

THREAT AND HAZARD IDENTIFICATION AND RISK ASSESSMENT

2017 REPORT NEVADA

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Table of Contents

THIRA Overview	3
THIRA Steps 1 & 2: Threats and Hazards.....	4
THIRA Steps 3 & 4: Impacts, Outcomes, Targets and Resource Requirements.....	7
Planning.....	7
Public Information and Warning	10
Operational Coordination	11
Forensics and Attribution	14
Intelligence and Information Sharing	15
Interdiction and Disruption	17
Screening, Search, and Detection.....	19
Access Control and Identity Verification	20
Cybersecurity.....	22
Physical Protective Measures	24
Risk Management for Protection Programs and Activities	25
Supply Chain Integrity and Security	27
Community Resilience	28
Long-term Vulnerability Reduction	30
Risk and Disaster Resilience Assessment	32
Threats and Hazard Identification	34
Critical Transportation.....	35
Environmental Response - Health and Safety.....	37
Fatality Management Services	39
Fire Management and Suppression	41
Infrastructure Systems	43
Logistics and Supply Chain Management	45
Mass Care Services.....	47
Mass Search and Rescue Operations.....	49
On-scene Security, Protection and Law Enforcement	51
Operational Communications	52
Public Health, Healthcare, and Emergency Medical Services	54
Situational Assessment.....	56
Economic Recovery	58
Health and Social Services	59
Housing	61
Natural and Cultural Resources	63
THIRA Post-Assessment	66

THIRA Overview

Every community should understand the risks it faces. By understanding its risks, a community can make smart decisions about how to manage risk, including developing needed capabilities. Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences. By considering changes to these elements, a community can understand how to best manage and plan for its greatest risks across the full range of the threats and hazards it faces. The THIRA process helps communities identify capability targets and resource requirements necessary to address anticipated and unanticipated risks.

The THIRA follows a four-step process, as described in *Comprehensive Preparedness Guide 201, Second Edition*:

1. **Identify the Threats and Hazards of Concern.** Based on a combination of past experience, forecasting, expert judgment, and other available resources, you identify a list of the threats and hazards of primary concern to your community.
2. **Give the Threats and Hazards Context.** You describe the threats and hazards of concern, showing how they may affect your community.
3. **Establish Capability Targets.** You assess each threat and hazard in context to develop a specific capability target for each core capability. The capability target defines success for the capability. (Note that this tool breaks THIRA Step 3 into two sub-steps in which you develop impact and outcome statements in the first step and establish targets in the second step).
4. **Apply the Results.** For each core capability, you estimate the resources required to meet the capability targets.

Report Overview

This report contains three sections:

Threats and Hazards

- Organized by threat/hazard
- Includes data from THIRA Steps 1 and 2—threat and hazard context descriptions, category and type information

Impacts, Outcomes, Targets, and Resource Requirements

- Organized by core capability
- Includes data from THIRA Steps 3 and 4—impact statements, desired outcomes, capability targets, and resource requirements to meet capability targets

THIRA Post Assessment

- Includes THIRA participation, modeling and visualization tools, and hours to complete data

THIRA Steps 1 & 2: Threats and Hazards

Earthquake

Category: Natural

Type: Earthquake

Terrorism:

Context Description:

1. A magnitude 6.9 earthquake along the Mount Rose Fault (April-September), resulting in significant damage/disruption to infrastructure and energy/fuel delivery systems, the moderate to severe damage of 1,200 residential structures, moderate to severe damages to 300 small to medium sized businesses, and other damage out to 40 miles from the epicenter. This event would displace +/- 5,000 persons, inflict moderate to severe injury to 3,000 persons, and cause 50 deaths. 2. A magnitude 6.0 earthquake along the Frenchman Mountain Fault occurs during the peak tourism months (April - September). This earthquake will result in widespread damage throughout the Las Vegas Urban Area, including aging unreinforced masonry buildings and high rise resort hotels on the Las Vegas Strip. The economic loss as a result of the earthquake exceeds \$7 billion. Over 15,000 buildings experience major damage. More than 3,600 people will require shelter, over 1,100 mass casualties are expected, and nearly 300 fatalities are likely. 3. A magnitude 7.8 Earthquake on the San Andreas Fault with epicenter near Salton Sea. This earthquake will result in damage out to 60 miles from the epicenter, impacting fuel, vehicular transportation, and power through Cajon Pass and the I-15 corridor to Las Vegas. While mass migration from impact areas within Southern California may occur with as many as 50,000 persons seeking temporary shelter, fuel disruption to the Las Vegas area and McCarran Airport is ongoing for 7-10 days.

Flood

Category: Natural

Type: Flood

Terrorism:

Context Description:

A 100/500-year event results in catastrophic flash floods causing flooding to critical infrastructure including: 100 small/medium businesses with moderate to major damage, 15,000 residential homes with moderate to major damages. public roadways and highways damaged including the undercut of 30 miles of primary roadway, 300 culverts blocked or damaged. Discharge/Flow rates in excess of 23,500 cubic feet/second in strained public flood channels. Flooding impacts

Wildfire

Category: Natural

Type: Wildfire

Terrorism:

Context Description:

A lightning strike causes a 5,000-10,000 acre wildfire threatening 500 residential and small/medium commercial structures, as well as Critical Infrastructure/Key Resource (CIKR) sites in the urban interface in July. Because of this fire, 2,000 persons are displaced with 500 requiring shelter for a period of three days. Additionally, 100 (reduced from 200) persons have adverse respiratory/medical reactions due to smoke and fire activities requiring hospitalization for 24 hours. There is a displacement of animals and livestock requiring the establishment of sheltering/housing specific to this population, no more than 100, for seven days.

Pandemic - Human

Category: Natural

Type: Pandemic - Human

Terrorism:

Context Description:

An infectious disease outbreak is introduced to southern Nevada by way of direct air travel into Las Vegas and transmitted efficiently from person to person resulting in large numbers of people being infected. The pandemic wave will sweep across southern Nevada in 1-2 months (New timeframe), and observed after 1-2 months (new observation period) affecting multiple locations both in southern and northern (new location) Nevada, as well as simultaneously impacting other locations outside of state due to transient population movement (new wider population impact). 3.0 % of overall population have minor to moderate infections that impact their ability to work for one to three weeks.

Active Shooter

Category: Human_caused

Type: Active Shooter

Terrorism: Yes

Context Description:

A coordinated active shooter incident (i.e., Mumbai/Paris-style attack) targeting multiple commercial soft targets along the Las Vegas Strip using small arms and improvised explosive devices (IEDs). 2-5 (new number) gunmen attack various locations, including three (3) luxury hotels/casinos, a hospital and nearby international airport. The attack stretches on for 6 hours. (shortened timeframe). There are 75 fatalities and 250 non-fatal (new human impacts) injuries as a result of the assault and or other actions or mechanisms of injury.

Cyber Attack

Category: Human caused

Type: Cyber Attack

Terrorism: Yes

Context Description:

A cyber related incident resulting in the loss of system integrity to information technology systems that also severely compromises essential services. The event creates an inability for systems and their operators to understand, detect, and isolate the event, and destabilizes critical technology systems. One of the consequences is the inability to conduct financial transactions within the impacted systems.

Drought

Category: Natural

Type: Drought

Terrorism:

Context Description:

8 years of persistent extreme to exceptional drought that results in: 20% of the county's private wells running dry; municipal water reserves are at emergency levels; and the effect of the drought results in a 20% economic downturn for the county.

Hazmat Release - Chemical

Category: Technological

Type: Hazmat Release - Chemical

Terrorism:

Context Description:

Non-terrorism transportation system release involving rail/freight line derailment near or on major highway corridor causing a chemical or hazardous material (i.e., chlorine) spill and potential plume over a major population area. This results in the displacement of 25,000 persons from 3,000 residential and 750 commercial buildings within the impacted area. Additionally, the release causes injury to 150 persons and death to 50 persons.

THIRA Steps 3 & 4: Impacts, Outcomes, Targets and Resource Requirements

Planning | Impacts and Desired Outcomes

Earthquake Impacts

1. Results in 10k-40k displaced persons, 90k-400k structures damaged, 700-3k persons requiring hospitalization, 200-800 fatalities, and \$4.4-17.7B in infrastructure damages. 2. Cascading effects cause a train derailment near downtown Reno releasing a chemical substance on a large portion of the population. Results in 800-3,000 displaced persons, 12,000 structures with major damage, 1,300-5,000 seek basic medical aid, 400-1,500 casualties requiring hospitalization, 80-500 fatalities (including chemical release), and \$7.6B in infrastructure damages. 3. Cascading events include critical infrastructure disruptions along the Cajon Pass (i.e., pipelines, transportation, and technology - fiber optics) and a requirement to provide sheltering to displaced populations across the southern Nevada.

Earthquake Outcomes

Complete or update earthquake plan, exercise elements of the plan, testing response capabilities. Review the impacts of a regional event and incorporate State response planning with impending out-of-state impacts or migration issues.

Flood Impacts

Flooding to critical infrastructure, businesses, and residential areas. Rainfall in excess of 23,500 cubic feet/second in strained public flood channels.

Flood Outcomes

Complete/updated mitigation plans to lessen jurisdictional impact from cause and flood response planning resulting in a state tabletop exercise on regional flood response planning effort.

Wildfire Impacts

1. A lightning strike causes a 5,000-10,000 acre wildfire threatening 500 residential and small/medium commercial structures, as well as Critical Infrastructure/Key Resource (CIKR) sites in the urban interface in July. Because of this fire, 2,000 persons are displaced with 500 requiring shelter for a period of three days. Additionally, 100 persons have adverse respiratory /medical reactions due to smoke and fire activities requiring hospitalization for 24 hours.

Wildfire Outcomes

Develop operational plans at the state and local level that adequately identify critical objectives (evacuation, sheltering, recovery, etc.) based on wildfire response. Ensure tasks and objectives are implemented within the timeframe identified in the plan using available resources. Fully implement the provisions of NRS 414A.

Pandemic - Human Impacts

Since there will be no significant immunity to the novel virus on a population basis - sub-clinical infection will occur. Based on data from past pandemics, assumption are: approximately 50% of the infected population may be asymptomatic. Majority of the population (over 70%) will be infected over the course of the pandemic, but only 15-35% of the population will become clinically ill (i.e., there will be a relatively high rate of asymptomatic infection). For planning purposes assume that the majority of cases will occur in the first wave. If the overall clinical attack rate is 35%, assume that 25% of the population will be clinically ill in the first wave. For a severe pandemic (in terms of health impacts) and in the absence of any intervention, of those who are clinically ill, up to 10% may be hospitalized, 2% may die. Individuals who recover from illness caused by the pandemic strain will be immune to further infection by that strain. If the disease is unknown, Nevada's communities need to be prepared to open and operate Points of Dispensing (PODS) for the entire population of their communities within 48 hours.

