Thunderstorms
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kill people, destroy residences
damage or destruction
Hurricanes have the potential to
to South Carolina’s infrastructure.
Property along the coast and in
storm surge areas may be
severely impacted or destroyed.
Critical infrastructure such as
utilities, roadways, bridges,
hospitals, EOCs, Police/Fire/EMS
stations may be damaged or
destroyed in these storms. South
Carolina has experienced many
hurricanes causing significant
damage to infrastructure, including
Hurricane Matthew in
2016 ($70m), Hurricane Irma in
2017 ($12m), Hurricane Florence
in 2018 ($31m), Hurricane Dorian
in 2019 ($89m), and Hurricane Ian
in 2022 ($32m).

Consequences to the environment include erosion of critical dunes, impacts to sensitive coastal ecosystems, drowned trees and vegetation, and polluted waterways from the runoff of debris and hazardous materials. Debris piles can pose public health and safety risks and must be managed in accordance with state and local ordinances. The SC Dept. of Health & Environmental Control (SCDHEC) will take the lead on the monitoring and cleanup of any adverse environmental impacts. The SC Forestry Commission has plans to deal with tree debris and timber harvesting.

Hurricane Hugo was a $7 billion impact on the State. It was the largest, most costly disaster at that time. If Hugo hit today, it would cost more than $13 billion. The economic impact to affected jurisdictions would be significant. In any hurricane event, the impact to tourism is millions of dollars a day. It may take several years to recoup the economic costs of a singular hurricane event. Federal grants can aid in recovery efforts and alleviate the overall economic impact of a hurricane.

To ensure the public is prepared for a hurricane, the state has completed the following:
1) Annual Hurricane Guide distributed in local newspapers and available on the website.
2) Created Hurricane.sc
3) Approximately every 10 years, a Hurricane Evacuation Study is completed to update transportation analysis, shelter analysis, and evacuation zones.
4) The state prepares for hurricane season with a statewide media campaign led by SCEMD.
5) In the event of a hurricane, the PIO section has premeditated materials for use in SCEMD’s comprehensive public information and communication program. These programs are in place to instill public confidence in government, even in times of a disaster.

Debris removal and emergency response costs following Hurricane Florence in 2018 exceeded $61 million statewide. For Hurricane Dorian, these costs were greater than $27 million.
Responders may face extreme difficulties when responding to a Hurricane or coastal storm event. Hurricanes can down trees and power lines, destroy critical infrastructure such as local EOCs, fire stations, and hospitals, and damage bridges, roadways, and government buildings critical for response and recovery operations. Responders may have to rescue individuals isolated without resources. Responders should be aware of their risks at all times.

In an extreme event, such as a major hurricane, the State EOC or other key operating facilities could be impacted. If the State EOC is damaged or the delivery of utilities is interrupted, it may be necessary to move to the Alternate EOC location or function from a location

The state recognizes that the public may face extreme consequences from hurricanes and coastal storms, which is reflected in preparedness, public risk awareness, mitigation, capacity building, and other efforts. Hurricanes have the potential to injure and kill people, destroy residences and businesses, and interrupt water, power, and sewer services necessary to return to a normal way of life. Whether residents have insurance or receive assistance, the recovery process from a major hurricane is costly and can take years or decades. Long-term recovery groups are still active and working recovery efforts for past hurricanes and other events.

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Hurricanes have the potential to cause significant consequences to South Carolina’s infrastructure. Property along the coast and in storm surge areas may be severely impacted or destroyed. Critical infrastructure such as utilities, roadways, bridges, hospitals, EOCs, Police/Fire/EMS stations may be damaged or destroyed in these storms. South Carolina has experienced many hurricanes causing significant damage to infrastructure, including Hurricane Matthew in 2016 ($70m), Hurricane Irma in 2017 ($12m), Hurricane Florence in 2018 ($31m), Hurricane Dorian in 2019 ($89m), and Hurricane Ian in 2022 ($32m).

Consequences to the environment include erosion of critical dunes, impacts to sensitive coastal ecosystems, drowned trees and vegetation, and polluted waterways from the runoff of debris and hazardous materials. Debris piles can pose public health and safety risks and must be managed in accordance with state and local ordinances. The SC Dept. of Health & Environmental Control (SCDHEC) will take the lead on the monitoring and cleanup of any adverse environmental impacts. The SC Forestry Commission has plans to deal with tree debris and timber harvesting.

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**Public**

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**Continuity of Government**

The public may face localized consequences from a severe thunderstorm. Thunderstorms have the potential to injure and/or kill people, damage residences and businesses, and interrupt power service. These impacts are generally minimal compared to hurricanes, floods, and earthquakes. Recovery from a thunderstorm event may take several weeks.

