Washoe County Emergency Management and Homeland Security Program September 2021



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Washoe County Emergency Management and Homeland Security Program

LETTER OF PROMULGATION

To all Recipients:

Promulgated here within is the Regional Earthquake Plan for Washoe County. The Regional Earthquake Plan provides a framework within which the Regional Partners (Washoe County Emergency Management, City of Reno, City of Sparks, Pyramid Lake Paiute Tribe, Reno Sparks Indian Colony, Washoe County Health District, Washoe County School District, and University of Nevada, Reno) can plan and perform their emergency functions during an earthquake. It also provides for the management and operation of the Regional Emergency Operations Center (REOC) to serve as a mechanism for coordination of emergency operations during an earthquake that impacts one or more Regional Partners.

The Regional Earthquake Plan is a component of the Region's overall regional emergency management organization and is supported by other regional and jurisdictional plans. Focused on response and short-term recovery activities, the Regional Earthquake Plan provides a framework for how the Region will conduct emergency operations. The plan identifies key roles and responsibilities, provides a concept for coordinated operations, and establishes a system for incident management. The outlined framework is consistent with the National Incident Management System (NIMS).

This Regional Earthquake Plan was reviewed by the Regional Partners. It will be revised and updated every five years and as required.

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PLAN ADMINISTRATION

The Regional Partners will coordinate review, revision, and re-promulgation of this Regional Earthquake Plan every five years or when changes occur, such as lessons learned from exercises or events. Changes to the basic plan may be made by the Washoe County Emergency Management and Homeland Security Program without formal approval by the Regional Partners.

Record of Plan Changes

Track and record all updates and revisions to the Regional Earthquake Plan in the following table. This process will ensure the most recent version of the Regional Earthquake Plan is disseminated and implemented by emergency response staff.

Date	Change No.	Partner	Summary of Change
9-30-2021	001	WCEM	Original Plan Completed

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Plan Distribution List

The Washoe County Emergency Management and Homeland Security Program is ultimately responsible for dissemination of the Regional Earthquake Plan and updates to the following jurisdictions, agencies, and persons electronically unless otherwise indicated. Copies of the Regional Earthquake Plan will also be maintained at Regional Emergency Operations Center.

Agency	Department/Title	Date
Tribal	Reno Sparks Indian Colony	9-30-21
Tribal	Pyramid Lake Paiute Tribe	9-30-21
Washoe County	Washoe County School District	9-30-21
Washoe County	Washoe County Health District	9-30-21
City	Reno	9-30-21
City	Sparks	9-30-21
University/College	University of Nevada, Reno	9-30-21

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EXECUTIVE SUMMARY

Washoe County and its Regional Partners (Partners) - City of Reno, City of Sparks, Pyramid Lake Paiute Tribe, Reno Sparks Indian Colony, Washoe County Health District, Washoe County School District, and University of Nevada, Reno - have created this Regional Earthquake Plan. In addition, the University of Nevada, Reno also represents the Nevada Seismology Lab and the Nevada Bureau of Mines and Geology which have contributed to the development of this plan.

Traditionally, jurisdictions plan their emergency operations independently; however, earthquakes do not follow political or jurisdictional boundaries. An earthquake impacting one Regional Partner is likely to also impact other Partners. The Regional Earthquake Plan provides guidance and practical tools for conducting joint operations in response to an earthquake that affects one or more Regional Partners.

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SECTION 1: INTRODUCTION

Section 1 establishes the framework within which this Regional Earthquake Plan exists and explains how it fits into existing plans. It includes the mission, purpose, scope, goals, objectives, and limitations.

1.1 General

Washoe County and its Regional Partners have created this Regional Earthquake Plan with the understanding that an earthquake impacting one Partner is also likely to impact other Partners. The Washoe County Regional Partners' emergency management mission is to ensure the Washoe County Region (Region) is prepared for an earthquake by ensuring coordination of response and recovery activities to increase the Region's capabilities to minimize loss of life and reduce impacts from earthquakes.

The Regional Earthquake Plan is primarily designed to offer guidance for larger or more complex earthquakes that may exceed the response capability and/or resources of frontline responders. No plan can anticipate all the situations and conditions that may arise during earthquakes; therefore, on-scene Incident Commanders must have the ability to exercise discretion in directing tactical operations based on the specific circumstances of the earthquake.

It is imperative that all jurisdictions and response agencies have a plan to provide general guidance and a common framework to respond to and recover from earthquakes. The Regional Earthquake Plan promulgates such a framework within the Region to bring a combination of technical capabilities and resources plus the judgement and expertise of its emergency response staff, department directors, and other key stakeholders. The Regional Earthquake Plan provides the foundation and guidance for use of National Incident Management System (NIMS) and Incident Command Structure (ICS) principles necessary to effectively manage earthquakes within or affecting the Region.

1.2 Plan Organization

The Regional Earthquake Plan contains the following sections supplemented by supporting plans in WebEOC:

- *Preface* includes a letter of promulgation, plan administration, executive summary, and table of contents.
- Section 1: Introduction establishes the framework within which this Regional Earthquake Plan exists and explains how it fits into existing plans. It includes the mission, purpose, scope, goals, objectives, and limitations.
- *Section 2: Situation and Assumptions* describes the County's unique environment and earthquake planning assumptions.
- *Section 3: Concept of Operations* describes the response and recovery priorities and lists earthquake-specific response and recovery tasks.
- Section 4: Roles and Responsibilities identifies by emergency function the specific roles and responsibilities of each discipline as well as other partners.
- Section 5: Regional Emergency Operations Center (REOC) highlights the setting in which the Regional Emergency Operations Center (REOC) exists.

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- *Section 6: Related Plans* lists the other plans that may be implemented during an earthquake, including Continuity of Government, Continuity of Operations, and Washoe County Functional Annexes found in WebEOC.
- Section 7: Plan Development and Maintenance describes ongoing maintenance activities for the Regional Earthquake Plan.
- Section 8: Authorities and References Section 8 outlines Federal, State and Partner-specific emergency management authorities, references, and requirements pertaining to the Region's roles and responsibilities.
- Section 9: Glossary and Acronyms contains definitions and acronyms to ensure the use of common terminology.
- *Annex A: Built Environment* includes detailed maps and tables indicating locations of critical buildings and infrastructure.