Pandemic - Human Outcomes

Plan for the identification and isolation of the cause factors for the outbreak within 2-6 weeks of first event. Provide medical countermeasures to the affected population within 48 hours

Active Shooter Impacts

The number of possible attackers, duration of the incident or the locations of the incident is unknown. For planning purposes, 2-5 gunmen attack various locations, including three (3) luxury hotels/casinos, a hospital and McCarran International Airport. The attack stretches on for 6 hours, during which time, hostages are taken at several of the locations. Ultimately, 75 people are killed.

Active Shooter Outcomes

Incorporate the requirements of NRS 414A Mutual Aid Legislation into planning documents. Update written response plans that interdict, deter, or disrupt and prevent imminent attacks in Nevada. Incorporate force protection into planning efforts, test and validate response plans through exercise within two years.

Cyber Attack Impacts

State offices and programs will not be able to provide essential services to the public until systems are restored. There will be an inability to distribute payroll and process funds into state systems resulting in the loss of confidence in essential state services.

Cyber Attack Outcomes

Establish outline for strategic cyber planning efforts within one year. Establish response planning documents and develop full plan within three years. Determine what response capabilities and resources unique to this threat exist, or are available, and initiate the development of response protocols.

Drought Impacts

Continual depletion of essential water will disrupt farming/ranching activities to a point where these industries will either shift away from this state or end. Further, growth in all sectors will decrease due to the inability to sustain population and the water required to support that population or any future growth.

Drought Outcomes

Incorporate long term strategies for mitigating the effects of drought through state, county, jurisdiction, and tribal plans and programs.

Hazmat Release - Chemical Impacts

10,000 gallons of hazardous materials release into the atmosphere from a major Nevada highway (up to 90 tons on railroad), prompting a shelter-in-place order within the immediate plume area, and evacuation orders for those outside of the plume in the direction the plume is heading. Difficulty in evacuation of casinos (Las Vegas or Reno) or other population concentrations, so likely a shelter-in-place order for impacted locations.

Hazmat Release - Chemical Outcomes

Uniform response planning efforts within Nevada developed/updated to reflect response requirements of incident.

Planning | Capability Target

Protection/Response/Recovery: Insure that 100% of Nevada's jurisdictions have developed and maintained all-risk/all-hazard plans, COOP, EOP's, and Recovery Plans. Mitigation: Update the State of Nevada Hazardous Mitigation Plan every 3 years, to ensure it meets the Emergency Management Accreditation Program (EMAP) requirements for approval and certification during the specified time-frames, and addresses all relevant threats/hazards identified in Nevada's THIRA and other appropriate risk assessments for the state.

Planning | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Animal Emergency Response	Animal Protection: Large Animal Sheltering Team	III	3
Incident Management	Individual Assistance Disaster Assessment Team Leader	III	2
Incident Management	Incident Management Team	III	5
Mass Care Services	Shelter Management Team	III	4
Medical and Public Health	Emergency/Critical Care Team	II	5

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	3
Geographic Info Systems and Info Technology	GIS Analyst	3

Public Information and Warning | Impacts and Desired Outcomes

Earthquake Impacts

Potential damage to PIW system/network infrastructure. Loss of access to PIW system (internet, social media, TV, etc.).

Earthquake Outcomes

Successful use of PIW systems resulting in the notification of 100 % of the public on information related to the incident, emergency information to include sheltering, medical treatment and evacuation orders, within one hour of the incident. Obtain full implementation the public information and warning investment under HSGP 2015.

Flood Impacts

Information shared that may not take into account very localized situations or impacts.

Flood Outcomes

Pre-notification PIW to 100% of the affected population 12 hours prior to the initiation of the event.

Wildfire Impacts

Information may change drastically due to the nature of the event, situational awareness and fire behavior.

Wildfire Outcomes

Pre-notification PIW to 100% of the affected population 6 hours prior to direct impact from the event. Communicate appropriate information to Nevada's communities on wildfire risks and dangers.

Pandemic - Human Impacts

Information must be verifiable regarding impacts to health and potential/actual cause factors or the public may disregard the information or treatments.

Pandemic - Human Outcomes

Pre-notification PIW to 100% of the affected population 2 hours after the confirmation of the cause for the event.

Active Shooter Impacts

Event will induce panic until the suspect(s) is contained/eliminated from event. Event will cause secondary issues with transportation and hyper-awareness of population resulting in additional response needs. Must consider displaced populations.

Active Shooter Outcomes

Post-event use of PIW systems to 100% of the impacted public as to the nature and requirements of the public related to the event. Coordinated, accurate, and responsible information must be shared with the public in order to not compromise the operation and on going investigation.

Cyber Attack Impacts

Current systems which deliver messaging may be compromised or unavailable due to the incident.

Cyber Attack Outcomes

Pre-event messaging and public education efforts should be initiated or supported to limit the public and private activities that weaken systems or expose them to hostile acts. Identification of resources and a response plan structure that provides a knowing and effective response to hostile action should be documented. Post event PIW notification and information using alternative resources for public and private sector systems that become inoperative.

Drought Impacts

There is no direct impact on this capability.

Drought Outcomes

Pre-event messaging which educates the public and private bodies on the nature and scope of drought regularly.

Hazmat Release - Chemical Impacts

Impact areas may change, cause factors may not be initially known, treatment options may need to be disseminated.

Hazmat Release - Chemical Outcomes

Post-event use of PIW systems to 100% of the affected public as to the nature and requirements of the public related to the event.

Public Information and Warning | Capability Target

Within 30 minutes and using a variety of delivery systems, provide warnings to 100% of the people of an imminent event, including information on how to take appropriate actions, and provide the affected population with information on how to obtain essential services and access resources following the event.

Public Information and Warning | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Communications Support Team (CAP)	III	3
Incident Management	Public Information Officer (Type 3)	III	2

Other Resources

Category	Resource	Number Required
Incident Management	Public Information Officer	10

Operational Coordination | Impacts and Desired Outcomes

Earthquake Impacts

Multiple area commands are expected, limited depth of experienced personnel at all levels, potential access issues for command staff, multiple operational periods with limited staffing, lack of typed management teams, loss of infrastructure (physical location, communications).

Earthquake Outcomes

Develop and maintain standardize large scale incident operational procedures for communications, coordination, and command and control through a complete implementation of NIMS.

Flood Impacts

Communication among government, non-government, and private sector partners may be disrupted during the incident. Command and control between government, non-government, and private sector partners may be difficult, especially if the flood is of great magnitude.

Flood Outcomes

Develop partnerships amongst response agencies, supporting agencies, government, non-government agencies, and private sector partners that support networking, planning, and coordination. Initiate response operations with functional and integrated communication amongst response/supporting agencies. Mobilize resources and establish command and control amongst partnering agencies/entities within the affected community throughout the duration of the incident. Maintain NIMS compliant command and control throughout the incident.

Wildfire Impacts

Must ensure all community stakeholders are involved in recovery efforts and planning. Communication between multiple command and control agencies/jurisdictions may be difficult to implement during a large scale wildfire that spans multiple jurisdictions.

Wildfire Outcomes

Coordination and unity of effort between all levels of government and private sector partners must be achieved prior to, during, and after the incident. Partnering jurisdictions/authorities must achieve clear modes of communication, both horizontally and vertically. Effectively coordinate and use appropriate federal, state, local, nongovernmental, and private sector resources to achieve the affected communities recovery objectives.

Pandemic - Human Impacts

Ensure that all partnering agencies understand the nature of the event (use non medical language).

Pandemic - Human Outcomes

Coordinate response with community/local, state, tribal and federal partners. Mobilize all critical resources. Establish command and control structure within the affected community. Maintain NIMS compliant command throughout the incident.

Active Shooter Impacts

Different facets of response, mitigation of threat, coordination between multiple jurisdictions/authorities (federal, state, and local law enforcement). Communication between multiple command and control agencies/jurisdictions.

Active Shooter Outcomes

Coordination and unity of effort between all levels of government and private sector partners must be achieved prior to, during, and after the incident. Partnering jurisdictions/authorities must achieve clear modes of communication, both horizontally and vertically.

Cyber Attack Impacts

Discontinuity between incident management and response resources due to non-existent plans

Cyber Attack Outcomes

Create and maintain Subject Matter Experts (SME) to advise state and local EOC's on the event, its cause, origin, and impact, and efforts to mitigate or resolve the incident. Produce a plan sufficient to address the incident and response, while providing continuity of services for affected agencies or businesses.

Drought Impacts

Different organizations, agencies, and jurisdictions may chose to implement plans and processes, or educational programs that are not coordinated resulting in less of an overall impact to affect the condition.

Drought Outcomes

Establish and maintain a group to identify the strategic plan and goals for this threat to minimize or mitigate its possible outcome.

Hazmat Release - Chemical Impacts

Impact areas may change, cause factors may not be initially known, coordination among multiple communities, government entities, and private sector partners may be difficult.

Hazmat Release - Chemical Outcomes

Coordination and unity of effort between all levels of government and private sector partners must be achieved prior to, during, and after the HazMat release. Partnering jurisdictions/authorities must achieve clear modes of communications, both horizontally and vertically. Mobilize all critical resources and establish command and control within the affected community and surrounding communities. Provide defined structure and decision-making process among community/government leaders for recovery activities.

Operational Coordination | Capability Target

Establish and maintain a unified command/control ICS structure with all intrastate and interstate stakeholders to identify and coordinate incident management activities within 30 minutes of awareness of the threat/hazard across the impacted area. Within 1 hour, mobilize critical resources and establish command, control, and coordination structures through the SEOC and 16 Emergency Support Functions in the state, as well as all

appropriate local EOC's in the impacted area/community, and maintain, as needed, throughout the duration of an incident.

Operational Coordination | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Incident Management Team	III	6
Incident Management	Communications Support Team (CAP)	III	6
Search and Rescue	Urban Search and Rescue (US&R) Task Force	III	1
Search and Rescue	US&R Incident Support Team	I	1

Other Resources

Forensics and Attribution | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

N/A

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

Lab personnel are impacted by event, lack of SME or lab capacity.

Pandemic - Human Outcomes

Lab results that can determine if the event is criminal or noncriminal.

Active Shooter Impacts

Timing of the event (more populated on Friday night vs. Monday morning). Venue type (i.e. CES, SEMA, etc.). Weapon type, availability of targets. Scene must be stabilized prior to capability being met. Scene altered due to response resources.

Active Shooter Outcomes

Identification of devices and attackers. Find/apprehend suspect. Validate the intelligence and the source of the attack. Stabilize the incident/event. Preserve crime scene and collect evidence.

Cyber Attack Impacts

Failure to determine cause and attribute the act to a source prevents limiting the overall impact.

Cyber Attack Outcomes

Within 30 minutes determine the cause of the incident and implement protective measures that limit the impact of the attack to the system or software. Implement security measures on related systems and procedures which notify operators of collateral systems.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Physical accesses to site of release may take time due to the material that is released, as well as the location of the incident.

Hazmat Release - Chemical Outcomes

Prioritize Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) material collection and analysis to determine if HazMat incident was human caused.

