, Facilities, and Infrastructure  | Impact on Environment  | Impact on State Economy  | Public Confidence in the State's Governance  |
|---|--|--|--|---|---|--|--|--|
|   |  |  |  |   | roads and bridges have been reported as the major infrastructure elements impacted.   |  |  |  |
| Severe Weather (Tornadoes, high wind, hail, extreme temperatures) | Tornadoes, high winds and hail can affect specific area, region, or the state as a whole. An event anywhere in the state becomes a major news event covered by the media. Some incidents are forecasted but others are unpredictable. An extreme heat event can affect the state as a whole. Severe weather can have significant impacts on the elderly, disadvantaged, and handicapped populations. | Fire and police, and emergency responders are called on to evacuate people from the impacted area, close roads, attend to the injured, and direct traffic away from the disaster area. For Presidential declared disasters, emergency response costs are significant reimbursement elements. Fire and police, and emergency responders are called on to evacuate people from extreme heat conditions, operate shelters and cooling venues and attend to the injured. | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as severe weather events. To date, there have been few or no extreme heat incidents that have shut down state, county, or municipal governmental operations. | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions. | Market value of property is not significantly reduced. Impact areas are undefined. Tornadoes, high winds and hail impact roads and bridges, schools, hospitals, directly and indirectly, making access much more difficult. Detours and road closures also add to the cost of the event. In the few reported tornadoes, high winds, and hail incidents, roads and bridges have been reported as the major infrastructure elements impacted. Property and infrastructure is not affected during extreme temperature events. Any effect is the result of secondary hazards caused by an event, such as wildfire. Public buildings would be made available for shelters and cooling areas. | Tornadoes, high winds and hail, impact the environment by: possibly spreading debris and pollution; damaging sewer and wastewater treatment plants; and disturbing the wildlife and natural areas. Extreme heat can be associated with drought and violent weather conditions. | Tornadoes, high winds and hail can drain state, county and local resources. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government. Extreme heat drains state, county and local resources. Under the most severe heat conditions some of the costs can be recouped through federal grant reimbursements, but there is a fiscal impact on the local government. | Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence.              |
| Terrorism   | New Jersey's dense population, major lines of commerce, travel, communication and industrial base contribute to its potential as a terrorist target. The   | A significant threat or act of terrorism may cause the State of New Jersey to respond simultaneously to the crisis and consequences of an attack. First responders to a terrorism event will   | State of New Jersey offices and departments maintain continuity of operations plans and in the event of a terrorist attack, will enact them. However, due to the   | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If   | Damage to property will depend on the specific event. Effects could include: loss of data networks, damage or destruction of real   | An act of terrorism may impact the environment depending on the type and location of the attack. A radiological  | The economic condition of the State will depend completely on the success of a terrorism event and the overall impact it has on  | Public confidence in state governance will depend entirely on the initial response to the terrorism event. A well planned response to the event can lead to a successful |



| Hazard    | Impact on Public  | Impact on Responder   | Continuity of Operations  | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment  | Impact on State Economy  | Public Confidence in the State's Governance   |
|-----------|---|---|---|---|--|--|--|---|
|           | public in the area surrounding an event will be in grave danger. Travel may be hindered due to the inaccessibility of roads or other forms of public transportation.  | quickly become both physically and psychologically fatigued. Supplying the proper resources and personnel to respond to a terrorism event can be difficult due to debris in the road or traffic. Access must be coordinated in order to perform effective rescue efforts. First responders may be targeted in the event of secondary attacks. | specific nature of an event, some governmental operations and services may be interrupted.  | they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of the event and level of service disruptions.   | property or areas becoming uninhabitable. Government facilities may suffer damage of destruction as a result of a terrorist attack. Given the nature of terrorist hazards, government facilities may be the targets of attacks. If facilities are affected they may lose their ability to conduct normal operations. Infrastructure may also be damaged as the result of an attack or be the target of a specific threat. Many critical infrastructure pieces have been hardened to resist attack but may become inoperable. | dispersion device or an improvised nuclear device would have a long term impact that could cost billions to remediate. Additionally, an attack on natural gas, oil, and/or chemical facilities could also have long term environmental implications for the State. | statewide public and private sectors. If the damage is low but the psychological impact is high, the area could face relocation of private sector assets due to the cost of the event. | mitigation and the establishment of public confidence in the government's ability to respond. The key to public confidence is to keep the public informed about the event and what is being done to address the concerns related to that event. |
| Wildfires | The effects of wildfires extend beyond those directly impacted by the fire and can potentially affect the surrounding area or state as a whole through the ash fallout and smoke. A wildfire event in the Pinelands or anywhere in the state becomes a major news event covered by the media. | Fire and police, and emergency responders are called on to evacuate people from the fire area, close roads, create fire breaks, attend to the injured and direct traffic away from the area. For Presidential declared disasters, emergency response costs are significant reimbursement elements.  | COOPs are a requirement of the state and local governments. COOPs provide the framework to ensure that state and local agencies are able to continue performance of essential functions under a broad range of circumstances such as wildfire events. To date, there have been few or no fire incidents that have shut down state, county, or | Road and bridge closures, as well as transit service disruptions, to protect public safety may be a consequence. If they do occur, the ability to deliver goods and services efficiently will be impacted locally, regionally, or statewide depending on the magnitude of | Areas of repetitive wildfire are generally shunned by new home purchasers in favor of less threatened home sites. Wildfires create air pollution, impact roads and bridges, schools, hospitals, directly or indirectly, making access much more difficult. Detours and road closures also add to the cost of the fire event. Transportation,   | Wildfires impact the environment by: spreading pollution; creating health problems; carrying ash and smoke; and disturbing the wildlife and natural areas.   | A wildfire drains state, county and local resources. Even if some of the costs can be recouped through federal grant reimbursements, there is a fiscal impact on the local government. | Governmental response, on all levels – state, county and local, requires direct actions that must be immediate and effective to maintain public confidence.   |



| Hazard | Impact on Public | Impact on Responder | Continuity of Operations           | Delivery of Services  | Property, Facilities, and Infrastructure   | Impact on Environment | Impact on State Economy | Public Confidence in the State's Governance |
|--------|------------------|---------------------|------------------------------------|---|--|-----------------------|-------------------------|---|
|        |                  |                     | municipal governmental operations. | the event and level of service disruptions. Normal operations would be affected and could lead to a drop in level of services or inability to provide certain services. | communications and the general operation of governmental services may be disrupted by a wildfire incident. In most reported fire incidents roads and bridges have been reported as the major infrastructure elements impacted. |                       |                         |   |

COOP    *Continuity of Operations Plans*  
 HVAC    *Heating, ventilation, and air conditioning*