1.3 Plan Coordination

Implementation of the Regional Earthquake Plan occurs in coordination with other plans. Emergency operational authority will remain with the local jurisdiction(s) for as long as operations can be maintained. The Regional Earthquake Plan is not intended to replace or duplicate existing plans. Rather, it is intended to support the coordination of all participating Regional Partners and reinforce associated Partner plans.

1.4 Document Handling

This document is classified as confidential and may only be released to authorized public safety and public health staff under the requirements of Nevada Revised Statute (NRS) 239C.210 and Washoe County public records policy. The Regional Partners will maintain this document in adherence with Nevada Revised Statutes and Washoe County policy.

1.5 EMAP Accreditation

The Emergency Management Accreditation Program (EMAP) is a voluntary accreditation process to ensure accountability in emergency management organizations. The Washoe County Emergency Management and Homeland Security Program received its EMAP accreditation in October 2015 and January 2021. The Regional Earthquake Plan is written in accordance with the criteria for operational planning and procedures described in the 2019 Emergency Management Standard by the Emergency Management Accreditation Program.

1.6 Mission, Purpose, and Scope

The mission of the Regional Earthquake Plan is to provide support for lifesaving, life-sustaining, and other resources necessary to supplement local, regional, tribal, private sector, nonprofit, nongovernmental, and volunteer agency activities immediately following a catastrophic earthquake in the Region and to lessen the consequences of an earthquake and enhance recovery of the affected areas.

Washoe County is subject to major earthquakes. A large earthquake will cause significant damage in the Region, destroying or damaging thousands of buildings, disrupting transportation and utility

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systems, and causing thousands of injuries or fatalities. Response to a disaster of this magnitude will severely strain the resources of both the public and private sectors in the Region.

The purpose of the Regional Earthquake Plan is to provide a consistent and flexible framework for Washoe County, Regional Partners, and private entities to work in a coordinated manner in response to a significant earthquake (magnitude of 7) in Washoe County. While it is not intended to constitute a comprehensive plan, the Regional Earthquake Plan encompasses two of the five phases of the emergency management cycle: Response and Recovery. For earthquake mitigation recommendations, see *Earthquake Annex in Hazard Mitigation Plan* in WebEOC.

Earthquakes do not follow political or jurisdictional boundaries. An earthquake impacting one Regional Partner is likely to also impact other Partners. For this reason, the Regional Earthquake Plan provides strategic guidance and practical tools for conducting joint operations in response to an earthquake affecting one or more of the Regional Partner jurisdictions. The Regional Earthquake Plan provides flexibility to meet uncertainty and changing conditions. It does not change policies and direction provided in the Regional Emergency Operations Plan (REOP); rather, it provides additional guidance to complement the REOP.

1.7 Goals and Objectives

The goals of the Regional Earthquake Plan are to:

- 1. Establish the emergency management organization necessary to respond to any significant earthquake affecting Washoe County.
- 2. Establish the overall operational concepts associated with the management of earthquakes and provide a flexible platform for planning and response to earthquakes likely to affect Washoe County.
- 3. Provide the response management team with contextual information to guide initial response planning, including assumptions and tasks with timelines and responsibility.
- 4. Provide for the rapid resumption of effected businesses and community services.
- 5. Provide accurate documentation and records required for cost recovery efforts.
- 6. Provide an overview of the threat earthquakes pose to Washoe County and define the potential range of impacts represented by the most likely major earthquake scenario.

The objectives of the Regional Earthquake Plan are divided into four categories as follows.

1.7.1 Emergency Management Organization, Coordination, and Communications:

- 1. Activate an emergency management structure that manages resource shortages.
- 2. Establish and maintain functional and interoperable communications for responders.
- 3. Validate and provide internal and external public messaging.

1.7.2 Emergency Services:

- 1. Perform emergency response operations and provide safety, security, and support.
- 2. Conduct search and rescue operations.
- 3. Establish lines of supply for saving lives and property: Airports, Railroads, and Roads.
- 4. Reduce hazards suppress fire and contain hazardous materials.
- 5. Conduct safety and damage assessments.

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1.7.3 Health and Human Services:

- 1. Provide health and medical services acute care (hospital and EMS), chronic care (medical special needs and mental health) and execute patient evacuation and movement.
- 2. Maintain public health (food, water, vector control, food and water quality inspection, and surveillance).
- 3. Provide care and shelter, including animals.
- 4. Conduct mass fatality operations.

1.7.4 Infrastructure:

- 1. Stabilize and provide critical utilities water, sewer, power, communications, and natural gas.
- 2. Conduct debris clearance and disposal.

1.8 Limitations

Many variables govern the specific effects of an earthquake, from the amount of energy it releases and the location of its origin to the specific qualities of the soil and rock. Given these variables and the complexity of earthquake effects, no plan can possibly identify all considerations for a response. Consequently, the Regional Earthquake Plan is not intended to describe detailed procedures for tactical execution of response tasks; however, the plan does provide considerations that can be used to guide the execution of response and recovery operations.

Washoe County endeavors to make every reasonable effort in response to an earthquake and related hazards; however, resources may become overwhelmed by the magnitude of the disaster. While recognizing this possibility, the Regional Earthquake Plan is designed to help the Region fulfill its response function to its maximum capacity. The Regional Earthquake Plan is not intended to guarantee specific tasks will be done in a specific order or that the tasks will be done at all. No guarantee of a perfect response system is expressed or implied by the Regional Earthquake Plan, its implementing instructions, or procedures.

1.9 Planning Process

The Regional Earthquake Plan is the result of considerable effort and collaboration among Partners and stakeholders. Throughout the planning process, Partner-specific concerns were considered in the writing of the Regional Earthquake Plan and its supporting annexes. The Regional Earthquake Plan will be maintained and updated by participating Partners. In addition, the Partners use a web-based system available through WebEOC to further integrate regional operations and strengthen key redundancies.