Forensics and Attribution | Capability Target

Prioritize, collect, and examine 100% of evidence associated with an act of terrorism or an imminent terrorist attack across 17 counties and all critical infrastructure sectors. Identify 100% of the terrorist actors, co-conspirators, and their sponsors by fusing all science-based forensic results and all source intelligence information and products across 17 counties and all critical infrastructure sectors.

Forensics and Attribution | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Medical and Public Health	Epidemiology (Surveillance and Investigation)	II	3
Medical and Public Health	Isolation and Quarantine	II	3

Other Resources

Intelligence and Information Sharing | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

N/A

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

Loss of personnel due to illness/event.

Pandemic - Human Outcomes

Using GIS, determine which area of the population has been affected. Use health alert network to provide information to healthcare providers. Ensure information sharing mechanism is in place to alert partnering agencies.

Active Shooter Impacts

Lack of information, lack of dissemination of information, possible issues with the evidence, lack of partnership participation ("Fog of War").

Active Shooter Outcomes

Timely sharing of accurate and timely intelligence and information with local stakeholders and national stakeholders. Review Suspicious Activity Reports (SAR), follow up with investigations, identify potential or additional targets, include all relevant parties in information sharing. Production and dissemination of analytical products.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

The ability to collect and disseminate in a timely manner, intelligence related to cyber that would impact cyber systems supporting government and private industries/organizations.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Lack of information and dissemination of information. Lack of partnership participation.

Hazmat Release - Chemical Outcomes

Anticipate and identify potential hazardous materials being transported across Nevada. Share timely and accurate information regarding the incident to federal, state, local, and private sector partners.

Intelligence and Information Sharing | Capability Target

Ensure that 100% of applicable intelligence will be shared with stakeholders within 2 hours. Within 1 hour of receiving intelligence from the fusion center, disseminate actionable intelligence and information to key stakeholders from all agencies/organizations. Within 2 hours, develop information and intelligence gathering priorities in response to a dynamic threat scenario with a potential for follow-on attacks and ensure identification and tasking of all available intelligence assets to support these priorities.

Intelligence and Information Sharing | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Liaison Officer (Type 3)	III	2

Other Resources

Interdiction and Disruption | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

N/A

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

Must have open communications with partnering agencies. If cause is a biological agent, it will have a criminal investigative element.

Pandemic - Human Outcomes

Based on current threat streams and Intel, maintain open communications with partnering jurisdictions and authorities.

Active Shooter Impacts

A need to increase the level of information sharing with federal, state, and local partnering jurisdictions. Limited resources if deployed to multiple locations.

Active Shooter Outcomes

Monitor and disrupt criminal activity pre-event. Expand Suspicious Activity Reporting (SAR) to the whole community. Deployment of protective resources to relevant critical sites/infrastructure to prevent the incident from expanding to more facilities.

Cyber Attack Impacts

Any cyber event may impact information and/or communications systems that are intrinsic to response mission area resources and prevent them from timely response and resolution of issues.

Cyber Attack Outcomes

100 percent of the critical systems will have protections that will detect and disrupt attempted unauthorized intrusions systems and will be sufficient to protect or halt damages to systems.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

N/A

Hazmat Release - Chemical Outcomes

N/A

Interdiction and Disruption | Capability Target

Deploy 20 specialized tactical alert teams, bomb squads, or EOD units within 1 hour to prevent initial or follow-on terrorist attacks. Conduct simultaneous tactical counter-terrorism operations in up to 5 separate locations on 3 consecutive days. Identify response capabilities and establish strategic plan for cyber attack response.

Interdiction and Disruption | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Law Enforcement Operations	Bomb Squad/Explosives Team	II	5

Other Resources

Screening, Search, and Detection | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

N/A

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

Faulty technology or limited technological capability to rapidly detect biological incidents. False positives from bio-data collected from surveillance activities.

Pandemic - Human Outcomes

Ensure bio-surveillance is being conducted. Increase/expand active epi-surveillance if necessary.

Active Shooter Impacts

Does technology work? Are personnel properly trained to use equipment? Nevada's large tourist population makes screening, search, and detection difficult to obtain (nearly 1 million visitors every week).

Active Shooter Outcomes

Conduct routine screening, search, and detection at large events/venues. Increase coordination between law enforcement agencies (federal, state, and local). Acquire/obtain accurate intelligence. Increased coordination between law enforcement and partnering emergency response agencies (private security, fire, EMS, and hospitals). Increase the level of training and knowledge of law enforcement/private security in behavioral analysis and detection capability.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

100 percent of all critical systems have detection systems to identify intrusions and their sources.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

N/A

Hazmat Release - Chemical Outcomes

N/A

Screening, Search, and Detection | Capability Target

Ensure 100% of Nevada's hospitals and local public health agencies have the ability to coordinate syndromic surveillance. Employ wide-area search and detection assets in 100% of the targeted areas in concert with local, state, tribal, private sector, or other federal agencies based on known or suspected threat information.

Screening, Search, and Detection | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Medical and Public Health	Epidemiology (Surveillance and Investigation)	II	5
Medical and Public Health	Environmental Health	II	5

Other Resources

Access Control and Identity Verification | Impacts and Desired Outcomes

Earthquake Impacts

Failure of the infrastructure (physical, SCADA, and cyber) to support access control and ID verification.

Earthquake Outcomes

Identify CIKR facilities that require access control measures (RSS sites, Power/Utilities, etc.) and implement protocols to verify identify and authorize, grant, or deny physical access to CIKR sites.

Flood Impacts

Lack of credentials, unsecured perimeter, trying to secure and identify the perimeter. Lack of initial staging area and command and control. Understanding of CIKR impacted within the perimeter. Lagging credentialing program.

Flood Outcomes

Properly screen, identify and credential responding personnel. Develop comprehensive resource management/credentialing program. Ensure the protection of CIKR sites near the incident.

Wildfire Impacts

Limited law enforcement personnel available to protect/patrol evacuated residential areas. Limited law enforcement personnel available to deny/verify access to restricted areas/evacuated community.

Wildfire Outcomes

Implement and maintain security of residential homes that have been evacuated due to wildfire threat. During wildfire incident, identify and authorize, grant, or deny physical access to restricted roads/evacuated community.

Pandemic - Human Impacts

Lack of supplies or failure to use protective measures which impact personnel, poor training and protocol adherence.

Pandemic - Human Outcomes

Credential medical, Receiving Storage and Staging (RSS) site, and Point of Dispensing (POD) personnel, and develop comprehensive resource management/credentialing program. Ensure access control and identity verification for the RSS Sites.

Active Shooter Impacts

Lack of credentials, unsecured perimeter, trying to secure and identify the perimeter. Lack of initial staging area and command and control, understanding of CIKR impacted within the perimeter. Lagging credentialing program.

Active Shooter Outcomes

Properly screen, identify and credential responding personnel. Develop comprehensive resource management / credentialing program. Ensure the protection of CIKR sites near the incident.

Cyber Attack Impacts

Systems need consistent and regular use. Infrequent use or changes in manpower create access problems when security features cannot recognize legitimate users. Users forget security elements and violate security procedures.

Cyber Attack Outcomes

100 percent of critical systems have verification processes and access controls and identification protocols that prevent or limit unauthorized access.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident, there may be a limited number of law enforcement available to restrict access.

Hazmat Release - Chemical Outcomes

Properly screen, identify and credential responding personnel. Develop comprehensive resource management/credentialing program. Ensure the protection of CIKR sites near the incident. Secure perimeter around HazMat incident to ensure citizens and visitors in the affected community do not enter the "Hot Zone".

Access Control and Identity Verification | Capability Target

Ensure identities of 100% of personnel who are authorized to access systems and facilities for CIKR sites. Grant or deny physical access of an estimated 500 people to specific locations, information, and networks.

Access Control and Identity Verification | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	EOC Management Support Team	II	3

Other Resources

Category	Resource	Number Required
	Credentialing system	1

Cybersecurity | Impacts and Desired Outcomes

Earthquake Impacts

Power system damages may result in loss of power to vital protection systems and networks across the whole community.

Earthquake Outcomes

Timely redundancy in critical systems. Continuity of Operations (COOP) planning, devolution planning, disaster data recovery.

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

N/A

Pandemic - Human Outcomes

N/A

Active Shooter Impacts

Criminal elements may take advantage of the incident by increasing their cyber attacks on CIKR IT systems. Possible overloads due to data dumps from video and other files may occur.

Active Shooter Outcomes

Secure IT systems and maintain their integrity during the event. Heightened awareness for the protection of IT systems during event. See situational awareness.

Cyber Attack Impacts

The bypass of any security system leaving systems vulnerable/improper or lack of use of established protocols making systems vulnerable.

Cyber Attack Outcomes

Within two years, have identity verification protocols in place and used consistently by all users to critical systems.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

N/A

Hazmat Release - Chemical Outcomes

N/A

Cybersecurity | Capability Target

Within 2 years, using a phased approach, implement risk-informed guidelines, regulations, and standards to ensure the security, reliability, integrity, and availability of critical information, records, and communications systems and services to state networks, critical infrastructure and key resources, through collaborative cybersecurity initiatives and efforts.

Cybersecurity | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Incident Management Team	III	1

Other Resources

Category	Resource	Number Required
Other	Cyber Response Plan	1
Geographic Info Systems and Info Technology	Cyber Technical experts	1

Physical Protective Measures | Impacts and Desired Outcomes

Earthquake Impacts

Compromised power or systems due to the earthquake. Loss of manpower/personnel.

Earthquake Outcomes

Maintain security for CIKR facilities. COOP planning for the whole community (all sectors i.e. retail stores). Update Nevada critical infrastructure protection plan.

Flood Impacts

The larger the number of sites that need to be protected the greater the strains on law enforcement resources. (how many sites need to be protected, what are private security capabilities, what is the duration of the incident). Compromised power or systems due to the flooding. Loss of manpower/personnel.

Flood Outcomes

Ensure the protection of CIKR sites near the incident. COOP planning for the whole community (all sectors i.e. retail stores). Update Nevada's critical infrastructure protection plan.

Wildfire Impacts

The size of the wildfire and the number of structures in danger. Number of firefighter personnel and equipment available to protect facilities. Weather conditions (dry, windy, etc.)

Wildfire Outcomes

Identify potential CIKR/residential/commercial facilities threatened by the the wildfire and protect them from damage or destruction through appropriate mitigation efforts related to the terrain and vegetation.

Pandemic - Human Impacts

Lack of law enforcement personnel. Unable to gain access to affected areas.

Pandemic - Human Outcomes

Secure Receiving, Storage, and Staging sites (RSS). Secure Points of Dispensing (PODS). Secure medical material while in route to PODs, Hospitals, and Push-Partners.

Active Shooter Impacts

The larger the number of sites that need to be protected the greater the strains on law enforcement resources. (How many sites need to be protected, what are private security capabilities, what is the duration of the incident).