Responders may face some difficulties when responding to a thunderstorm event. Trees may be down, blocking critical roadways and access points. Power lines may also be down in roadways or on private property creating a dangerous situation. Localized flooding may require swift water rescues.

The state does not anticipate any issues maintaining operations and the delivery of services following a severe thunderstorm. In a catastrophic event, the state has a COOP Plan in place that could be activated and implemented at any time. See COG/COOP plan for additional information.

Consequences to property, facilities, and infrastructure from severe thunderstorms are minimal. Downed trees and power lines are typical consequences from thunderstorms. Rooftops and windows of homes and businesses may be damaged. Power service to residences and critical facilities may be impacted in the short term.

Severe thunderstorms in South Carolina have historically had few consequences to the environment. In some cases, these storms can down trees and vegetation, cause hail damage, and cause localized flooding. Please see “Flood”. No major consequences to the environment are expected.

**Property, Facilities, and Infrastructure**

**Environment**

**Economic Condition of the Jurisdiction**

**Public Confidence in the Jurisdiction’s Governance**

**Tropical Cyclones**

**Severe Thunderstorms**
Tornadoes

All of South Carolina is at risk from tornadoes, and the public could face serious consequences. Tornadoes can be deadly. On April 13, 2020, 28 tornadoes impacted South Carolina, causing nine fatalities and numerous injuries. Common consequences of tornadoes to the public are damage to homes and businesses, interruption of utility services, and devastation to the local economy.

Responders will face significant difficulties responding to a tornado. Search & rescue operations may be required. Communication systems may be destroyed. Road signs and landmarks may be missing when trying to navigate to survivors in need. Power lines, debris, and trees may block roadways and access points. Responders should exercise extreme caution.

The state does not anticipate any issues maintaining operations and the delivery of services in the event of a tornado in the state. If the SEOC is directly affected by a tornado, it may be necessary to move to the Alternate EOC or function from another location to maintain operations during the event. See COG/COOP plan for additional information.

All property in South Carolina is at risk to tornadoes. The consequences to property, facilities, and infrastructure from a tornado may be catastrophic. Depending on the scale of the tornado, damage can be minimal or catastrophic. Historically, South Carolina’s greatest magnitude tornado was an EF4. An EF4 can cause devastating damage, level well-constructed homes and buildings, overturn trains, and throw heavy vehicles. Public infrastructure and utilities would be demolished.

Because of the vast range of wind speeds associated with tornadoes, consequences to the environment vary greatly. Even an EF0 (65-85mph) can uproot trees and vegetation. In stronger tornadoes, debris may be tossed miles away from the source, potentially entering our waterways. Hazardous materials may escape if vehicles are damaged, or storage tanks are compromised. SC DHEC would monitor the environment for adverse impacts.

Tornadoes are typically a local disaster, but as with all hazards, direct impacts to key economic drivers in the state may have compounding effects on the economy. The average annualized losses from tornadoes in South Carolina from 2015 to 2020 was $20,490,994, significantly higher than the long term (1960-2020) annualized average of $7,416,415. If a larger outbreak occurred, there could be a greater economic effect. If a small community was hit by a severe tornado, the entire community & local economy could be devastated. Local assistance through VODAs, especially the American Red Cross, would be utilized.

Public confidence in government will not likely be impacted by a tornado event. If there is a statewide tornado outbreak, SCEDM has premedias media products for distribution on the agency webpage (www.scemd.org) and via traditional media and social media (@scemd) to support individuals, households, and businesses in taking protective action and finding resources after the event. NOAA weather radios will also send alerts and important weather updates to the public. Some local communities have tornado sirens and community safe rooms to protect residents.

Hail

Consequences of hail to the public include possible injuries and, in rare cases, death. Hail may damage homes and businesses. Because hail is a product of thunderstorms, see “Severe Thunderstorms” for more consequences to the public.

Consequences of hail to responders is minimal. Hail is typically a brief event due to the physics of the atmospheric conditions that are required to make hail. Responders should remain inside during hailstorms. Because hail is associated with thunderstorms, see “Severe Thunderstorms” for more information.

The state does not anticipate impacts on continuity of operations and delivery of services from a hail event. See COG/COOP plan for additional information.

Hail has the potential to damage property, facilities, and infrastructure. Large hail can puncture roof tops, windows, vehicles, windows, and other outdoor structures. Because hail is associated with thunderstorms, see “Severe Thunderstorms” for more information.

Hail may impact vegetation and crops in the state. See “Severe Thunderstorms” for more information.

Consequences of the economic condition of the State will be minimal to non-existent. The state has several hail events each year. The annual cost of damage to property and infrastructure is approximately 2,884,442. Most of the damages from hail are covered under homeowners’ insurance, and therefore do not impact the state or local economy.