1.9.1 Whole Community Preparedness/Planning

The "Whole Community" planning concept is based on recognizing it takes all aspects of a community to effectively prepare for, protect against, respond to, recover from, and mitigate against disasters. This includes all emergency management Partners, both traditional and nontraditional; the private sector; and the public, including survivors of an earthquake. In this sense, the Partners must plan for a wide variety of impacts to the communities within the Region. The Regional Earthquake Plan attempts to address a wide variety of operational concerns throughout the Region.

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1.10 Relationship to Other Plans

Numerous plans are used as guidance when necessary to augment the Regional Earthquake Plan.

The following federal authorities and plans guide emergency preparedness, response, and recovery at the federal level and provide support and guidance for state and local operations:

- *Presidential Policy Directive 8* describes the Nation's approach to preparing for the threats and hazards posing the greatest risks to the security of the United States.
- *National Preparedness Goal* describes the Nation's security and resilience posture through identifying key mission areas and core capabilities necessary to deal with great risks, using an integrated, layered, and all-of-Nation approach as its foundation.
- *National Preparedness System* provides guidance, programs, processes, and systems to support each component of the National Preparedness System to enable a collaborative, whole community approach to national preparedness to engage individuals, families, communities, private and nonprofit sectors, faith-based organizations, and all levels of government.
- *National Incident Management System (NIMS)* provides a consistent nationwide framework and comprehensive approach to enable government at all levels, the private sector, and nongovernmental organizations to work together to prepare for, prevent, respond to, recover from, and mitigate the effects of incidents regardless of their cause, size, location, or complexity.
- *National Response Framework (NRF)* serves as a guide to how state and federal government should conduct all-hazards response. It is built upon a scalable, flexible, and adaptable coordination structure to align key roles and responsibilities across the country.
- *National Disaster Recovery Framework* provides guidance to enable effective recovery support to disaster-impacted states, tribes, and local jurisdictions. It provides a flexible structure to enable disaster recovery managers to operate in a unified and collaborative manner.

The following state authorities and plans guide emergency preparedness, response, and recovery at the state level and provide support and guidance for state and local operations:

- *The Nevada State Comprehensive Emergency Management Plan (SCEMP)* is the foundation document for identifying the overarching roles and responsibilities of State, local, and tribal governments.
- *The Threat Hazard Identification Risk Assessment (THIRA)* is an all-hazards capability-based assessment tool. The THIRA allows the State to understand its threats and hazards and how the impacts may vary according to time of occurrence, seasons, locations, and community factors. The *THIRA* process helps the State identify capability targets and resource requirements necessary to address anticipated and unanticipated risks.
- *The State Disaster Recovery Plan* was developed in collaboration with the County to create a statewide plan to lead recovery efforts and serve as a template for future county-level recovery plans.

See *Regional Emergency Operations Plan Section 1.11: Relationship to Other Plans* for more details on the federal and state plans listed above.

See Section 6: Related Plans for a description of plans and functional annexes located in WebEOC.

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SECTION 2: SITUATION AND ASSUMPTIONS

Section 2 builds on the scope discussion in Section 1 by profiling the Region's earthquake risk environment, identifying specific planning considerations, and describing the predicate assumptions underlying the Regional Earthquake Plan. This section ensures that the Regional Earthquake Plan is tailored to the unique risks faced by the Region.



Section 2: Situation and Assumptions - Page 1

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2.1 Situation Overview

This section describes Washoe County in the context of the characteristics having implications for emergency management during and following an earthquake; it describes the Region's risk environment and includes general earthquake information and a summary of the built environment.

Hazard Levels in Washoe County				
Hazard Level	Description			
High risk	Wildland Fire, Flood, Earthquake			
Moderate risk	Energy Emergency, Criminal Acts and Terrorism, Severe Storms, Hazardous Materials Incident, Drought, Infectious Disease, Avalanche and Landslide			
Low risk	Transportation Incident, Radiological Waste Transport, Volcano			

See Washoe County Regional Hazard Mitigation Plan in WebEOC.

2.1.1 Community Profile

Washoe County is a 6,600 square-mile jurisdiction spanning portions of Nevada's western and northern borders with California and Oregon, respectively. The County parallels the eastern slope of the Sierra Nevada Mountains and includes such natural features as high desert, Lake Tahoe, Pyramid Lake, the Truckee River (which joins the two lakes), and the Humboldt-Toiyabe National Forest. The climate is mild with moderate precipitation and few temperature extremes.

In addition to the Cities of Reno and Sparks, Washoe County encompasses the Paiute Indian Tribal Council and the Reno-Sparks Indian Colony Tribal Council. Washoe County includes the unincorporated areas East Washoe Lake, the Virginia Foothills/Toll Road area, and the following 10 Census Designated Places:

- 1. Cold Springs
- 2. Gerlach-Empire
- 3. Incline Village Crystal Bay
- 4. Lemmon Valley Golden Valley
- 5. Nixon
- 6. Spanish Springs
- 7. Sun Valley
- 8. Sutcliffe
- 9. Verdi Mogul
- 10. Wadsworth

See *Regional Emergency Operations Plans Section 2: Situation and Assumptions* for additional information on the population of jurisdictions, tribes, and educational entities.

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2.1.2 Earthquake Information

To implement initial response and recovery strategies, an accurate picture of the potential scope of the earthquake is required. Quickly identifying the potential scope of damage following a major earthquake is critical to mounting an effective response; however, initially this may be extremely difficult because of limited communications capability, information overload, limited staff, and fragmented or conflicting damage reports. The Regional Earthquake Plan is based on projected impact scenarios driven by events on the earthquake faults in Northern Nevada that are believed to present the greatest risk.

The Regional Earthquake Plan assumes that it is better to form a quick picture of the potential scope of damage using a combination of actual street-level impact reporting and pre-event impact modeling, rather than total reliance on waiting two-to-three days for confirmed impact information. Immediately following an earthquake, it may be possible to establish an initial assessment of the impact using available analytical tools. This assessment will guide initial response activities towards those areas that are most likely to be seriously affected, given the location and magnitude of the earthquake, and shaking potential within Washoe County.

Key information about the earthquake includes:

- The source fault (e.g., Mt. Rose),
- Location of the epicenter,
- Magnitude,
- Shaking potential, and
- Length of shaking.