Active Shooter Outcomes

Ensure the protection of CIKR sites near the incident.

Cyber Attack Impacts

Insufficient physical security to all sites

Cyber Attack Outcomes

Protective measures ie: software and hardware solutions were sufficient to provide timely notification and interruption of cyber events to minimize or prevent impact to systems

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

The larger the number of sites needing protection puts a greater strain on law enforcement resources.

Hazmat Release - Chemical Outcomes

Ensure the protection of CIKR sites near the incident.

Physical Protective Measures | Capability Target

Implement and maintain risk-informed physical protections, countermeasures, and policies, protecting all public sector critical infrastructure and key resources facilities, 17 jurisdictions, and tribal partners, operated internet systems, and those materials, products, and systems associated with critical infrastructure sectors and other key operational activities. Encourage all private sector critical infrastructure and key resources owners and operators to do likewise.

Physical Protective Measures | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
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Other Resources

Category	Resource	Number Required
Public Works	Critical Infrastructure SME	3

Risk Management for Protection Programs and Activities | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

Ensure the entire community is aware of all of Nevada's risks.

Flood Impacts

N/A

Flood Outcomes

Ensure the entire community is aware of all of Nevada's risks.

Wildfire Impacts

N/A

Wildfire Outcomes

N/A

Pandemic - Human Impacts

N/A

Pandemic - Human Outcomes

N/A

Active Shooter Impacts

Legal intervention from CIKR sites prevent achieving this capability. Privately owned sites must invite/agree to assessment.

Active Shooter Outcomes

Conduct threat analysis to address risks associated with threat/hazards to CIKR sites. Understand the threats/hazards in order to conduct prevention and mitigation activities. Work towards increased threat information and Intel sharing.

Cyber Attack Impacts

As the landscape changes, all capabilities reliant on cyber systems become affected by improper system protections for current threats.

Cyber Attack Outcomes

Conduct regular/annual assessments of all cyber systems to understand/detect vulnerabilities and establish/update protection programs.

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

N/A

Hazmat Release - Chemical Outcomes

N/A

Risk Management for Protection Programs and Activities | Capability Target

Complete and maintain updated risk assessments for 100% of the CIKR sites within the State of Nevada.

Risk Management for Protection Programs and Activities | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Planning Section Chief (Type 3)	III	1

Other Resources

Category	Resource	Number Required
	Critical Infrastructure SME	3

Supply Chain Integrity and Security | Impacts and Desired Outcomes

Earthquake Impacts

Failure of multiple transportation or delivery systems (fuel, natural gas, electric, etc.), security needs to protect supply chain, failure in distribution systems (restocking stores after disaster), access to basic commodities disrupted.

Earthquake Outcomes

Restoration of basic supply chains (food, gas, power, water) within 24 hrs.

Flood Impacts

Failure of multiple transportation systems, security needs to protect supply chain, failure in distribution systems (restocking stores after disaster), access to basic commodities disrupted.

Flood Outcomes

Restore basic supply chains (food, gas, power, water, etc.) within 24 hours.

Wildfire Impacts

Failure of multiple transportation or delivery systems (fuel, natural gas, electric, etc.), security needs to protect supply chain, failure in distribution systems (restocking stores after disaster), access to basic commodities disrupted. All due to fire impact on transportation modes.

Wildfire Outcomes

Restoration of basic supply chains (food, gas, power, water) within 24 hrs.

Pandemic - Human Impacts

Infrastructure within the area is intact or available.

Pandemic - Human Outcomes

Ensure supply chain of SNS/Federal Medical Assets within Nevada from RSS sites to PODs and Hospitals is not disrupted.

Active Shooter Impacts

If dependent lifeline (utility, water, power, gas) systems are taken out, it impacts more than just the location, it impacts the entire community.

Active Shooter Outcomes

Ensure the proper information regarding the incident is communicated to the appropriate critical infrastructure nodes.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

If water becomes a critical short supply, it could usher in limits on certain uses or by certain resources which may resort to illegal acquisition.

Drought Outcomes

Ensure existing water supplies are adequately protected from theft.

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident, supply chain could be disrupted indefinitely.

Hazmat Release - Chemical Outcomes

Ensure that all supply chains have alternative routes to maintain supplies for basic human needs.

Supply Chain Integrity and Security | Capability Target

Secure and make resilient all major interstate highways, nodes, methods of transportation between nodes, and materials in transit across all sectors and 17 counties within Nevada.

Supply Chain Integrity and Security | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Public Works	Structural Engineer	I	10
Law Enforcement Operations	Law Enforcement Patrol Team (Strike Team)	II	30

Other Resources

Category	Resource	Number Required
Public Works	Damage Assessment Team - Debris	2
Public Works	Disaster Management Recovery Team – Public Works	10

Community Resilience | Impacts and Desired Outcomes

Earthquake Impacts

Lack of diversity in Nevada's industry (Casinos/Mining), increases impact on community resiliency (175,900 employed by gaming, 150,000 employed by transportation, 39,000 employed by manufacturing).

Earthquake Outcomes

Continue community outreach programs to encourage emergency preparedness (great shakeout, preparedness kits). Develop small business COOP template, create business ESF in the SEOC.

Flood Impacts

Lack of desire to plan effectively.

Flood Outcomes

Maintain/update critical floodplain management and zoning that would lessen or limit the impact of flood actions within the community.

Wildfire Impacts

Getting community buy-in to become more prepared for wildfire threats.

Wildfire Outcomes

Maintain wildfire awareness programs throughout the community. Ensure community is aware of wildfire threats and mitigation efforts they can take to make community more resilient.

Pandemic - Human Impacts

Outbreak could affect all sectors within a community sufficiently to cause critical services interruptions.

Pandemic - Human Outcomes

Maintain traditional public health community outreach.

Active Shooter Impacts

Post attack, the international/national perception of Las Vegas as a tourist/convention destination will be affected. Repair to our local branding and image post attack will be necessary for recovery.

Active Shooter Outcomes

Return the community to its pre-incident status. (Review Mitigation Plan).

Cyber Attack Impacts

Many processes are driven by data systems and technology that have cyber components. Because of this, much of what is done daily can be severely affected by any cyber related event. Most small businesses do not maintain processes that are not reliant on technology.

Cyber Attack Outcomes

Ensure state and private sectors have continuity of operations planning and protocols to provide services that are not reliant upon cyber systems.

Drought Impacts

Planning for water use during critical drought periods could be a highly emotional issue and subject to wide interpretation.

Drought Outcomes

Establish water use protocols that would support critical use during drought conditions.

Hazmat Release - Chemical Impacts

Getting community buy-in to become more aware of threats and hazards facing Nevada.

Hazmat Release - Chemical Outcomes

Ensure all of Nevada's communities have mitigation plans. Educate community on shelter-in-place and evacuation plans/practices. Work with private sector partners to develop COOP plans.

Community Resilience | Capability Target

Ensure 100% of the individuals in the affected area are educated regarding measures to be taken to safeguard their homes and businesses. Build human resource capacity by 30% through citizen engagement via citizen core groups such as community emergency response teams (CERT) or voluntary organizations active in disaster (VOAD).

Community Resilience | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Communications Support Team (CAP)	I	3

Other Resources

Category	Resource	Number Required
Incident Management	CERT	20
Incident Management	VOAD	10

Long-term Vulnerability Reduction | Impacts and Desired Outcomes

Earthquake Impacts

Large percentage of Las Vegas population is low income and unable to reduce their long-term vulnerability.

Earthquake Outcomes

Develop preparedness programs for private and business continuity. Conduct community outreach for long-term vulnerability reduction. Inform/encourage community to become more prepared. Making community aware of their risks and hazards to encourage them to prepare. Public education to reduce vulnerability. Educate children (320,000 kids in Clark County)

Flood Impacts

Overcoming the misconception that flood awareness/planning need not be addressed due to drought conditions.

Flood Outcomes

Within 100 percent of all communities establish flood planning and protocols to reduce flood impact.

Wildfire Impacts

Low income households throughout the state may be unable to reduce their long-term vulnerability.

Wildfire Outcomes

Develop preparedness programs for private and business continuity. Conduct community outreach for long-term vulnerability reduction. Inform/encourage community to become more prepared. Make community more aware of their risks.

Pandemic - Human Impacts

N/A

Pandemic - Human Outcomes

Maintain traditional public health community outreach (i.e. outreach to community for developing preparedness kits, Pan-Flu Coop plans for business).

Active Shooter Impacts

The thorough cataloging of vulnerability data. Evolving resiliency of the threat and complacency.

Active Shooter Outcomes

Continued investment in robust intelligence collection efforts. Ensure Nevada's homeland is safe, secure and resilient.

Cyber Attack Impacts

Response capabilities are immediately vulnerable in information sharing and record access and must address how to overcome.

Cyber Attack Outcomes

See other capabilities under Cyber

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Many residents within Nevada are low income and unable to reduce their long-term vulnerability.

Hazmat Release - Chemical Outcomes

Develop preparedness programs for sector and business continuity. Conduct community outreach programs. Inform community of risks and threats in Nevada.

Long-term Vulnerability Reduction | Capability Target

Develop a strategy to reduce or eliminate 50% of risks from natural, technological, and human caused hazards for people and property in 3 years.

Long-term Vulnerability Reduction | Resource Requirements

NIMS-typed Resources

Other Resources

Category	Resource	Number Required
Incident Management	Staff Planner	2
Incident Management	Staff Planner	2

Risk and Disaster Resilience Assessment | Impacts and Desired Outcomes

Earthquake Impacts

Failure to include the whole community in identifying threats and hazards.

Earthquake Outcomes

Conduct risk assessments that identify and define local vulnerabilities and the consequences associated with them.

Flood Impacts

A community will not have sufficient planning or response activities, or will leave their community vulnerable to the effects of flooding.

Flood Outcomes

Review annually all community Hazard Mitigation plans against actual events to insure plans meet resiliency levels

Wildfire Impacts

Whole community must be involved in risk assessment to ensure all vulnerabilities and consequences are identified.

Wildfire Outcomes

Conduct risk assessments that identify and define local vulnerabilities and the consequences associated with them.

Pandemic - Human Impacts

Unknown

Pandemic - Human Outcomes

Ensure that relevant health data is being provided to partnering jurisdictions/agencies. Create and maintain redundant data storage systems.

Active Shooter Impacts

Lack of situational intelligence. Testing of the political or criminal climate. Sufficient resources to analyze, produce and process information. Lack of analysts personnel to process intelligence information.

Active Shooter Outcomes

Continued evaluation of those threats and hazards both transient and on-going to the jurisdictions.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

Failure to understand situation for sound planning and prevention measures.

Drought Outcomes

Establish/maintain a system that monitors water levels and usage for the state that informs leaders in order to make proper decisions.

Hazmat Release - Chemical Impacts

Whole community must be involved in risk assessment to ensure all vulnerabilities and consequences are identified.

Hazmat Release - Chemical Outcomes

Conduct risk assessments that identify and define local/community vulnerabilities and the consequences associated with them.