Public confidence in government is not likely to be impacted by a hail event. See “Severe thunderstorms” for more information.

Lightning

Consequences of lightning to the public include possible injuries and, in rare cases, death; from 1959 to 2017, there were 301 lightning-related fatalities in South Carolina. Lightning may strike homes and businesses, potentially sparking a fire or derailing electrical systems. Because lightning is a product of thunderstorms, see “Severe Thunderstorms” for more consequences to the public.

Consequences of lightning to responders are minimal. Lightning may spark building and house fires, requiring immediate response. When possible, responders should remain inside if there is lightning. Because lightning is associated with thunderstorms, see “Severe Thunderstorms” for more information.

The state does not anticipate issues continuing operations during lightning events. In the event of a lightning strike to the building, SCEMD has a backup power generator, redundant communication systems, and an IT failover system in place. The SEOC and State Warning Point have backup UPS systems for their computers. See COG/COOP plan for additional information.

Lightning has the potential to damage property, facilities, and infrastructure. Lightning can spark fires and destroy electrical systems. In South Carolina, the annual estimated damage from lightning since 1950 is $1.4 million. Because lightning is associated with thunderstorms, see “Severe Thunderstorms” for additional information.

Consequences to the environment from lightning are minimal. The greatest impact is lightning-generated fires. In the case of a fire, see “Wildfires” for more information. Also see “Severe Thunderstorms” since lightning is associated with this hazard type.

Consequences to the economic condition of the State will be minimal to non-existent. Most of the damages resulting from lightning strikes are covered under homeowners’ insurance, & therefore do not impact the state or local economy.