If Internet access is available through existing networks or satellite backup systems, information about the earthquake can be found at the United States Geological Survey (USGS) website at http://earthquake.usgs.gov/. The USGS also provides information on earthquake characteristics within minutes of the event. Washoe County has partnered with the Cities of Reno and Sparks to institute Code Red, a telephone notification system for use in times of crisis.

Shake maps can be used to identify areas where ground shaking is strongest and to estimate the potential for damage in those areas. Shake maps may vary significantly depending on the nature of the event; however, they provide an immediate means for a general assessment of impact. The USGS web site also provides shake map information based on actual events. This information is usually available via the Internet within 60 minutes of the event. Intensity maps describe the degree of shaking caused by an earthquake at a given place and decreases with distance from the earthquake epicenter.

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Fault Locations in the Truckee Meadows Area

Section 2: Situation and Assumptions - Page 4

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Mt. Rose Fault Magnitude 6.9 Shake Map

For planning purposes only: Planning Scenario ShakeMap for Mt. Rose Fault Zone Median ground motions on May 12, 2017, at 2:14:11 PM MDT, M 6.9, N39.34 W119.76, Depth: 9.0km



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	11-111	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

Section 2: Situation and Assumptions - Page 5



Intensity Map Contours (for planning purposes only)

Section 2: Situation and Assumptions - Page 6

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2.1.3 Built Environment

According to the *Washoe County Regional Hazard Mitigation Plan*, building stock data in FEMA's HAZUS-MH loss estimation software indicates a planning figure of roughly 237,000 buildings in Washoe County. These structures include over 201,000 housing units, of which approximately 58% are owner-occupied. Wood construction is predominant throughout the Region with significant numbers of reinforced masonry and manufactured housing as well. There are relatively few steel, precast, unreinforced masonry, or concrete buildings. With two major cities and numerous towns, Washoe County requires substantial physical infrastructure.

Critical Infrastructure in Washoe County				
Sector	Description			
Chemical facilities	The <i>Hazardous Materials Plan</i> (found in WebEOC) lists fixed facilities known to manufacture, store, use, and/or transport Extremely Hazardous Substances.			
Communications	There is a robust public safety telecommunications network in Washoe County, and Public Safety Answering Points (PSAPs) are operated by Washoe County and several local jurisdictions. A full range of commercial analog and digital telecommunications services is available.			
Dams	There are 97 dams in Washoe County. Of these dams, 14 are designated high-hazard and have emergency action plans.			
Defense	Active military facilities in the County include the Armed National Guard Washoe County Complex and RenoTahoe Airport Air National Guard base.			
Drinking water and wastewater systems	There are over 100 public water systems in Washoe County. The Truckee Meadows Water Authority (TMWA) provides residential, commercial, and industrial water services throughout Washoe County. There are three wastewater treatment plants and a wastewater reclamation facility, with other new plants in the future.			
Energy	The County has a geothermal plant at Steamboat and is an importer of energy. There is a power generation station at the Tracey Kinder-Morgan petroleum pipeline, and the Paiute and Tuscarora natural gas pipelines traverse Washoe County.			
Information technology	There are major fiber-optic transmission lines through information transmission corridors in Washoe County.			
Postal and shipping	In addition to the U.S. Postal Service, Washoe County is served by most major express shippers and numerous trucking companies.			
Public health and health care	The Washoe County Health District (WCHD) is a full-service public health agency covering Washoe County and the Cities of Reno and Sparks. The County has numerous acute-care medical facilities, including a Level II trauma center.			

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	Transportation
Air	The County is served by Reno/Tahoe International Airport plus 11 general aviation facilities ranging from RenoStead Airport to glider ports and landing strips.
Rail	Amtrak operates a passenger station in Reno. Active freight rail lines traverse southern and central Washoe County with a Union Pacific rail yard in Sparks. Rail lines traversing Reno and Sparks are used for the transport of numerous hazardous materials. There are eight railroad bridges in Washoe County.
Road	There are 222 bridges in Washoe County. Key corridors in Washoe County are Interstate 80 (west to Sacramento and San Francisco, east to Salt Lake City) and Interstate 580/Highways 395 (south to Los Angeles, north to Oregon, Washington, and Canada) and 95 (south to Las Vegas). Interstate 80 and Interstate 580/Highway 395 are of particular concern as high-volume hazardous material transportation routes.

See *Annex A: Built Environment* for additional details on the built environment and fault maps with overlays showing the infrastructure elements described in the table above.

2.1.4 Access and Functional Needs

Washoe County is home to population cohorts that may be particularly vulnerable to the social, health, economic, or other impacts of earthquakes. The Washoe County Health District maintains a list of organizations dedicated to helping at-risk individuals during emergencies. In addition, the Washoe County Health District ensures that assisted living, memory care, skilled nursing, and rehabilitations facilities maintain Alternate Care Site Plans to implement if the staff and residents need to evacuate the facilities.

See Regional Emergency Operations Plans Section 2: Situation and Assumptions for quantities of at-risk populations in Washoe County.

2.2 Planning Assumptions

A large magnitude earthquake will overwhelm the Region's response capabilities and will immediately escalate the activation of the Regional Emergency Operations Center (REOC). An earthquake in the Carson Range will affect two states and two incorporated municipalities, impacting the availability and allocation of mutual aid assistance and further requiring close interagency coordination to ensure the appropriate prioritization of critical resources. Additional resource assistance will likely come from outside the state using the interstate Emergency Management Assistance Compact (EMAC) agreement. Washoe County will request state resources, but resource availability will depend on the location of the earthquake's epicenter and the impact to neighboring jurisdictions. The State of Nevada and FEMA Region IX's capability to respond will be compromised.