Risk and Disaster Resilience Assessment | Capability Target

Support, assist, and motivate 17 counties in prioritizing their risks, needs, and resources using the most current knowledge of existing critical assets, key resource lifelines, systems, and networks and their performance post-quake. Conduct a statewide risk assessment every year that includes information about localized vulnerabilities.

Risk and Disaster Resilience Assessment | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
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Other Resources

Category	Resource	Number Required
Incident Management	Staff Planner	2

Threats and Hazard Identification | Impacts and Desired Outcomes

Earthquake Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Earthquake Outcomes

Maintain threat and hazard identification process with whole community.

Flood Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Flood Outcomes

Maintain threat and hazard identification process with whole community.

Wildfire Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Wildfire Outcomes

Maintain threat and hazard identification process with whole community.

Pandemic - Human Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Pandemic - Human Outcomes

Maintaining threats and hazard identification process.

Active Shooter Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Active Shooter Outcomes

Gather threat and hazard data in a timely, efficient, and accurate manner. Ensure the correct data is received by the correct people at the correct time. Build partnerships with private sector.

Cyber Attack Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Cyber Attack Outcomes

Maintain threat and hazard identification process with whole community and work to include relevant context beyond what is developed for the THIRA in 2016.

Drought Impacts

Neglecting threats and hazards of significance for communities and building capability to meet those.

Drought Outcomes

Maintain threat and hazard identification process with whole community.

Hazmat Release - Chemical Impacts

Failure to involve the whole community may result in not identifying threats and hazards, as well as capabilities.

Hazmat Release - Chemical Outcomes

Maintain threat and hazard identification process across Nevada, with the whole community.

Threats and Hazard Identification | Capability Target

Identify 5 of the worst-case, plausible threats and hazards to the region and provide timely and accurate data on these threats and hazards through a continual process of data collection and analysis. Encourage 17 jurisdictions to identify threats and hazards on an annual basis. Identify and provide context for 5 threats and hazards in collaboration with whole community partners and incorporate this into the analysis and planning process.

Threats and Hazard Identification | Resource Requirements

NIMS-typed Resources

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	1
Incident Management	Staff Planner	2

Critical Transportation | Impacts and Desired Outcomes

Earthquake Impacts

Extent of the damage may impact the time it takes to repair transportation nodes (highway, airport, rail, etc.) limited resources and inability to bring resources into the affected community.

Earthquake Outcomes

Protect and restore transportation corridors to ensure the delivery of resources and movement of first responders throughout the impacted area/community.

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

A large scale wildfire may close critical transportation corridors and limit the mobility of first responders and citizens throughout the area.

Wildfire Outcomes

Protect transportation corridors to ensure the delivery of resources and movement of first responders throughout the impacted area.

Pandemic - Human Impacts

Infrastructure within the area is intact or available.

Pandemic - Human Outcomes

Maintain capability to transport medical assets and personnel during an event.

Active Shooter Impacts

Amount of debris may impact the time it takes to remove. Limited amount of law enforcement available to escort resources into and out of the area.

Active Shooter Outcomes

Ensure major highway's remain open so that critical resources can move into and out of the impacted areas

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident, roadways into and out of the affected community may be inaccessible even though there may not be any physical damage. This is something that cannot be fixed and is time dependent.

Hazmat Release - Chemical Outcomes

Ensure major highways and rail systems remain open so that critical resources can move in and out of the impacted community/area.

Critical Transportation | Capability Target

Within the first 24 hours after an incident, inspect, re-establish, and maintain 3 land and air routes to move all first responders and other resources to safely sustain 100% of the affected persons in the vicinity of the incident. Within the first 48 hours of an incident,

establish physical access to deliver required resources to save lives and meet the needs of 100% of the people in the affected area.

Critical Transportation | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Search and Rescue	Urban Search and Rescue (US&R) Task Force	I	5

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	3
Public Works	Damage Assessment Team - Debris	5

Environmental Response - Health and Safety | Impacts and Desired Outcomes

Earthquake Impacts

Multiple agency coordination and damage assessment to an unknown number of sites.

Earthquake Outcomes

Coordinate with federal, state, and local resources to identify appropriate environmental response/health and safety needs. Identify and stabilize for short term recovery.

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

Potential destruction of watershed, timber resources, and flash floods. Air quality issues.

Wildfire Outcomes

Conduct air quality assessments, disseminate guidance (evacuation, air quality, post-fire information) and resources to the affected population. Ensure first responders are equipped with the proper Personnel Protective Equipment (PPE).

Pandemic - Human Impacts

Unknown contaminated areas. Limited capability to test environment. Depending on the agent used, environmental clean up will take a long time.

Pandemic - Human Outcomes

Collaborate with Local, State, and Federal Partners (EPA) to ensure proper clean up of points of contamination/contaminated areas.

Active Shooter Impacts

Large amounts of debris may take an extended period of time to remove. PPE may not be available for at least 12 hours. Environmental impact may take years to clean up.

Active Shooter Outcomes

Determine the amount of debris generated from the incident and its environmental impact. Ensure first responders and citizens within the impacted area are equipped with the proper Personal Protective Equipment (PPE)

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

Ensure that SCADA systems have protocols in place to provide for manual controls of critical infrastructure providing essential services

Drought Impacts

N/A

Drought Outcomes

Ensure 100 percent of community water systems have protocols in place when water availability is impacted

Hazmat Release - Chemical Impacts

Unknown contaminated areas. Limited capability to test environment. Depending on the material released, environmental clean up will take an extended amount of time.

Hazmat Release - Chemical Outcomes

Conduct assessments and deploy appropriate resources. Deploy HazMat teams to support response personnel and the affected community. Ensure first responders and citizens within the impacted area are equipped with the proper PPE. Perform environmental cleanup.

Environmental Response - Health and Safety | Capability Target

During the first 12 hours of an incident, conduct health and safety hazard assessments and disseminate guidance and resources, including the deployment of hazardous materials teams, to support environmental health and safety actions for 100% of response personnel and 100% of the population within the affected area.

Environmental Response - Health and Safety | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Animal Emergency Response	Animal Disease Epidemiologist	I	2

Category	Resource	Type	Number Required
Animal Emergency Response	Animal Protection: Large Animal Transport Team	I	5
Fire/Hazardous Materials	HazMat Entry Team	II	5
Law Enforcement Operations	Bomb Squad/Explosives Team	I	5
Law Enforcement Operations	Law Enforcement Aviation - Helicopters - Patrol & Surveillance	II	4
Law Enforcement Operations	Law Enforcement Patrol Team (Strike Team)	II	20
Law Enforcement Operations	SWAT/Tactical Teams	II	3
Law Enforcement Operations	Mobile Field Force Law Enforcement (Crowd Control Teams)	II	3
Law Enforcement Operations	Public Safety Dive Team	II	2
Animal Emergency Response	Animal Control Specialist	I	5
Emergency Medical Services	Emergency Medical Responder	I	20
Mass Care Services	Shelter Management Team (Mass Care)	II	20
Incident Management	Incident Management Team	III	3
Medical and Public Health	Medical/Public Health System Assessment Team	I	3
Search and Rescue	Urban Search and Rescue (US&R) Task Force		5

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	1
Public Works	Damage Assessment Team - Debris	10
Mass Care Services	Mass Care - Would be the Red Cross (private entity)	5

Fatality Management Services | Impacts and Desired Outcomes

Earthquake Impacts

Identification of unknown numbers of deceased persons, storage or disposition of remains. Identification of visitors may be challenging.

Earthquake Outcomes

Comprehensive management of fatalities. Look at the threat for number of fatalities.

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

No significant impact. Citizens may refuse to listen to evacuation orders/recommendations, which could lead to an increase number of victims. Time of day (wildfire occurs at night when people are sleeping, leaving them less notification time/warning to evacuate. Age/health of citizen needing to evacuate.

Wildfire Outcomes

Identify decedents/victims and ensure reunification of remains. Provide counseling services to responders and families. (Previous wildfires have caused limited fatalities)

Pandemic - Human Impacts

Number of fatalities (2% of impacted population). Number of fatalities occurring over time (long-term vs. short-term) time of year (summer is worse than winter).

Pandemic - Human Outcomes

Coordinate with medical examiner to identify victims, issue death certificates, storage of decedents.

Active Shooter Impacts

A large number of fatalities will require more time and personnel to ensure proper identification. Storage capacity for deceased may be limited.

Active Shooter Outcomes

Recover deceased persons within 72 hours of the incident. Identify victims and ensure reunification of families with remains. Provide mental health services (counseling) to victims.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Environmental cleanup make take an extended period of time, thus recovery of victims may not occur until "HotZone" is considered safe for recovery efforts.

Hazmat Release - Chemical Outcomes

Establish and maintain operations to recover fatalities resulting from a HazMat incident. Identify decedents/victims and ensure reunification of remains. Provide mental health services to victims and responders.

Fatality Management Services | Capability Target

Within 12 hours of an incident, conduct operations to recover all fatalities. Within 24 hours of a request to support a mass fatality incident, establish initial morgue operations, prepare for the arrival of Disaster Mortuary Operational Response Teams (DMORT) support, and obtain refrigeration units and other resources to recover or collect up to 200 fatalities and provide counseling services to 100% of the bereaved.

Fatality Management Services | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Medical and Public Health	Behavioral Health Specialist, Licensed	I	5
Medical and Public Health	Isolation and Quarantine	II	5
Medical and Public Health	Environmental Health Specialist	I	5
Search and Rescue	Human Remains Canine Search Technical Specialist (Advisor)	I	5

Other Resources

Fire Management and Suppression | Impacts and Desired Outcomes

Earthquake Impacts

N/A

Earthquake Outcomes

N/A

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

Along the Sierra Front and in the Mt. Charleston area in Clark County, there are many complex issues related to wildland urban interface. Property values and population densities result in immediate complex management decisions related to resource requirements, safety and security of the public, and potential economic losses.

Wildfire Outcomes

Maintain robust incident management through the development and maintenance of inter-agency all-hazard Incident Management Teams. Develop, codify, and maintain robust resource ordering through a comprehensive mutual aid program. Have sufficient resources available within +6 hours of the incident start.

Pandemic - Human Impacts

N/A

Pandemic - Human Outcomes

N/A

Active Shooter Impacts

N/A

Active Shooter Outcomes

N/A

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

N/A

Hazmat Release - Chemical Outcomes

N/A

Fire Management and Suppression | Capability Target

Within +2 hours of wildfire ignition, initiate the wildfire response plan for the Agency Having Jurisdiction (AHJ). Within this same time-frame, provide an accurate assessment of wildfire behavior and projected growth sufficient to provide accurate public information and warning to the affected community. Maintain or have available 15 Strike Teams of Type I engines, and 10 Strike Teams of Type II engines for deployment within +2 hours from ignition and/or notification. Upon containment of the wildfire impact area, and within a three day period after such containment, initiate damage assessment and establish short and long-term housing for the affected population up to the limits indicated by the threat context for wildfire. Maintain within the State of Nevada sufficient overhead personnel sufficient to manage two wildfires simultaneously at the size and complexity as identified in the Wildfire context within this document.