Public confidence in government is not likely to be impacted by a lightning event. See “Severe Thunderstorms” for more information.
<table>
<thead>
<tr>
<th>Wind</th>
<th>Winter Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>In extreme wind events (including macrobursts, microbursts, derechos, and straight-line winds), wind has the potential to damage personal property, trees, and residences. Certain types of structures (including manufactured homes and structures without gable roofs) are more susceptible to wind damage. Because people with lower incomes are more likely to reside in this type of structure, they may be more susceptible to this type of damage.</td>
<td>Winter weather has the potential to impact the public by damaging infrastructure and private property and interrupting the delivery of utility services. Power outages are common during winter weather, which affect public health and safety, as do the hazardous driving conditions winter weather creates.</td>
</tr>
<tr>
<td>Consequences of wind to responders are minimal. Responders should exercise caution when driving or operating in significant winds. Restoration of utilities may be delayed as some equipment cannot operate in heavy winds.</td>
<td>Debris removal and emergency response costs from the 2014 ice storm totaled more than $239 million statewide. Debris in roadways poses the greatest hurdle for response operations during an ice storm. Responders face many consequences from winter weather. They must navigate dangerous roadways and work in freezing conditions. Ice and snow may bring down trees and power lines, causing widespread power outages.</td>
</tr>
<tr>
<td>The state does not anticipate any issues continuing operations and delivering services during wind events. See COG/COOP plan for additional information.</td>
<td>Program operations will continue during winter weather event. If there is a power outage, SCEMD has redundant power, IT, and communication systems in place to maintain operations. SCEMD will continue to coordinate the statewide response throughout the entire winter weather event. If the State EOC is damaged, it may be necessary to move to the Alternate EOC location or function from another location to maintain operations during the event. See COG/COOP plan for additional information.</td>
</tr>
<tr>
<td>Wind has the potential to damage property, facilities, and infrastructure. In South Carolina, the annual estimated damage from wind since 1950 is $9.9 million.</td>
<td>The 2014 ice storm resulted in more than $22 million in damages to public infrastructure. Property, facilities, and infrastructure may be impacted by winter weather. Collapsed roofs, downed power lines, vegetative debris in roadways, and damage to water/wastewater facilities may take weeks or months to fix.</td>
</tr>
<tr>
<td>Consequences to the environment from wind are minimal. Wind can down trees and damage vegetation.</td>
<td>Consequences to the environment from winter weather include downed trees/branches, localized flooding from snow melt, and below freezing temperatures. These low temperatures can significantly impact livestock and the growth of vegetation and crops in the State.</td>
</tr>
<tr>
<td>Consequences to the economic condition of the State will be minimal to nonexistent. Most of the damages resulting from wind are covered under homeowners’ insurance, and therefore do not impact the state or local economy.</td>
<td>The 2014 ice storm had a total impact of more than $269 million statewide. The economic condition of the State may be impacted by a widespread winter weather event. Ice and snow are dangerous and can cause structural damage as well as service and business interruptions. Many residents will not venture out of their homes to purchase food or goods.</td>
</tr>
<tr>
<td>Public confidence in government will not be impacted by a wind event.</td>
<td>Public confidence in government will likely not be impacted by a winter weather event, unless there are significant errors in forecasts or delays in protective action decision-making (e.g., closures and releases) that result in increased danger or harm. Winter weather is common in SC. During statewide winter weather events, SCEMD has premade media products for distribution on the webpage (<a href="http://www.scemd.org">www.scemd.org</a>) and via traditional and social media (@scemd). SCEMD also promotes local and community-based resources. NOAA weather radios will also send out important information to the public. SCEMD has also published a Winter Weather Guide with information for the public.</td>
</tr>
<tr>
<td><strong>Drought</strong></td>
<td>Consequences of drought on the public are not always direct. Farmers will be the most directly impacted by drought. If they do not produce crops, the public’s food supply is impacted. If water restrictions are implemented by government, residential lawns and gardens will be impacted in addition to agricultural interests. Responders generally will not be directly impacted by drought. Possible reductions of water for firefighting purposes in extreme instances when supplemental water sources are not available could create operational stress and risk for firefighters. The state does not expect to experience issues continuing operations and delivering services during drought. See COG/COOP plan for additional information. Persistent drought can directly impact the water/wastewater, energy, and food/agriculture sectors within South Carolina. Furthermore, all sectors of CI/KR may be impacted by cross-sector dependencies and cascading impacts from the loss of water, agricultural, and energy services. Environmental consequences of drought are significant. Drought reduces the availability of water, reduces crop yields, &amp; impacts our local ecosystems. In addition, there are several indirect consequences. For instance, the 1998 - 2002 drought contributed to the southern pine beetle epidemic. Drought has the potential to significantly impact the State’s economy. Agriculture represents one of the largest industries in South Carolina. Loss of agriculture crops would significantly hurt the economy, especially in rural farming communities. Public confidence in government will likely not be impacted by a drought event. Droughts are common in South Carolina. Insurance and assistance programs are widely available to farmers. The Department of Agriculture and SCDNR run drought programs to promote education and techniques for farming in drought conditions. SC DNR also runs the State Drought Response Committee which meets monthly to discuss drought matters.</td>
</tr>
<tr>
<td><strong>Extreme Heat</strong></td>
<td>Extreme heat can create risks to human health and safety, and cause heat exhaustion and heat stroke. Extreme heat events can be particularly risky for the elderly, outdoor laborers, and residents without air conditioning. Impacts of extreme heat can create stress on social service and medical providers. High temperatures can cause increased risk to responders based on physical exertion, protective gear, and the need for increased hydration. In extreme heat, caution should be exercised for first responders. The state does not anticipate issues impacting continuing operations and delivering services during extreme heat unless there are extended electric utility outages because of extreme temperatures. See COG/COOP plan for additional information. Extreme heat places intense strain on the electrical grid and may cause or contribute to outages or blackouts, which can have cascading effects on all areas of critical infrastructure. Extreme heat events are not expected to have significant impacts on the environment. Extreme heat early in the year can cause major damages to crops, impacting the agricultural industry that is critical to South Carolina’s economy. Loss of agriculture crops would significantly hurt the economy, especially in rural farming communities. Public confidence in government will likely not be impacted by an extreme heat event.</td>
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<tr>
<td><strong>Extreme Cold</strong></td>
<td>Extreme cold can create risks to human health and safety and cause frostbite and other injuries. In extreme cold, caution should be exercised for first responders. The state does not anticipate any issues continuing operations and delivering services during extreme cold. See COG/COOP plan for additional information. Extreme cold can place intense strain on the electrical grid and may cause or contribute to outages or blackouts, which can have cascading effects on all areas of critical infrastructure. Extreme cold can cause pipes to crack and break, resulting in water system leakages, water utility outages, and lack of fire suppression capabilities. Extreme cold events are not expected to have significant impacts on the environment. Extreme cold can cause major damages to crops, impacting the agricultural industry that is critical to the state’s economy. Loss of agriculture crops would significantly hurt the economy, especially in rural farming communities. Public confidence in government will likely not be impacted by an extreme cold event.</td>
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**Coastal Hazards**

The 2015 floods in South Carolina had a FEMA estimated $202.2 million Individual Assistance impact on the State. The public may face extreme consequences from flooding and/or flash floods. Floods have the potential to injure and kill people, especially those who drive through flooded roadways. Floods can destroy residences and businesses, and interrupt water, power, and sewer services necessary to return to a normal way of life. Whether residents have flood insurance or receive assistance, the recovery process from flood may be costly and take weeks, months, or years to complete.

