THREAT AND HAZARD IDENTIFICATION AND RISK ASSESSMENT (THIRA) EXECUTIVE SUMMARY

2018 Report
Nevada

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Printed On: 03/05/2019

THIRA Executive Summary

THIRA Process

Communities use the THIRA to assess risk and set capability targets that reflect their preparedness goals, answering three key questions:

- What threats and hazards can affect our community?
- If they occurred, what impacts would those threats and hazards have on our community?
- Based on those impacts, what capabilities should our community have?

The THIRA/SPR goes beyond evaluating risk, as it also identifies what communities need to do to address that risk.

By completing the THIRA process, communities can better understand what they need to prepare for and how to translate that information into action. Communities begin by identifying the threats and hazards that would most challenge their capabilities. They then provide context for those threats and hazards, developing scenarios that describe how they may affect the community. The scenarios include factors and conditions that would make those threats and hazards especially challenging for delivering capabilities. This helps communities better understand what they need to be prepared for.

Communities then set capability targets that are specific, measurable, actionable, relevant to potential threat and hazard impacts, and time-bound. Setting preparedness goals for addressing the impacts of their most challenging threats and hazards every three years helps communities to track progress over time and describe their preparedness in specific, measurable terms.

Threats/Hazards in Context

Southern NV Active Shooter	
Type	Active Shooter
Context Description	An active shooter/complex coordinated terrorist attack incident (i.e., Mumbai/Paris-style attack) targeting multiple commercial soft targets along the Las Vegas Strip using small arms and improvised explosive devices. 2-5 gunmen attack various locations, including three luxury hotels/casinos, a hospital, and the nearby international airport. The attack stretches on for 6 hours.

Frenchman Mountain Earthquake	
Type	Earthquake
Context Description	A magnitude 7.0 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.

Cyber Attack	
Type	Utility Interruption
Context Description	A cyber-related incident targeting a major utility provider disrupts the delivery of electrical power to the bulk of homes and businesses throughout Nevada. Despite efforts to restore the electrical grid, power remains off for over 48 hours with no short-term solution available. Lack of power over this time period results in the expenditure of critical resources and eventually backup power systems are no longer sustainable. Medical providers, grocery stores, prisons, and regular households across the state experience significant impact without power. Civilian unrest increases rapidly, overwhelming law enforcement efforts. The Governor declares a state of emergency and deploys National Guard assets throughout the state.

Active Shooter	
Type	Active Shooter
Context Description	In late September, one of the largest motorcycle events occurs in the Reno/Tahoe area, with over 150,000 people converging on the area for the three-day event. A popular entertainer is performing at an outdoor venue in the Lake Tahoe casino corridor. With an expectation of 10,000

	in attendance. A complex coordinated terrorist attack (i.e., Mumbai/Paris-style attack) targeting multiple commercial soft targets involved with the motorcycle event and the concert venue using small arms and improvised explosive devices (IEDs). Eight gunmen attack various locations, including the concert venue, two hotels/casinos, a hospital and the Reno/Tahoe international airport. There are hundreds of fatalities and non-fatal injuries as a result of the assault.

Pandemic - Human	
Type	Pandemic - Human
Context Description	Late November, an outbreak of measles is introduced to Northern Nevada by way of direct air travel into Reno during the busy holiday season. Measles is transmitted efficiently from person to person resulting in large numbers of people being infected. The epidemic will sweep across Northern Nevada within 1-2 months and start to affect locations in Southern Nevada. Overall, 30% of the Nevada population have been infected which impacts their ability to work for one to three weeks. There is a fatality rate of 15% due to complications from other associated illnesses. Typical time it takes for symptoms to show up once you've caught the virus is 10-14 days and adults can be contagious from 2-3 days before symptoms begin through 5 to 10 days after the illness starts.

Wildfire	
Type	Wildfire
Context Description	Mid-July, several lightning strikes causes a 5,000 acre wildfire in Lake Tahoe Basin that significantly impacts the urban interface. The fire impacts a large number of residential neighborhoods, commercial structures and critical infrastructure sites. Because of this fire, there is a displacement of persons out of neighborhoods and businesses with many requiring shelter for a period of three or more days. Many individuals have adverse respiratory/medical reactions due to smoke and fire activities requiring hospitalization. There is a displacement of animals and livestock requiring the establishment of animal sheltering for several days. In addition, due to several other fires occurring throughout the state, state and local resources are heavily taxed.

Flood	
Type	Flood
Context Description	Late December, the Sierra Nevada mountains are hit with several heavy snow storms followed in early January with a warm atmospheric river that stalls over Northern Nevada. A 100/500-year event results in

	catastrophic flash floods causing flooding to critical infrastructure including businesses and residential homes with moderate to major damage. As a result of the flood, there is a displacement of persons out of neighborhoods and businesses with many requiring shelter for a period of three or more days. There also a displacement of animals and livestock requiring the establishment of animal sheltering for several days. Public roadways and highways damaged including the undercut of primary roadway, due to hundreds of culverts blocked or damaged. Discharge/Flow rates in excess of 5,000 cubic feet/second in strained public flood channels.