Fire Management and Suppression | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Mass Care Services	Shelter Management Team (Mass Care)		5
Law Enforcement Operations	Law Enforcement Patrol Team (Strike Team)	I	10
Incident Management	Incident Management Team	II	2
Fire/Hazardous Materials	Engine, Fire (Pumper)	III	50
Fire/Hazardous Materials	Engine, Fire (Pumper)	I	50
Fire/Hazardous Materials	Water Tender, Firefighting (Tanker)	II	10

Other Resources

Infrastructure Systems | Impacts and Desired Outcomes

Earthquake Impacts

Magnitude, locations, and duration of the earthquake/event.

Earthquake Outcomes

Decrease and stabilize infrastructure issues. Talk with utility personnel.

Flood Impacts

N/A

Flood Outcomes

N/A

Wildfire Impacts

Weather (high-winds) and accessibility to impacted infrastructure. Destruction of infrastructure from a large wildfire may require additional personnel for restoration and their deployment and mobilization to the affected area may take time.

Wildfire Outcomes

Decrease and stabilize immediate infrastructure threats (down/destroyed powerlines) to the affected population.

Pandemic - Human Impacts

Critical infrastructure personnel become ill and are unable to work (i.e. doctors, nurses, utility workers).

Pandemic - Human Outcomes

Ensure COOP plans address reductions in work force.

Active Shooter Impacts

Access to infrastructure facilities (i.e. power plants/power lines) may be limited due to the incident. Heat is a major issue in Las Vegas during the summer months, loss of power results in loss of A/C. Limited personnel available to repair damaged infrastructure.

Active Shooter Outcomes

Decrease and stabilize immediate infrastructure threats to the affected community . Stabilize cascading effects on infrastructure in neighboring communities. Re-establish infrastructure in impacted community to support immediate response efforts.

Cyber Attack Impacts

Cascading impact of an event upon a single system may severely limit services from other infrastructure.

Cyber Attack Outcomes

Decrease and stabilize immediate infrastructure threats to the affected community . Stabilize cascading effects on infrastructure in neighboring communities. Re-establish infrastructure in impacted community to support immediate response efforts.

Drought Impacts

No complete understanding of drought impact on all infrastructure.

Drought Outcomes

Maintain required water infrastructure above all other non-essential needs.

Hazmat Release - Chemical Impacts

Hospitals within the affected area/plume may not be able to receive patients. Large number of victims will require many resources for decontamination, especially at hospitals. Infrastructure facilities (water, power, gas, etc.) may not be able to operate during a shelter-in-place order.

Hazmat Release - Chemical Outcomes

Ensure infrastructure systems throughout the state have shelter-in-place plans in order for them to continue operations during a HazMat incident. Ensure evacuation plans are in place for hospitals, nursing homes, long-term care facilities, etc.

Infrastructure Systems | Capability Target

Within 72 hours of an event, restore 50% of peak household power outages of the total 200,000 customers without power, and 50% of critical facility outages. Within five days, restore 75% of peak household power outages and 75% of critical facility outages. Within 72 hours restore water and sewer services to 50% of the effected community, and within 5 days restore 75% of water and sewer services to the affected community. Within 96 hours restore natural gas services to 50% of the affected community.

Infrastructure Systems | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Emergency Medical Services	Emergency Medical Task Force	I	3
Fire/Hazardous Materials	Mobile Communications Unit (Law/Fire)	I	5

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Team Leader	1
Public Works	Damage Assessment Team - Debris	10
Public Works	Private utilites	10

Logistics and Supply Chain Management | Impacts and Desired Outcomes

Earthquake Impacts

Magnitude, locations, and duration of the earthquake/event. Number of affected population, check numbers above in defined threat

Earthquake Outcomes

Activate COOP, re-establish services for the affected population.

Flood Impacts

Dependent on magnitude of flood, access to impacted area and facilities would be limited. Further, responders and other critical personnel may be unavailable due to the event.

Flood Outcomes

Activate all COOP plans to insure operations are impacted as minimally as possible.

Wildfire Impacts

Command and control between government, non-government and private sector (multiple) partners may be difficult during a large scale wildfire.

Wildfire Outcomes

During a wildfire, enhance public and private resource and service support for mass care and sheltering within the affected community.

Pandemic - Human Impacts

Vaccinations required to mitigate event, instead of pills/prophylaxis.

Pandemic - Human Outcomes

Vaccinations required to mitigate event, instead of pills/prophylaxis. Ensure Push-Partners (Closed PODs) have and maintain capability to run their PODs.

Active Shooter Impacts

Communication among government, non-government, and private sector partners may be disrupted during the incident. Command and control between government, non-government and private sector partners may be difficult.

Active Shooter Outcomes

In order to save/sustain lives, meet basic human needs, and stabilize the incident, Nevada must ensure mobilization and delivery of governmental, non-governmental, and private sector resources to the affected community and meet the needs of the incident survivors. Develop an ESF in the SEOC for private sector partners.

Cyber Attack Impacts

N/A

Cyber Attack Outcomes

N/A

Drought Impacts

N/A

Drought Outcomes

N/A

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident, community staples (banks, grocery stores, pharmacies, etc.) inside the "HotZone" will not be available to the affected population.

Hazmat Release - Chemical Outcomes

Mobilize and deliver government, non-government, and private sector resources within the affected area to save lives, sustain lives, meet basic human needs, and stabilize the incident. Develop an ESF in the SEOC for private sector partners.

Logistics and Supply Chain Management | Capability Target

During the first 72 hours of an incident, mobilize and deliver essential public and private services and resources needed to save lives and meet the needs of all people in the impacted area.

Logistics and Supply Chain Management | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Public Works	Damage Assessment, Repair and Start-Up Team - Wastewater Lift and Pump Station	I	5
Medical and Public Health	Medical/Public Health System Assessment Team	I	5
Search and Rescue	Urban Search and Rescue (US&R) Task Force		5
Mass Care Services	Shelter Management Team (Mass Care)	I	10

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Team Leader	3
Public Works	Damage Assessment Team - Debris	5

Mass Care Services | Impacts and Desired Outcomes

Earthquake Impacts

Magnitude, locations, and duration of the earthquake/event. Percent of the affected population.

Earthquake Outcomes

Establish, staff, equip and maintain emergency sheltering and feeding sites; and reunification centers outside of the affected area within 24 hours of the event. Transition into recovery by providing long-term housing to affected population/community.

Flood Impacts

Coverage locations, and duration of the flood/event. Percent of the affected population.

Flood Outcomes

Establish, staff, equip and maintain emergency sheltering and feeding sites and reunification centers outside of the affected area within 24 hours of the event. Transition into recovery by providing long-term housing to affected population/community.

Wildfire Impacts

A large number of victims needing mass care services may stretch Nevada's current mass care capabilities. Limited supplies may exist for assisting the medical needs of shelter victims (i.e. dialysis equipment, diabetes medication, etc.)

Wildfire Outcomes

Move and deliver resources and capabilities to meet the needs of evacuated citizens, including individuals with access and functional needs, pets and large animals. Establish, staff, and equip mass care shelters, feeding sites and reunification centers. Transition into recovery by providing long-term housing to affected population/community.

Pandemic - Human Impacts

Significant cost associated with quarantine of transient population. Strain on support services (food prep, security, wellness checks)

Pandemic - Human Outcomes

Coordination of federal, state, tribal, local, and NGO response to the event.

Active Shooter Impacts

A large number of victims needing mass care and reunification services may stretch Nevada's current mass care capabilities.

Active Shooter Outcomes

Establish, staff, and equip mass care - shelters, feeding sites and reunification centers for the affected population within 24 hours of the event. Ensure individuals with access and functional needs are provided proper care/equipment/treatment.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

If victims are entering shelters, a mechanism must be in place to ensure they are decontaminated. There may be limited decon resources (personnel, equipment, etc.) to ensure shelter victims have been decontaminated before entering shelter.

Hazmat Release - Chemical Outcomes

Establish, staff, equip, and maintain emergency sheltering outside of the affected area, plume, or "HotZone".

Mass Care Services | Capability Target

Within 24 hours of an incident, mobilize resources and capabilities to provide life-sustaining services to the affected population, including animals, consisting of shelter for an estimated 100,000 people in need of potable water, sanitation disposal, security, mental health treatment, functional needs assistance, and veterinary services, and provide support for reunifying families.

Mass Care Services | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Mass Care Services	Shelter Management Team (Mass Care)	I	20
Incident Management	Incident Management Team	I	5
Animal Emergency Response	Animal Protection: Small Animal Sheltering Team	II	3
Animal Emergency Response	Animal Protection: Large Animal Sheltering Team	II	3
Law Enforcement Operations	Mobile Field Force Law Enforcement (Crowd Control Teams)	I	10
Medical and Public Health	Public Health and Medical Support Team Leader in a Shelter	I	20

Other Resources

Category	Resource	Number Required
Public Works	Damage Assessment Team - Debris	10
Public Works	Private Utilities (waste, water, waster water)	10
Incident Management	NVWarn capabilities	5

Mass Search and Rescue Operations | Impacts and Desired Outcomes

Earthquake Impacts

USAR/SAR personnel affected by impact and unable to respond within required time limits.

Earthquake Outcomes

75% of all structures will be evaluated within 12 hours for potential victims.

Flood Impacts

USAR/SAR Personnel affected by impact and unable to respond within required time limits.

Flood Outcomes

75% of all structures will be evaluated within 12 hours for potential victims.

Wildfire Impacts

USAR/SAR Personnel affected by impact and unable to respond within required time limits.

Wildfire Outcomes

75% of all structures will be evaluated within 12 hours for potential victims.

Pandemic - Human Impacts

NA

Pandemic - Human Outcomes

NA

Active Shooter Impacts

Number and type of structures impacted. Number of potential victims. Time of day (in the afternoon, more victims are at work vs. more victims at home during the evening). If event occurs in Las Vegas, the strip may be busier at night or on the weekend.

Active Shooter Outcomes

Evaluate the incident and determine the number of structures impacted, type of structures, and number of victims. Request the proper resources in a timely manner to save lives. Conduct search and rescue operations to locate and rescue person in distress.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident victims may need to be taken long distances in order to be in the "ColdZone", thus straining SAR resources. Limited amount of decon and PPE equipment / resources available.

Hazmat Release - Chemical Outcomes

Evaluate the incident and determine the number of victims that need to be rescued and brought from the "HotZone" to the "ColdZone". Perform decontamination of victims prior to evacuating them to "ColdZone".

Mass Search and Rescue Operations | Capability Target

Within the first 4 hours of the incident, identify and deploy 20 Type I and 20 Type III Wilderness SAR Teams to the affected area. Within 12 hours of an incident, conduct search and rescue operations to search 75% of damaged structures to locate and rescue persons in distress. Within 24 hours of the incident, identify and deploy three Type I USAR Task Forces to the affected area and evaluate 75% of collapsed structures, locate and rescue 20% of the affected population in confined space. During the response phase of the incident maintain a functional and qualified IMT for SAR operations to insure continual operational continuity and safety.