Debris removal and emergency response costs as a result of the 2015 floods were in excess of $58 million statewide. Responders may face extreme difficulties when responding to a flood event. Floods can destroy homes, businesses, and critical infrastructure such as local EOCs, fire stations, and hospitals. Floods can wash out bridges and roadways, as well as destroy government buildings critical for response and recovery operations. Responders may have to perform swift water rescues to individuals trapped in flooded areas. Responders should be aware of their risks at all times.

Sea level rise threatens private property, beaches, and infrastructure. The public may face significant consequences in the long term due to the loss of these resources. Due to the low probability of a tsunami occurring in South Carolina it is unlikely that the public will be impacted. However, if there is a tsunami the populations living on the coast are at risk. If there is a significant warning time less of the public will be impacted than if the tsunami occurs with little warning.

Sea level rise may increase the frequency of coastal flooding, which would increase the workload of [and danger faced by] responders. Other coastal hazards (erosion, saltwater intrusion, land subsidence) are not likely to affect responders.

Due to the state capital’s inland location, most state offices, including SCEMD, do not anticipate impacts that hinder maintaining operations and the delivery of services in the event of coastal hazard. Due to the state EOC’s inland location, the public will be impacted than if the State EOC is isolated or the delivery of utilities is interrupted, it may be necessary to move to the Alternate EOC location or function from another location to maintain operations during the event. See COG/COOP plan for additional information.

The State EOC is not located in a SFHA; however, many access roads may be impacted by flooding. In an extreme flood event, there may be an instance when the State EOC is inaccessible. If the State EOC is isolated or the delivery of utilities is interrupted, it may be necessary to move to the Alternate EOC location or function from another location to maintain operations during the event. See COG/COOP plan for additional information.

Environmental consequences of flooding are vast. Flooding may erode riverbeds, causing sediments to enter the waterways, clogging our water management systems & waterways downstream. Floods can bring hazardous materials or pollution into waterways via runoff. Riparian ecosystems are negatively impacted with the introduction of sediments, pollutants & nutrients. SC DHEC will monitor the waterways and riparian areas for any adverse impacts.

As a result of the 2015 floods, FEMA provided more than $90 million in assistance to disaster survivors, and more than $115 million in Public Assistance grants for response and recovery. The additional impact of flooding on transportation, agriculture, business continuity, and government services is substantial. Mitigation practices can reduce the impact of flooding on our economy. It is also important that residents and businesses purchase flood insurance so they can be operational in a short amount of time. Federal grants can aid recovery efforts and alleviate the overall economic impact of a hurricane.

Education and awareness are key components to maintaining public confidence in government during a disaster. In conjunction with FEMA, NOAA, USACE, SC Department of Natural Resources, and the Department of Insurance, the State provides information on floods and flood insurance to the public. During the NFIP mapping process, residents are invited to participate and learn about flood risks. Some members of the public have NOAA weather radios to alert them of potential flooding. SCEMD has premeditated media products for social media and other communications in the event of flooding.

The 2015 floods in South Carolina resulted in more than $60 million in damage to public infrastructure. There are numerous potential consequences that may result from a flood. Property in the floodplain or other low-lying areas may be severely impacted or destroyed. State facilities within or near floodplains have been identified in this plan and mitigation ideas have been created. Critical infrastructure such as utilities, roadways, bridges, and Police/Fire/EMS stations may be damaged or destroyed in an event. Public Assistance grants are available to restore critical infrastructure to pre-disaster function capacity, and design. Mitigation grants can reduce their overall risk and hazard consequences.

Property, facilities, and infrastructure along the coast are at risk if coastal hazards impact the state. It is unlikely that there will be a tsunami large enough to impact significant numbers of properties, but coastal flooding and long-term sea-level rise have the potential to do so.

There are several consequences to the environment from coastal hazards. Protective dunes on the shore may be reduced or washed away. Beaches could be significantly damaged.

If there is a large coastal hazard event, the economy may be impacted. The additional impact of flooding on transportation, agriculture, business continuity, and government services is substantial. However, if there is a minor tsunami it is unlikely that economic conditions of the state will be impacted, though local jurisdictions may be.

Public confidence in governance is unlikely to be impacted by a tsunami. The National Weather Service will issue a tsunami warning if there is an earthquake off the coast that may generate a tsunami and SCEMD will share this warning. Sea level rise could negatively impact public trust in the state’s governance if there are impacts or preventive measures that the public perceives the state should have addressed but did not.

Likewise, if there is a sense of inadequate action on the part of the government, other coastal hazards including erosion, saltwater intrusion, and land subsidence could affect public trust in governance. This is addressed through ongoing hazard and risk analysis and public education regarding evolving hazard risk.