Although substantial research and information went into developing the Regional Earthquake Plan, it is almost always necessary to rely on certain assumptions that, along with hard facts, provide necessary

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input to plan development. For the purposes of developing the Regional Earthquake Plan, the following statements are initially accepted at face value:

- Earthquakes represent actual sources of potential human, economic, and property loss in Washoe County. Earthquakes may produce a minor disaster (presenting minimal need for state and/or federal assistance), a major disaster (requiring recovery and possibly some response assistance), or a catastrophic disaster (requiring substantial and immediate state and/or federal response assistance as well as long-term recovery assistance).
- An earthquake requiring joint incident management may occur with little or no warning and may escalate rapidly.
- Regional Partners may exhaust or expect to exhaust all available resources before requesting outside assistance.
- At no time during autonomous or joint incident management activities will Regional Partners forfeit operational or administrative authority over the incident management activities within their areas of responsibility.
- Should joint incident management be necessary, Washoe County will activate the Regional Emergency Operations Center (REOC), and Regional Partners will interface with the REOC in accordance with the Regional Earthquake Plan and the *Regional Emergency Operations Plan* (found in WebEOC).
- At the time of Regional Earthquake Plan activation, individuals and organizations will be familiar with the Regional Earthquake Plan and will competently execute the responsibilities it assigns to them.
- Should federally recognized Tribal Nations be involved in an incident, the Regional Partners will assist as needed while respecting their status as sovereign nations.
- At all times—but particularly in the context of joint incident management operations— the Regional Partners will assiduously monitor and document all costs incurred to facilitate earthquake recovery costs and fiscal transparency.

2.2.1 Critical Assumptions for Each Objective

Following is a list by Objective Area of the Critical Assumptions used in the Regional Earthquake Plan planning process.

2.2.1.1 Emergency Management Organization, Coordination, and Communications

- 1. Activate an emergency management structure that manages resource shortages.
 - Large earthquakes will produce intense regional competition for resources.
 - The state and federal governments will immediately begin mobilization of resources; however, it may take time for resources to arrive. For example, Federal United States Army Reserve teams may take 24 to 48 hours to arrive in the affected areas.
- 2. Establish and maintain functional and interoperable communications for responders.
 - Communications networks, including public telephone networks, wireless systems, radio and television systems, and Internet service may be interrupted, hampering emergency response capabilities. Radio transmitter/repeater sites may be non-functional.

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- Limited operational state and local microwave-based communications may be overloaded with very high volumes of emergency responder traffic.
- Many agencies and organizations, including news media and non-governmental organizations, have plans to use the same back-up communications, including walkie-talkies and satellite phones.
- Amateur Radio Emergency Service (ARES), a subset of the American Radio Relay League (ARRL), will focus on emergency communications but may be delayed in deployment because of hazards and roadway and bridge damage.
- Limited mass battery charging capability will restrict responder communications.
- 3. Validate and provide internal and external public messaging.
 - The demand for emergency public information will be immediate and will increase.
 - Warning systems will be seriously impaired by power and phone outages.
 - Established Joint Information Centers (JIC) may not be accessible.
 - Washoe County has partnered with the Cities of Reno and Sparks to institute Code Red, a telephone notification system for use in time of crisis.

2.2.1.2 Emergency Services

- 1. Perform emergency response operations and provide safety, security, and support.
 - Damage and disruption will necessitate deployment of law enforcement resources to maintain public order and secure dangerous sites.
 - Supporting emergency responders includes monitoring their health and mental status and collecting injury and/or exposure information.
 - Evacuation may be limited due to non-passable roadways and vehicle-borne evacuees with vehicles containing limited gas.
 - It may be necessary to rescue individuals from immediate, life-threatening situations.
 - People with functional needs may be limited in their ability to take emergency protective actions and will require additional assistance.
 - There will be scores of injured, trapped, or deceased casualties throughout the city. This may overwhelm emergency resources and preclude the traditional direct response to each individual emergency or call for assistance.
- 2. Conduct search and rescue operations.
 - Search and rescue needs after the earthquake will exceed the local resources. Many of the current search and rescue personnel are also responsible for firefighting, hazardous materials, and emergency medical services (EMS).
 - Washoe County Sheriff's Office has a Search and Rescue unit comprised of volunteers and two full-time employees. The Cities of Reno and Sparks have their own Search and Rescue units. Truckee Meadows Fire and Rescue does not have a dedicated unit but have the expertise, skills, and tools to perform search and rescue. During an earthquake, the teams will convene at the REOC under the Operations Section Chief who will coordinate the search and rescue groups' priorities.
 - Pre-determined Washoe County Search and Rescue teams consist of the following:

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- The Incident Management Team manages planning, organizing, and logistics.
- Washoe County Search and Rescue is a general team for shore support and water rescue.
- The HASTY team, along with a small K-9 group, is for back country search and rescue, water rescue, and diving. REMSA sends a unit for assistance.
- Special Vehicle Unit (SVU) has snowmobiles and water boats.
- The K-9 Team can be secured for the K-9s to commence search and rescue in crumbled buildings after the facilities are assessed and considered safe.
- Air Squadron supplies their own aircraft to search from the air.
- The Regional Aviation Enforcement Unit (RAVEN) has one full time pilot and three part-time pilots; they have several helicopters.
- The National Guard will assist as needed with Search and Rescue after a disaster is declared at the request of the Governor. They will be directed by the Operations Section Chief.
- Call handling for Search and Rescue is performed by Dispatch at the request of the Division of Emergency Management or the Washoe County Sheriff's Office.
- 3. Establish lines of supply for saving lives and property: Airports, Railroads, and Roads.
 - Landslides will cause roads to be impassable and railroads will bend.
 - Damaged roads that are impassable for weeks will impede the typical ground damage assessments.
 - Numerous aftershocks will follow a large earthquake and may create additional damage or other cascading effects.
 - An earthquake occurring when the ground is saturated from rain may trigger landslides throughout steep slope areas.
 - Damage to transportation systems will require alternative solutions to evacuate residents, the injured, and the medically fragile, as well as the movement of response personnel and resources into Washoe County.
 - Damaged or collapsed transportation network structures may create areas of isolation throughout Washoe County.
 - While roads may be impassible to automobile traffic, other transportation options including motorcycles, mopeds, and bicycles may serve as a viable means of getting around locally.
 - If the earthquake triggers a fuel disruption from damaged or ruptured pipelines or loss of energy to power fueling stations, bicycles may become the most practical means of transportation for the public.
 - Aviation will be a critical asset during the response phase of the disaster.
 - Existing railroads cross faults.
 - Critical routes may require temporary modification of roadbed alignments onto adjacent land to navigate around debris and obstacles.
- 4. Reduce hazards suppress fire and contain hazardous materials.
 - The earthquake may cause immediate, simultaneous fires from gas and fuel ruptures. Damage to fire suppression systems and water pipelines, difficulty accessing fire incidents, and limited resources will hamper response efforts.
 - Damage to water and communications systems will challenge fire-fighting operations.
 - Hazardous material incidents will occur after an earthquake, such as chlorine gas and ammonia releases.