Earthquake	
Type	Earthquake
Context Description	A magnitude 6.9 earthquake along the Mount Rose Fault occurs mid-May, at 0630 resulting in significant damage/disruption to infrastructure and energy/fuel delivery systems, moderate to severe damage of residential structures, small to medium sized businesses, casinos, and other damage out to 40 miles from the epicenter. Hundreds of buildings experience major damage. This event would affect the general population and visitors; inflict minor, to severe injury, and cause several deaths. There is a displacement of persons out of neighborhoods, visitors and businesses with many requiring shelter for a several days to weeks. There is also a displacement of animals and livestock requiring the establishment of animal sheltering for several days to weeks.

THIRA Capability Targets

Planning

Within every **5** **year(s)**, update all emergency operations plans that define the roles and responsibilities of **100** partner organizations involved in incident management across **9** jurisdictions affected, and the sequence and scope of tasks needed to prevent, protect, mitigate, respond to, and recover from events.

Public Information and Warning

Within **30** **minute(s)** notice of an incident, deliver reliable and actionable information to **2578147** people affected, including **515629** people with access and functional needs (affected) and **515629** people with limited English proficiency affected.

Operational Coordination

Within **2** **hour(s)** of a potential or actual incident, establish and maintain a unified and coordinated operational structure and process across **9** jurisdictions affected and with **100** partner organizations involved in incident management. Maintain for **4** **week(s)**.

Critical Transportation

Within **72** **hour(s)** notice of an impending incident, complete the evacuation of **116030** people requiring evacuation, including **38575** people with access and functional needs (requiring evacuation).

Within **1** **week(s)** of an incident, clear **5208** miles of road affected, to enable access for emergency responders, including private and non-profit.

Environmental Response/Health and Safety

Within **8** **hour(s)** of an incident, assess, contain, and begin cleaning up hazardous material releases from **1437** hazmat release sites.

Within **7** **day(s)** of a hazmat incident, complete decontamination procedures for **100221** exposed individuals (hazmat-related incidents).

Fatality Management Services

Within **4** **month(s)** of an incident, complete the recovery, identification, and mortuary services, including temporary storage services, for **1502** fatalities.

Fire Management and Suppression

Within **2** **week(s)** of an incident, conduct fire fighting operations to suppress and extinguish **1245** structure fires.

Logistics and Supply Chain Management

Within **48** **hour(s)** of an incident, identify and mobilize life-sustaining commodities, resources, and services to **114043** people requiring shelter and **218500** people requiring food and water. Maintain distribution system for **4** **week(s)**.

Mass Care Services

Within **24** **hour(s)** of an incident, provide emergency sheltering, food, and water for **104043** people requiring shelter and **218500** people requiring food and water, including **35300** people with access and functional needs (requiring accessible shelter) and **70225** people with access and functional needs (requiring food and water), and **60500** animals requiring shelter, food, and water. Maintain for **4** **week(s)**.

Within **8** **week(s)** of an incident, move **21200** people requiring temporary, non-congregate housing, including **7075** people with access and functional needs (requiring accessible, temporary, non-congregate housing), from congregate care to temporary housing.

Mass Search and Rescue Operations

Within **7** **day(s)** of an incident, conduct search and rescue operations for **50000** people requiring rescue.

On-scene Security, Protection, and Law Enforcement

Within **12** **hour(s)** of an incident, provide security and law enforcement services to protect emergency responders and **1015744** people affected.

Operational Communications

Within **8** **hour(s)** of an incident, establish interoperable communications across **9** jurisdictions affected and with **100** partner organizations involved in incident management. Maintain for **4** **week(s)**.

Public Health, Healthcare, and Emergency Medical Services

Within **3** **day(s)** of an incident, complete triage, begin definitive medical treatment, and transfer to an appropriate facility **75432** people requiring medical care.

Situational Assessment

Within **12** **hour(s)** of incident, and on a **12** **hour(s)** cycle thereafter, provide notification to leadership and **100** partner organizations involved in incident management of the current and projected situation. Maintain for **4** **week(s)**.

Infrastructure Systems

Within **5** **day(s)** of an incident, restore service to **446481** customers (without communication service).
Within **30** **day(s)** of an incident, restore service to **446481** customers (without power service).
Within **6** **month(s)** of an incident, restore service to **292000** customers (without wastewater service).
Within **6** **month(s)** of an incident, restore service to **285000** customers (without water service).

Economic Recovery

Within **45** **day(s)** of an incident, reopen **18612** businesses closed due to the incident.

Health and Social Services

Within **6** **week(s)** of an incident, restore functions at **219** affected healthcare facilities and social service organizations.

Housing

Within **5** **year(s)** of an incident, **62200** people requiring long-term housing, including **21125** people with access and functional needs (requiring accessible long-term housing), find and secure long-term housing.

Natural and Cultural Resources

Within **5** **year(s)** of an incident, restore **5015** damaged natural and cultural resources and historic properties registered in the jurisdiction.