**Flood**

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Landslide and Mass Wasting

Due to the low probability of a landslide occurring in the state it is unlikely that the public will be impacted. Landslides can put the public at risk of serious injury or death. Homes and businesses can be damaged or destroyed.

Responders are at low risk of harm during a landslide, though a secondary landslide could occur during the response time. Landslides can damage response equipment.

SCEMD will not have any issues continuing operations and delivering services during landslide events. See COG/COOP plan for additional information.

Landslides may cause damage to properties or roadways. A landslide may cover a roadway with debris that will take time to remove. A large landslide may cause permanent damage to the roadway. In addition, large landslides could affect overhead utilities that run along roadways.

A landslide will impact the environment. This is more likely to occur on a slope that has already been damaged due to wildfire or severely heavy rains. A landslide can damage an entire slope.

There is little chance that a landslide will have an impact on the economic conditions of the state.

It is unlikely that a landslide will have an impact on the public confidence in the jurisdiction's governance.

Earthquake

Consequences to the public from a significant earthquake are numerous. Life safety will be an issue and there is the potential for many casualties. Homes and businesses will be destroyed, roadways and bridges may fail, power, water, and sewer services may take months to restore. The historic 1886 Summerville earthquake (7.3) claimed 73 lives and an estimated $23 million in damage.

Responders face unique consequences from an earthquake event. Earthquakes will damage bridges and roadways, cause land to liquefy, spark fires, and damage hazardous material tanks. Responders will have little communication services available, no power, water, or sewer services, and may not be able to get through to the areas most affected.

In an extreme event, such as a major earthquake, there may be an instance when the State EOC is impacted. If the State EOC is damaged or the delivery of utilities is interrupted, it may be necessary to move to the Alternate EOC location or function from another location to maintain operations in the event. See COG/COOP plan for additional information.

If the historic 1886 earthquake were to occur again today, damages to infrastructure would be expected to exceed $7 billion in costs. Damage to state facilities alone would cost $77 million, impacting over 2,500 facilities.

Environmental consequences from earthquakes are numerous. The ground motion and soil type may cause the ground to liquefy, causing underground storage tanks to surface or fail. Hazardous materials spills are common during earthquakes. In high magnitude earthquakes, trees will fall, underground pipes will break, and fires may spark, all impacting our environment.

The state economy would be severely impacted by a major earthquake. Impacts to infrastructure would create significant challenges for companies doing business in South Carolina, and those outside the state that rely on our port and highway systems. Loss of tourism would be a challenge for South Carolina.

Public confidence in government may suffer in the event of an earthquake. It may take several days or weeks to access the hardest hit areas. Debris may block roadways for weeks. Families may have to turn to public shelters if their homes are destroyed. The state has prepared for situations like this. The State Earthquake Plan is available for public display on SCEMD's webpage. SCEMD publishes an earthquake guide annually describing the risks to the state. The earthquake sc contains earthquake preparedness actions for the public. In the event of an earthquake, their PIO section has premade materials for use in the comprehensive social media program. These programs are in place to install and maintain public confidence in state government, even in times of a disaster.

Wildfire

The public will feel the direct consequences of a wildfire if their home or place of employment is in the wildfire impact area. Homes and businesses may be destroyed in a fire, utility service could be interrupted, and access to roadways may be limited. The public may also be impacted by air pollution from the wildfires. While the 2016 Pinnacle Mountain wildfire had a more than $4 million impact on the state, it fortunately did not impact any homes.

Responders will be directly impacted by a wildfire. Wildfires may change directions quickly as the wind and environmental elements change. Wildfires are often difficult to control and may take numerous resources to do so. Inhabitants of fumes may pose a health risk to firefighters.

Response costs for the 2016 Pinnacle Mountain wildfire exceeded $4 million.

The state does not anticipate any issues maintaining operations and the delivery of services during a wildfire. In an event that directly impacts the SEOC, the State has a COOP Plan in place that could be Activated and implemented at any time. See COG/COOP plan for additional information.

Property, facilities, and infrastructure in the wildfire zone will be significantly impacted. Homes and businesses may be destroyed in a fire, utility service could be interrupted, and access to roadways may be limited. Although wildfires are a natural process, the environment may be negatively impacted. Not only are trees impacted by these fires, so are the native species of plants and animals. The smoke and ash from the fires can pollute waterways and our air. The SC Forestry Commission and SC OHEC will monitor the air and water quality in an event.

Wildfires are typically a local disaster and the State’s economy may not be impacted. If a large fire does occur and cannot be controlled quickly, there could be a greater economic effect. If a small community was hit by a wildfire, the local economy could be devastated. Local assistance through VOADS, especially the American Red Cross, would be utilized.