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- 5. Conduct safety and damage assessments.
 - Disrupted communications systems, overwhelmed first responders, and the overall magnitude of the earthquake will slow the initial situation assessment.
 - The Washoe County Community Services Department will require additional support from licensed engineers, architects, and other qualified inspectors to assess thousands of public and private buildings and infrastructure. The Community Services Department has six building inspectors and three plan reviewers.
 - Damage in high-rise areas will generate the need to respond to fires on upper floors, people trapped in elevators, people with mobility challenges who need to evacuate but cannot use steps, and injuries in high-rise areas caused by falling glass and other debris.

2.2.1.3 Health and Human Services

- 1. Provide health and medical services acute care (hospital/EMS), chronic care (medical special needs and mental health) and execute patient evacuation and movement.
 - Local medical facilities may be damaged. Surviving hospital capacity may be inadequate to treat casualties and other medical emergencies, requiring that some severely injured patients be relocated to facilities outside Washoe County and the Region; however, relocation may be limited by impacts to the transportation system.
 - Demand will exceed hospital capabilities; the system is currently taxed under normal conditions.
 - Hospital functionality may be decreased by an estimated 30% and as much as 75 % in some hospitals.
 - Shortages will exist in hospital equipment, including beds and prescription medications affecting patient care.
 - For the remaining hospitals to continue operation, they will immediately need water, fuel, pharmaceuticals, and personnel.
 - REMSA has approximately 45 ambulances in Washoe County.
 - Initially, an estimated 40% of medical special needs patients will require assistance immediately with an additional 40% requiring care within 72 hours and the remaining 20% of the population requiring care within the first week.
 - Local jurisdictions will require significant amounts of state and federal resources to care for the large numbers of survivors with special medical needs.
 - Patient tracking systems among health care system components are not fully integrated.
 - The ability to coordinate and control the flow of all patients requiring movement is limited.
 - Many roads, highways, and bridges will be impassable in the first few days after the earthquake because of damage and debris on the roads, hampering patient movement.
- 2. Maintain public health (food, water, vector control, food and water quality inspection, and surveillance).
 - Demand for food and water will exceed capabilities.
 - Resources to move the water, such as water tenders, are very limited and will need coordination.

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- Massive assistance in the form of convergent volunteers, equipment, materials, and money will continue to flow to Washoe County, providing urgently needed resources but creating coordination and logistical support challenges.
- Veterinary care capacity is inadequate; vector monitoring and public health support staff will exist.
- 3. Provide care and shelter, including animals.
 - The demand for emergency shelter may initially exceed availability.
 - The demand for emergency shelter may initially exceed capacity to inspect buildings and provide the resources and staff required to open fully functional shelters.
 - Each shelter must be inspected for structural damage prior to opening which could delay access to temporary shelter options.
 - Capacity to shelter and care displaced residents may be exceeded, forcing relocation to other areas outside of Washoe County.
 - Some facilities may require modification to accommodate persons with functional needs.
 - Shelter planning considerations will include care for displaced pets and domestic animals.
 - A large percentage of the displaced population will have pets.
 - The American Veterinary Medical Association (AVMA) standardized pet calculations approximate that there are 103,000 animals owned in the Region (69,639 dogs, 46,063 cats, and 1,269 horses).
 - Washoe County will not have sufficient housing to accommodate the number of displaced persons and surge of emergency workers managing the response and recovery efforts.
 - Hundreds of residents as well as tourists and commuters may be stranded due to failure of transportation systems and may require shelter.
 - Families may become separated and require assistance with reunification.
 - Mass care operations will need to address potable water, sanitation disposal, security, mental health, and functional needs.
 - There will be a significant number of mental health distress/disorders.
- 4. Conduct mass fatality operations.
 - The number of potential fatalities may exceed existing Washoe County resources for handling deaths and remains. Las Vegas will send assistance as well as the National Guard.
 - Shortages in equipment and material to support and identify fatalities will exist.
 - No State Coroner or Medical Examiner exists; thus, Washoe County must rely on the mutual aid system or state and federal resources (e.g., law enforcement, National Guard, DMORT, etc.).
 - Within Washoe County, a surge capacity for storage exists:
 - Medical Examiner's Office 180-220
 - \circ Mobile Morgs 1 with a capacity of 16
 - Funeral Homes 100 maximum

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2.2.1.4 Infrastructure

- 1. Stabilize and provide critical utilities water, sewer, power, communications, and natural gas.
 - Critical infrastructure systems will be severely damaged and may not be functional for days, months, or years. Damage to these critical systems will also become a significant limiting factor for hospitals, care facilities, fire suppression, and rescue efforts.
 - Washoe County's ability to provide essential services will be impaired.
 - There will be a reduction in emergency service capacity due to injured or unavailable responders or damage to facilities and equipment and emergency services will be overwhelmed. There are not enough public safety resources to immediately address all, or even a majority of, the life safety needs expected.
 - Damage to fire suppression systems, water pipelines, and transportation networks will cause difficulty in accessing and controlling fire incidents.
 - The 911, 311, and 211 phone systems, if operational, will be overloaded.
 - Washoe County's communications and information technology systems may be intermittent or not operational.
 - Facilities and structures may be damaged preventing occupancy and access to essential records and equipment.
 - Washoe County contains natural gas transmission lines that cross faults and consequently rupture.
 - Chemicals needed for water treatment/ decontamination may not be readily available because of hazardous materials restrictions and transportation infrastructure damage.
 - Imported water supplies will be very limited following the event. Water supply will be restricted to storage at the time of the event and the capability to produce groundwater.
 - Water needed for firefighting may be required to meet certain quality standards regarding chemical and contamination levels.
 - Concern will arise over hooking up to recycled and/or contaminated supplies.
 - Availability of water that meets standards will be a problem.
 - Distribution systems and hydrants will be inoperable.
 - Washoe County may be releasing untreated sewage into the Truckee River due to damage to the system and lack of power supply, which would directly affect environmental conditions in the river as well as water supplies through contamination of groundwater spreading grounds over a long period of time.
 - There are not enough stockpiled emergency supplies available to restore power after the event.
- 2. Conduct debris clearance and disposal.
 - Resources to remove debris will initially be limited as Washoe County mobilizes assets and available contractors.
 - The earthquake will create tons of debris in the impacted area.
 - Most of the landfills are near capacity and debris removal efforts will require an additional amount of capacity that exceeds that which is available.