Mass Search and Rescue Operations | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Search and Rescue	Wilderness Search and Rescue Team	III	10
Search and Rescue	Wilderness Search and Rescue Team	I	15
Search and Rescue	Urban Search and Rescue (US&R) Task Force	I	5
Emergency Medical Services	Multi-Patient Medical Transport Vehicle	II	10
Law Enforcement Operations	Mobile Field Force Law Enforcement (Crowd Control Teams)	II	30
Search and Rescue	Human Remains Canine Search Manager	I	10
Incident Management	Volunteer Agency Liaison	I	4

Other Resources

Category	Resource	Number Required
Public Works	Damage Assessment Team - Debris	5

On-scene Security, Protection and Law Enforcement | Impacts and Desired Outcomes

Earthquake Impacts

Availability of affected response personnel, credentialing, access availability to affected areas.

Earthquake Outcomes

Provide security to CIKR facilities.

Flood Impacts

Cannot access the impacted area.

Flood Outcomes

Provide perimeter security to CIKR sites and residential communities for the duration of the flood until resolved.

Wildfire Impacts

Limited law enforcement personnel available to protect/patrol evacuated residential areas. Duration of the evacuation order/recommendation. Limited law enforcement personnel available to deny/verify access to restricted areas/evacuated community.

Wildfire Outcomes

Implement and maintain security of residential homes that have been evacuated due to wildfire threat. During wildfire incident, eliminate or mitigate the risk of further damage to property and the environment.

Pandemic - Human Impacts

Lack of law enforcement personnel. Unable to gain access to affected areas.

Pandemic - Human Outcomes

Secure Receiving, Storage, and Staging sites (RSS). Secure Points of Dispensing (PODS). Secure medical material while in route to PODs and Hospitals. (See Mass Care)

Active Shooter Impacts

Limited law enforcement resources. If the incident occurs over a large geographical area, providing security may be difficult.

Active Shooter Outcomes

Maintain the integrity of the crime scene for investigative purposes. Secure and establish a safe environment for the affected community. Eliminate or mitigate the risk of further damage to victims, persons, property, and the environment.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident security may be difficult to maintain throughout the affected community. Must ensure victims are decontaminated prior to entering the "ColdZone"

Hazmat Release - Chemical Outcomes

Provide security of CIKR sites outside of the "HotZone" ensure entry into and out of the affected area is maintained. Ensure integrity of the scene until it is determined no criminal activity has taken place. Ensure the protection needs of the affected community.

On-scene Security, Protection and Law Enforcement | Capability Target

Within 12 hours, establish and maintain on-scene security and protection needs for the incident area in order to mitigate the risk of further damage to persons, property, and the environment.

On-scene Security, Protection and Law Enforcement | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Law Enforcement Operations	Mobile Field Force Law Enforcement (Crowd Control Teams)	II	30
Incident Management	Incident Management Team	III	10

Other Resources

Operational Communications | Impacts and Desired Outcomes

Earthquake Impacts

Earthquake impact to facilities and networks.

Earthquake Outcomes

Establish and maintain forms of communications during the event

Flood Impacts

Systems may be overwhelmed at the local level.

Flood Outcomes

Establish and maintain forms of communications during the event

Wildfire Impacts

Communication infrastructure (i.e. transmitters, towers, repeaters, etc.) may be damaged by a wildfire and may take a prolonged time to repair (depends on accessibility to the area).

Wildfire Outcomes

Ensure the capability to communicate, both horizontally and vertically among emergency response personnel (Police, Fire, EMS, and Hospitals) and supporting agencies (NDEM, Fusion Centers, ESF's, etc.), to eliminate the risk of further damage to persons, property, and the environment. Ensure the capability to communicate critical information, regarding the incident, to the affected community.

Pandemic - Human Impacts

NA

Pandemic - Human Outcomes

Standard outcome, same as any other event

Active Shooter Impacts

Depending upon the complexity of the incident, cell phone services may be unavailable due to the call demand/volume. Communication infrastructure (i.e. transmitters, towers, repeaters, etc.) may be damaged and may take a prolonged time to repair.

Active Shooter Outcomes

Ensure the capability to communicate, both horizontally and vertically among emergency response personnel (Police, Fire, EMS, and Hospitals) and supporting agencies (NDEM, Fusion Centers, ESF's, etc.), to sustain life-sustaining activities. Ensure the capability to communicate critical information, regarding the incident, to the affected community.

Cyber Attack Impacts

Systems may be so affected or cause collateral effects to broader networks that capabilities would not be reacquired within reasonable time-frames.

Cyber Attack Outcomes

Access/reacquire networks for public safety and medical response within 30 minutes of the incident.

Drought Impacts

Drought Outcomes

Hazmat Release - Chemical Impacts

Communication infrastructure (i.e. transmitters, towers, repeaters, etc.) may be damaged and located in the "HotZone" and repairing them may not be able to occur until the scene is rendered safe from utility/communication personnel.

Hazmat Release - Chemical Outcomes

Ensure the capability to communicate, both horizontally and vertically among emergency response personnel (Police, Fire, EMS, Hospitals) and supporting agencies (NDEM, Fusion Centers, ESF's, etc.), to eliminate the risk of further damage to persons, property, and the environment. Ensure the capability to communicate critical information, regarding the incident, to the affected community.

Operational Communications | Capability Target

Within 12 hours of an incident, ensure interoperable communication networks for emergency services are functional statewide through the repair or transition to backup systems. Restore traditional analog and digital communications systems within 24 hours. Ensure the ability to share data, including photographs and live video, among 3 command posts in the region, the state fusion center, and the state operations center. Provided for remote delivery of radio and communications systems to rural incidents.

Operational Communications | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Communications Support Team (CAP)	II	20
Incident Management	Airborne Communications Relay (Fixed-Wing) (CAP)	II	5

Other Resources

Category	Resource	Number Required
Incident Management	COM-T	20
Incident Management	COM-L	10

Public Health, Healthcare, and Emergency Medical Services | Impacts and Desired Outcomes

Earthquake Impacts

Magnitude, locations, and duration of the earthquake/event. Percent of affected population.

Earthquake Outcomes

Assess medical capability and capacity. Assist in coordinating medical services and resources. Activate med surge area command. Restore long-term medical services/resources.

Flood Impacts

Magnitude, locations, and duration of flooding event. Percent of affected population.

Flood Outcomes

Assess medical capability and capacity. Assist in coordinating medical services and resources. Activate med surge area command. Restore long-term medical services/resources.

Wildfire Impacts

Many parts of rural Nevada lack the technology and equipment needed for air quality testing. Limited medical supplies may exist in rural Nevada to support mass care operations.

Wildfire Outcomes

Monitor air quality and provide appropriate Air quality guidance and information to the affected community. Facilitate and ensure the medical needs of evacuees in shelters.

Pandemic - Human Impacts

Loss of personnel due to illness/event. Limited resources to treat patients, especially if other communities around the country are effected. Limited ability to obtain resources from the federal government. Vaccine not yet developed.

Pandemic - Human Outcomes

Deliver medical countermeasures, open PODs, maintain RSS operations. Initiate crisis standards of care, medical surge area command activation and coordination of resources.

Active Shooter Impacts

Limited trauma treatment capability (limited burn centers, trauma centers (Take a look of earthquake capability)

Active Shooter Outcomes

Manage medical surge events as a result of mass casualty incidents.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident will determine the number of victims and their course of treatment. Limited trauma treatment capability throughout Nevada. Decon resources may be limited.

Hazmat Release - Chemical Outcomes

Decon and triage victims prior to admittance into area hospitals. Provide antidote's/countermeasures to the affected population if applicable to the chemical released. Manage medical surge events as a result of mass casualty incident.

Public Health, Healthcare, and Emergency Medical Services | Capability Target

Within 48 hours of the receipt of medical countermeasures from the Federal Government, distribute and dispense medications to 100% of the exposed population. Provide a mass immunization capacity of 460 people per hour (1 POD lane w/ 8 vaccinators = 460 PPH) for each POD opened (i.e. 5 one lane POD's = 2300 PPH) in the affected community for 2 days. Provide medical treatment to 100% of the incident casualties within 24 hours.

Public Health, Healthcare, and Emergency Medical Services | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Emergency Medical Services	Medical Supply Coordinator	I	15
Emergency Medical Services	Emergency Medical Task Force	I	3

Other Resources

Category	Resource	Number Required
Emergency Medical Services	Technicians to dispense dosages	30

Situational Assessment | Impacts and Desired Outcomes

Earthquake Impacts

Lack of information, inaccurate information, availability of damage assessment teams.

Earthquake Outcomes

Check PIW section. Ensure frequent and accurate information is provided to the public and decision makers, command and control, policy makers, MAC, EOC, SEOC.

Flood Impacts

Lack of information, inaccurate information, availability of damage assessment teams.

Flood Outcomes

Check PIW section. Ensure frequent and accurate information is provided to the public and decision makers, command and control, policy makers, MAC, EOC, SEOC.

Wildfire Impacts

Accurate information received, un-vetted information being released. Unauthorized release of information.

Wildfire Outcomes

Ensure that coordinated, accurate, and responsible information is delivered to government, private and civic leaders.

Pandemic - Human Impacts

Look at PIW, situational assessment is dependent on accurate information, proper assessment, has information been verified.

Pandemic - Human Outcomes

Ensure frequent and accurate information is provided to the public and decision makers, command and control, policy makers, MAC, EOC, SEOC.

Active Shooter Impacts

Accurate information received, un-vetted information being released. Unauthorized release of information.

Active Shooter Outcomes

Ensure that coordinated, accurate, and responsible information is delivered to government, private and civic leaders.

Cyber Attack Impacts

Information is usually shared via networks and systems and a cyber event may limit the distribution of information.

Cyber Attack Outcomes

Provide system assessments and vulnerability reporting to systems managers regularly to maintain situational awareness.

Drought Impacts

NA

Drought Outcomes

Maintain essential water level data and insure this is provided regularly to decision makers within the affected jurisdiction

Hazmat Release - Chemical Impacts

Situational assessment is dependent upon accurate information. Lack of information (type of chemical released and hazards associated with it). Lack of situational awareness.

Hazmat Release - Chemical Outcomes

Ensure that coordinated, accurate, and responsible information is delivered to the public and government, private, and civic leaders.

Situational Assessment | Capability Target

Within 12 hours of an incident, gather and compile situation reports from all affected jurisdictions (cities, counties, and state agencies) to develop and maintain a common operating picture. Deliver critical information updates every 4 hours (or sooner). Deliver critical information updates every 4 hours (or sooner, depending on the incident) throughout the operational period to inform decision makers regarding lifesaving and life-sustaining activities.