Public confidence in government will likely not be impacted by a wildfire event. If a large wildfire occurs that cannot be quickly controlled, SCEMD has premeditated media products for distribution on the agency webpage (www.scedm.org) and via traditional media and social media (@scemd). NOAA weather radios will also send important information to the public.
### Infectious Disease

Consequences to the public from public health emergencies (influenza, plague, food contamination, etc.) are vast. The public may experience temporary illness, long-term illness, or even death. Hospitals and doctor's offices may become crowded, patients may experience long lines, and pharmaceuticals may be limited. The COVID-19 pandemic demonstrated the potential magnitude of the impact on the public in a significant way.

Responders may also feel the consequences of a public health emergency. They may be exposed to the risk and become ill. Responders may have to wear protective gear and receive vaccinations to mitigate their risk. For more information on a Public Health Emergency Response, see Annex B of the EOP.

As demonstrated by COVID-19, a widespread public health emergency has the potential to impact the SEOC. To prevent the spread of infectious disease, the SEOC may move to virtual operations, or to the AEOC for a non-airborne disease by which the SEOC is contaminated. For more information, see the SC COOP Plan. For information on the State's response, see the SC EOP and Annex B, Appendix 14 (Infectious Disease Program).

It is unlikely that the consequences of a public health emergency would physically impact property, facilities, or infrastructure; however, a pandemic would impact personnel, potentially impacting the ability to properly service and maintain property, facilities, and infrastructure.

Consequences to the environment from a public health emergency are unlikely. Unless the event is terrorism or hazmat related, there will be no direct impact. See hazmat below for more information.

The economic condition may be significantly impacted by a widespread public health emergency. If a significant percentage of the population becomes ill, they will not be able to go to work or spend money. Outbreak-related movement restrictions also have the potential to significantly impact the economy. With vaccinations and early detection of pandemics and other public health issues, the impacts can be partially mitigated.

### Hazardous Materials

The public could be immediately impacted by the consequences of a hazardous materials (hazmat) release, spill, or explosion. Hazmat releases can occur via many sources and in many locations including fixed facilities, roadway, and rail. The public may be impacted on roadways, at school, in homes, through the food supply, or in public venues (large stadiums, athletic events, movie theaters, etc.). The consequences of hazardous materials may be illness, injury, or death. (SC DHEC Terrorist Hazards). A major event (such as an explosion or chlorine spill), residents may be displaced from their homes until the site is cleaned.

Responders face the immediate consequences of hazmat incidents. They must determine the type of material released or spilled and the appropriate response and cleanup of the material. The state has a variety of response teams to include hazmat, RMAT, National Guard CST, and EOD (Bomb squad). These responders are specially trained to deal with these incidences and they are provided protective gear to reduce their vulnerability to the hazardous materials.

In the event of a hazmat release, spill, or Terrorist act, there may be an incident when the State EOC is impacted. If the State EOC is damaged or the delivery of services is interrupted, it may be necessary to move to our Alternate EOC location or function from another location to maintain operations during the event. For more information, see the SC COOP Plan, SCORERP, and SC DHEC's Contingency Plan.

Property, facilities, and infrastructure will be significantly impacted by a hazmat incident. Especially in the event of an explosion, homes, businesses, industries, and infrastructure may be damaged or destroyed. In addition, most mobile hazmat releases are caused by traffic accidents, which can destroy vehicles, roadways, and signage.

The environment is likely to experience significant consequences from a hazmat incident. Sensitive ecosystems could be destroyed or significantly disturbed. Hazardous materials can be quickly spread through water, air, or the food supply. (SC DHEC Terrorist Hazards) Once hazardous materials are in our environmental systems, it may take days, weeks, months, or years to clean-up. (State of South Carolina Oil and Hazardous Substances Contingency Plan)

Depending on the size of the incident, the state's economy could experience enormous consequences. As reported by the Huffington Post, the BP oil spill in 2010 has cost approximately $40 billion to clean up. This would be a worst-case scenario. More common incidents such as hazmat spills on highways or releases at chemical facilities impact the economy if an industry or transportation routes are shut down.

Public confidence in governance may be impacted by a hazmat incident. In local events, the state does not anticipate an impact on public confidence. These events happen on a regular basis. In a major chemical release, radiological release, or terrorist incident, the public may be inclined to lose confidence in governance. In these instances, the state has premeditated media products for distribution on our webpage (www.scemd.org) or on social media outlets (@scemd) to provide clear and actionable information to the public regarding incident status and protective measures. For more information, see the SCORERP or SCEMD's website.
**Nuclear Facilities**

In a major event (such as a radiological release, explosion, or terrorist attack), residents may be displaced from their homes until the site is cleaned. Depending on the severity of the incident, this displacement may be temporary or long term. In extreme cases, this displacement may be indefinite.