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SECTION 3: CONCEPT OF OPERATIONS

Section 3 describes the response and recovery priorities and lists earthquake-specific response and recovery tasks.

3.1 General

Emergency Management staff in Washoe County and Regional Partners maintains comprehensive countywide emergency management programs to ensure preparations are robust to respond to and recover from emergencies and disasters. The Regional Emergency Operations Center (REOC) staff is responsible for coordinating their efforts with city and tribal government as well as with private agencies having a role in emergency management. When a major earthquake occurs in the Region, the Washoe County Crisis Action Team (CAT) gives recommendations to the Washoe County Manager, and the County Manager determines if it is necessary to activate the REOC.

When an earthquake occurs and it is determined the normal organization and functions of local government are insufficient to effectively meet response requirements, the Emergency Manager from the impacted jurisdiction may activate the Regional Earthquake Plan as deemed appropriate for the situation or at the request of an on-scene Incident Commander. In addition, Regional Partners may partially or fully activate and staff the REOC.

If it is determined that additional local, state, or federal aid is necessary to respond to an earthquake, the Policy Group will declare a local emergency, and a formal request will be sent to Nevada Division of Emergency Management (NDEM) requesting the Governor to declare a State of Emergency. All mutual aid requests must be coordinated in accordance with the Nevada Emergency Management Assistance Compact (NEMAC). Washoe County maintains mutual aid agreements with various agencies and organizations as well as with neighboring jurisdictions for additional resources and support. The Operations Section Chief with approval by the REOC Director requests and coordinates for these resources.

Washoe County formally adopted the National Incident Management System (NIMS) in 2005. NIMS provides a consistent nationwide framework and comprehensive approach to enable government at all levels, the private sector, and nongovernmental organizations to work together. A core component of NIMS is the Incident Command System (ICS). ICS is a management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, staff, procedures, and communications operating within a common organizational structure. The processes and procedures presented in the Regional Earthquake Plan are consistent with NIMS and ICS.

See *Regional Emergency Operations Plan, Section 3: Concept of Operations* for details on Incident Management, Modes of Operations, Escalation to Regional Emergency Operations, Unified Operations, and Multi-Jurisdictional Coordination.

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3.2 Response and Recovery Priorities

Washoe County Emergency Management will undertake response activities within the Region immediately after an earthquake. The response begins with situation assessment and reporting activities. The Region's response priorities are:

- 1. Lifesaving:
 - Efforts to save lives and operations to minimize risks to public health and safety,
- 2. Property:
 - Efforts to reduce impacts to critical infrastructure and minimize property damage,
- 3. Cultural and Environmental Degradation:
- Efforts to mitigate long-term impacts on the environment and cultural resources, and
- 4. Coordination among Appropriate Stakeholders:
 - Efforts to engage and coordinate with partners and stakeholders.

Recovery operations are the actions taken to restore vital services, help residents resume self-sufficiency, and help communities return to pre-earthquake or "new normal" conditions. Short-term recovery involves the restoration of critical services, such as communications, water supply, sewage service, emergency medical capabilities, and electricity, as well as garbage and debris removal. These functions must occur early in the earthquake response to support the life, health, and safety of the population and to support other emergency operations.

The Region's recovery priorities are:

1. Initial Damage Assessment:

Determine structural impacts to the Region.

- 2. Debris Removal:
 - Coordinate debris clearance, collection, and removal.
- 3. Infrastructure Restoration:
 - Facilitate restoration of critical infrastructure and resources.
- 4. Coordination among Appropriate Stakeholders:
 - Lead efforts to engage and coordinate with partners and stakeholders.
- 5. Restoration of Essential Utilities: Restore services within a short-term timeline.
- Restoration of Program Essential Functions: Ensure continuity of operations and preserve essential facilities, equipment, and records.

See Regional Disaster Recovery Framework Plan in WebEOC.

3.3 Response and Recovery Tasks

The following four tables listing response and recovery tasks correspond to the objectives listed in Section 1.7 Goals and Objectives and in Section 2.2 Planning Assumptions. Implement the tasks in the four tables simultaneously after an earthquake.

3.3.1 Emergency Management Organization, Coordination, and Communications

Timing Goal	Task	Responsibility				
1. Activ	1. Activate an emergency management structure that manages resource shortages.					
First 12	Establish a unity of effort among all levels of the emergency	REOC Director,				
Hours	response community.	Management Section				
	Concentrate emergency management efforts on supporting ongoing	REOC Director,				
	on-scene incident management at major incidents, reinforcing the	Management Section				
	logistical support being requested.	and Logistics Section				
		Chief				
	Implement Unified Coordination Group (UCG) to coordinate the	REOC Director,				
	state and federal support to the impacted jurisdictions.	Management Section				
	Gather and synthesize information for an emergency declaration.	REOC Director,				
		Management Section				
	Convene Washoe County Crisis Action Team (CAT) to advise the	REOC Director,				
	County Manager on activation of the REOC.	Management Section				
	Use WebEOC as the primary means of crisis information sharing	Documentation Unit				
	and documentation. In the event WebEOC is not available, use paper	Leader, Planning				
	forms.	Section				
First 24	Develop an emergency declaration and include objectives, priorities,	REOC Director,				
Hours	and emergency powers implemented.	Management Section				
	Prepare a situation status report listing critical resource shortfalls,	Planning Section				
	including emergency response personnel, equipment, and supplies.	Chief				
	Initiate a regular status reporting and resource requesting process	Liaison Officer and				
	between area commands (if established), major incident commands	Emergency Mgmt.				
	(if established), and state and federal counterparts offering	Coordinator,				
	coordinated assistance.	Management Section				
	Assess critical resource shortfalls and begin requesting support	Resource Status Unit				
	through mutual aid.	Leader, Ops. Sec.				
	Prioritize and manage competition for limited resources region wide.	Logistics Section Chief				
	Determine if Continuity of Government and Continuity of	REOC Director,				
	Operations Plans (COOP) need activated. (Activation of	Management Section				
	Departmental COOP is determined by the Assistant County	0				
	Manager in charge of that department.)					
	Designate staging areas and plan to accommodate support personnel.	Facilities Unit				
		Leader, Logistics				
		Section				
	Recall Washoe County staff as needed.	Human Resources				
		Unit Leader,				
		Logistics Section				
	Implement a recovery structure to begin coordinating issues of	REOC Director,				
	community recovery, business recovery, re-establishing government	Management Section				
	services, and transition to interim and long-term housing solutions.					