Situational Assessment | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Incident Management	Public Information Officer (Type 3)	III	10
Incident Management	Incident Management Team	III	10
Incident Management	EOC Management Support Team	III	5

Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	3

Economic Recovery | Impacts and Desired Outcomes

Earthquake Impacts

Nevada is very reliant on the gaming industry. Impacts to gaming will have significant consequences to Nevada's economy. Lack of diversification in Nevada's economy.

Earthquake Outcomes

Conduct assessments of economic issues and identify potential inhibitors to achieving stabilization within the community. Work with gaming industry to develop community based recovery plans that include economic recovery components.

Flood Impacts

Unknown

Flood Outcomes

Private sector and governments to include economic recovery into their business models to achieve pre-incident levels.

Wildfire Impacts

The size of the wildfire and the type (business, home, school, etc.) and number of structures damaged.

Wildfire Outcomes

Industry and local governments to include economic recovery into their business models to achieve pre-incident levels.

Pandemic - Human Impacts

Depending on the illness, event, or cause factor, visitors will not come to Las Vegas. Public perception of the event.

Pandemic - Human Outcomes

Encourage/ensure visitors to come to Nevada

Active Shooter Impacts

Magnitude of the incident. Lack of diversification in the economy.

Active Shooter Outcomes

Industry and local governments to include economic recovery into their business models to achieve pre-incident levels.

Cyber Attack Impacts

Unknown

Cyber Attack Outcomes

Ensure system restoration is planned and implemented with safeguards.

Drought Impacts

Some communities rely heavily on water resources (tourism, agriculture) and may not be able to recover from drought.

Drought Outcomes

Implement plans sufficient to limit the economic impact of drought through economic diversification.

Hazmat Release - Chemical Impacts

Nevada is very reliant on the Gaming industry. Impacts to gaming will have significant consequences to Nevada's economy. Lack of diversification in Nevada's economy.

Hazmat Release - Chemical Outcomes

Conduct assessments of economic issues and identify potential inhibitors to achieving stabilization within the community. Work with gaming industry to develop community based recovery plans that include economic recovery components.

Economic Recovery | Capability Target

Within 14 days of an incident, develop a Recovery Support Strategy (RSS) in concert with whole community partners and a specific timeline to restore community infrastructure sites.

Economic Recovery | Resource Requirements

NIMS-typed Resources

Other Resources

Category	Resource	Number Required
Other	Small Business Administration Assistants	10
Other	Private Sector Banking Industry	5

Health and Social Services | Impacts and Desired Outcomes

Earthquake Impacts

Impacts to health and human services will vary depending upon the magnitude and location of the earthquake. There is a shortage of healthcare facilities in Nevada, thus if one hospital is impacted there are significant consequences, especially in rural Nevada.

Earthquake Outcomes

Complete assessment of community health and human service needs. Provide mental health services to responders and victims. Ensure structural integrity of hospitals within the affected community. Activate hospital COOP and Med Surge plans.

Flood Impacts

Impacts to health and human services will vary depending upon the magnitude and location of flooding. There is a shortage of healthcare facilities in Nevada, thus if one hospital is impacted there are significant consequences, especially in rural Nevada.

Flood Outcomes

Complete assessment of community health and human service needs. Provide mental health services to responders and victims. Ensure structural integrity of hospitals within the affected community. Activate hospital COOP and Med Surge plans.

Wildfire Impacts

Impacts are limited to the amount/volume of citizens affected by the wildfire.

Wildfire Outcomes

Complete an assessment of community health and human service needs.

Pandemic - Human Impacts

Additional services required for quarantined persons (medical requirements). Mental Health requirements (MENTAL HEALTH REQUIRED FOR ALL HAZARDS)

Pandemic - Human Outcomes

Return to normal day to day activity from Med Surge. Transition from COOP to normal operations.

Active Shooter Impacts

Number of impacted persons.

Active Shooter Outcomes

Provide mental health services to response personnel and victims. People and events need to be memorialized for long-term recovery.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

Impacts to health and human services will vary depending upon the chemical/material released, size of plume, and location of the incident. Shortage of healthcare facilities in

Nevada, thus if one hospital is impacted there are significant consequences, especially in rural Nevada.

Hazmat Release - Chemical Outcomes

Complete assessment of community health and human services needs. Provide mental health services to responders and victims. Ensure proper decon, inspection and certification of hospitals that were in the "HotZone"

Health and Social Services | Capability Target

Within 7 to 10 days, engage in the following recovery functions: case management intake, direct physical labor, volunteer management, and leadership and capacity building for government, nonprofit, and faith-based organizations. Within 1 month of the opening of the Joint Field Office (JFO), restore basic health and social services functions. Identify critical areas of need for health and social services, as well as key partners and at-risk individuals (such as children, those with disabilities and others with access and functional needs, and populations with limited English proficiency).

Health and Social Services | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Mass Care Services	Shelter Management Team (Mass Care)	II	10
Mass Care Services	State Mass Care Coordinator	I	5
Medical and Public Health	Environmental Health	I	5
Medical and Public Health	Specialty Services Team	II	10

Other Resources

Housing | Impacts and Desired Outcomes

Earthquake Impacts

Valid assessment of population impact (i.e. 400 homes damaged equals 1,000 persons displaced). Access to long term housing without displacement. Cost must be assessed for long term housing. Time constraints for temporary housing. Undefined time periods for temporary housing. Individual utilities that are not part of larger entities.

Earthquake Outcomes

Development of basic short and long term housing plans.

Flood Impacts

Number of impacted persons. Type of population (transient vs. permanent). Size of community (rural vs. urban)

Flood Outcomes

Assess the affected communities housing impacts and needs. Identify options for temporary housing, and plan for permanent housing if necessary.

Wildfire Impacts

Impacts are limited to the amount/volume of citizens affected by the wildfire. (transient population affected vs. permanent population). Size of community (rural vs. urban)

Wildfire Outcomes

Assess the affected communities housing impacts and needs. Identify options for temporary housing, and plan for permanent housing if necessary.

Pandemic - Human Impacts

NA

Pandemic - Human Outcomes

NA

Active Shooter Impacts

Number of impacted persons. Type of population (transient vs. permanent). Size of community rural vs. urban)

Active Shooter Outcomes

Assess the affected communities housing impacts and needs. Identify options for temporary housing, and plan for permanent housing if necessary.

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

NA

Hazmat Release - Chemical Impacts

Housing impacts vary depending upon the chemical/material released, size of plume, and location of the incident. Unknown number of impacted persons.

Hazmat Release - Chemical Outcomes

Develop basic short and long term housing plans. Assess affected communities housing impacts and needs. Identify options for temporary housing, and plan for permanent housing needs if necessary. Decon residential and commercial facilities.

Housing | Capability Target

Within 2 weeks of the opening of the JFO, assess preliminary housing impacts and needs, identify currently available options for temporary housing, and initiate a plan for permanent housing. Within 48 hours, assess preliminary housing impacts and needs across the entire jurisdiction, identify currently available options for temporary housing

for 100% of the affected population, including individuals with access and functional needs.

Housing | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Mass Care Services	Shelter Management Team (Mass Care)	II	20
Medical and Public Health	Social Worker	I	20

Other Resources

Category	Resource	Number Required
Other	Public/Private sector realtors	20

Natural and Cultural Resources | Impacts and Desired Outcomes

Earthquake Impacts

There are specific building requirements that must be met. Cost of conducting damage assessment. Subject Matter Experts (SME) to evaluate natural and historic structures. Land ownership issues, cultural issues (tribal burial area). Cultural liaison.

Earthquake Outcomes

Restore natural and cultural sites to pre-incident conditions. Implement the Natural and Cultural Resource protection plans. See state historic preservation officer.

Flood Impacts

There are specific building requirements that must be met. Cost of conducting damage assessment. Subject Matter Experts (SME) to evaluate natural and historic structures. Land ownership issues, cultural issues (tribal burial area). Cultural liaison.

Flood Outcomes

Restore natural and cultural sites to pre-incident conditions. Implement the Natural and Cultural Resource protection plans. See state historic preservation officer.

Wildfire Impacts

Location of the wildfire (tribal land vs. federal land, fire is located/impacts natural and cultural resources)

Wildfire Outcomes

Mitigate the impacts to and stabilize the natural and cultural resources. Develop a timeline for addressing these impacts in a sustainable and resilient manner.

Pandemic - Human Impacts

NA

Pandemic - Human Outcomes

NA

Active Shooter Impacts

NA

Active Shooter Outcomes

NA

Cyber Attack Impacts

NA

Cyber Attack Outcomes

NA

Drought Impacts

NA

Drought Outcomes

The establishment of alternative recreation activities and public education on water resources and their limitations.

Hazmat Release - Chemical Impacts

Depending upon the chemical/material released, size of plume, and location of the incident, natural and cultural resources may not be able to be returned to pre-incident conditions.

Hazmat Release - Chemical Outcomes

Mitigate the impacts to and stabilize the natural and cultural resources.
Decontamination of natural and cultural resources to their pre-incident conditions.

Natural and Cultural Resources | Capability Target

Within 2 months of the opening of the JFO, complete an assessment of all affected natural and cultural resources and develop a timeline for addressing these impacts.

Natural and Cultural Resources | Resource Requirements

NIMS-typed Resources

Category	Resource	Type	Number Required
Animal Emergency Response	Animal Industry Specialist	I	3

Incident Management	Individual Assistance Disaster Assessment Team Leader	II	6
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Other Resources

Category	Resource	Number Required
Geographic Info Systems and Info Technology	GIS Analyst	3
Other	Archeologist	5
Other	Anthropologist	5

Category	Resource	Number Required
Other	Tribal Archeologist	5

THIRA Post-Assessment

Government Department/Agency Participation

Department / Agency	Federal	State	Territory	County	UASI	Other City	Tribal	Other (specify)	Other (specify)
Emergency Management / Homeland Security		2		9	4		6		
Fusion Center		1			4				
Law Enforcement / Public Safety				6	2				
Fire / EMS				11					
Public Health				1	1				
Historic / Cultural Resources									
Environment									
Transportation									
Agriculture				8					
Executive Branch									
Other (specify) National Weather Service	2								
Other (specify) Human Services				2					
Other (specify) Public Works				6					
Other (specify)									
Chief Information Officer (CIO)									
Chief information Security Officer (CISO)									

Non-Government Participation

Non-governmental organization	Number participating
American Red Cross	
Faith-based organization	
Other VOAD	1
Disability or access / functional needs community	
Community advocacy group	
Education community	5

Non-governmental organization	Number participating
Hospital / Healthcare organization	5
Utilities / Public works	3
Private sector / Business	2
Port authority / Other port organization	
Other (specify)	
Other (specify)	

Participant List

Departments, agencies, non-governmental organizations, and jurisdictions that participated in the THIRA process

Modeling and Visualization Tools

List of modeling or visualization tools that informed the THIRA Flood maps

Hours to Complete

How many hours did it take your jurisdiction to complete the THIRA? 960