Responders are at significant risk during response to a nuclear release. The state’s plans detail procedures for mitigating this risk. For more information, see the SC COOP Plan, SCDERP, and SC DHEC’s Contingency Plan.

An HFN release may impact the SEDC’s ability to function if the plume were to far exceed the 10 mile EPZ. If the State EOC is damaged or the IT system services are interrupted, it may be necessary to move to our Alternate EOC location or function from another location to maintain operations during the event. For more information, see the SC COOP Plan, SCDERP, and SC DHEC’s Contingency Plan.

An event at a nuclear facility would have significant impacts on South Carolina infrastructure. Primarily, nuclear facilities are a major source of electricity, and the loss of one of the state’s four generating plants could create a significant impact. Depending on the location of the event, road closures (short or long term) may be necessary.

A release from a nuclear facility could be impacted by a nuclear facility release. Infrastructure impacts could impede travel and commerce for the duration of response and recovery. Contamination of large areas could create the need to abandon infrastructure, homes, and businesses in the impacted area indefinitely.

The economy of South Carolina would likely be impacted by a nuclear facility release. Infrastructure impacts could impede travel and commerce for the duration of response and recovery. Contamination of large areas could create the need to abandon infrastructure, homes, and businesses in the impacted area indefinitely.

Public confidence in governance would likely be impacted by a nuclear facility incident as these events may be viewed by the public as preventable. Nuclear facilities provide educational materials to residents in the EPZs annually. FMs also have sirens to alert the public of an incident. Exercises are completed on a regular basis per federal standards. For more information, see the SCDERP or SCEDM’s website.

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**Terrorism and Mass Violence**

In a major event such as a radiological release, explosion, or terrorist attack, residents may be displaced from their homes until the site is cleaned. Depending on the severity of the incident, this displacement may be temporary or long term. In extreme cases, this displacement may be indefinite.

Responders are at significant risk during an active shooter/hostile action event and may be directly impacted. The state has a variety of teams that are trained and equipped to respond to these events.

While first responders are unlikely to be directly physically affected by a cyber attack, many of the IT and dispatch systems that both responders and the public rely on to facilitate emergency response could be impacted.

Responders face considerable risk when responding to a terrorist attack. In addition to the possibility of directly engaging the terrorist threat, many terrorist organizations have advocated for their followers to conduct secondary or follow-on attacks that are directed at first responders.

The state does not anticipate any issues maintaining operations and the delivery of services to an active shooter event in the state. An active shooter event impacts key operational components, including the State EOC, the State’s COOP Plan could be activated and implemented. See COG/COOP Plan for additional information.

A cyber attack directed at state government institutions could degrade the ability of the state and local governments to operate due to IT system dependencies. However, a framework is in place for the government to be able to reconstitute its services. See COG/COOP Plan for additional information.

Often, the purpose of the terrorist attack is to show weakness in the government’s ability to protect the public. If the SEDC were the target of a terrorist attack, potential facility damage and injuries to key personnel could necessitate the movement of operations to the AEOC. See COG/COOP Plan for additional information.

It is unlikely that an active shooter/hostile action event will impact the environment.

A cyber attack directed at industrial infrastructure that contains hazmat could cause environmental damage. However, since individual companies’ industrial processes do not tend to be interconnected, the ability to create widespread environmental damage in SC through cyber space is limited.

At sufficient scale, a terrorist attack could have significant impact on the environment. For example, South Carolina has four nuclear generating plants that could be a potential target. Damage to which could result in significant environmental and agricultural damage that could last decades.

The economic condition of the jurisdiction is unlikely to be impacted by an active shooter/hostile action event, unless the target of the event is a business or event that is a large contributor to the state economy.

The economic impact of an intentional cyber attack can range from minimal to catastrophic. Attacks directed at public health, transportation, pipelines, communications, and the electric grid, depending upon duration, could have devastating economic effects on SC.

Typically, one of the primary desired outcomes for terrorists is to create widespread systemic effects within the target’s economic system. A successful terrorist attack within SC would result in long-term and widespread damage to the state’s economy.

Public confidence in governance may be impacted by an active shooter or hostile action event. The response to the hostile action may impact public confidence.

A cyber attack that impacts not only the ability of government to provide services to its population but also affects the ability of the private sector to provide life-line sector services will put people at risk and have a significant negative impact on the population’s confidence in their government’s ability to provide basic services.

A successful terrorist attack within SC would have the potential to erode public confidence in the government’s ability to protect the public. Effects on an unprepared jurisdiction would be further degradation of confidence because of mismanagement of response and recovery. The state’s plans, procedures, training, exercises, and resource logistics are intended to protect against these consequences.