Within	Establish objectives and priorities established and emergency power	REOC Director,
48	implemented for recovery.	Management Section
Hours	Arrange for the REOC to assume responsibility for supporting	REOC Director,
110015	incoming mutual aid and convergent resources, relieving field-level	Management Section
	public safety workers to focus on providing sustained rescue,	Management Section
	firefighting, paramedic, and law enforcement services.	
		Logistics Section
	Process ongoing logistical resource requests for emergency services	Logistics Section Chief
	and mutual aid needs to support incident management.	
	Conduct an ongoing review in REOC of current situation reporting	REOC Director,
	and resource requesting processes and revise as available systems	Management Section
	require.	and Logistics Section
TT 7'.1 '		Chief
Within	Begin transitioning from immediate emergency response efforts to	REOC Director,
72	sustained operations.	Management Section
Hours	Implement protocols to track volunteers and donations management.	Services Branch,
		Logistics Section
	Designate resource staging areas and plan to accommodate out-of-	Facilities Unit
	area personnel and resources for recovery efforts.	Leader, Logistics
		Section
After	Review incident status reports to prioritize incident commands that	REOC Director,
72	can begin suspending emergency response operations and transition	Management Section
Hours	to sustained response and recovery operations.	
	Assess Washoe County Continuity of Government and status of	REOC Director,
	essential services.	Management Section
	Reinforce cost tracking guidance for Washoe County responders.	Cost Unit Leader,
		Finance Section
	Plan for relocation of displaced Washoe County departments and	Ground Support and
	staff.	Transportation Unit
		Leader, Logistics
		Section
2. Esta	blish and maintain functional and interoperable communications fo	or responders.
First 12	Use wireless priority service (WPS) for wireless and wire line	Aux. Emer. Comm.
Hours	telephone communication if available.	Unit Leader,
		Logistics Section
	Use Amateur Radio Emergency Services (ARES) to assist with	Aux. Emer. Comm.
	emergency communications.	Unit Leader,
		Logistics Section
First 24	Prepare a situation status report on the condition of communications	Communications
Hours	systems, including public switched telephone network and wireless	Unit Leader,
	systems, public safety radio systems including 800 MHz, VHF,	Logistics Section
	UHF, and amateur resources, 911, 311, 211, Internet and satellite	
	services, amateur radio, and non-technological based	
	communications systems.	
Within	Prioritize restoration of interoperable communications.	Communications
48		Unit Leader,
Hours		Logistics Section
110415		

3. Valio First 12	date and provide internal and external public messaging. Determine which government jurisdiction is handling the earthquake	REOC Director,
Hours	response to identify the appropriate Public Information Officer	Management Section
Tiours	(PIO) to take the lead and notify PIOs of the assignment.	Management Section
	Assess the need to activate the Joint Information Center.	PIO, Management
	Assess the need to activate the joint information Center.	Section
	Establish mahile on sotallite Joint Information Contar if accessory	
	Establish mobile or satellite Joint Information Center if necessary.	PIO, Management Section
	Gather emergency information on the scene and convey to the	PIO and REOC
	REOC Director. The PIO and REOC Director work together to	Director,
	determine what information is necessary for the public to know and to create any supporting graphics or documents.	Management Section
	Begin public information messaging regarding recommended	PIO, Management
	personal protective actions, safe congregation points, and	Section
		Section
	community assistance needed. Use Code Red to alert residents.	
	Determine information-sharing with other jurisdictions, including	PIO, Management
	Cities of Reno and Sparks.	Section
	Gather information on evacuations, animal rescue, or other	PIO, Management
	emergency services.	Section
First 24	Establish Washoe311 for communicating with the public and partner	PIO, Management
Hours	with applicable agencies to acquire accurate and timely information	Section
	to answer inquiries from the public.	
	Drop all vetted, public information into a 311/Fire Chat. The after-	PIO, Management
	hours service has access to this chat, so it will always have the most	Section
	current information.	
	The PIO of the responding agency and REOC Director will	PIO and REOC
	communicate throughout the earthquake. Washoe311 will only	Director,
	convey information that is designated as public via Twitter or a	Management Section
	specific Teams Chat.	
	Follow social media and respond as appropriate.	PIO, Management
		Section
	Initiate regular news briefings to inform residents on Washoe	PIO, Management
	County operations, steps they can take, services available to them,	Section
	ongoing rumor control efforts, and ways in which the community	
	can help.	
Within	Provide information to Nevada 211 so the staff can appropriately	PIO, Management
48	and accurately answer questions.	Section
Hours	5 1	
Within	Use Joint Information Center to provide coordinated emergency	PIO, Management
72	information to the public.	Section
Hours		Section
	Produce, regularly update, and distribute a disaster "Fact Sheet" to	DIO Managamant
After		PIO, Management
72	the media, people in shelters, field response personnel, and citizens.	Section
Hours		

3.3.2 Emergency Services

Timing Goal	Task	Responsibility
1. Perform emergency response operations and provide safety, security, and support.		
First 12 Hours	Direct and assist immediate life-saving rescue operations, emergency medical service, fire suppression, hazardous materials response, and maintain public order.	Operations Section Chief
	Gather rapid damage assessment information, identifying areas affected, major incidents, and operational status of critical services.	Damage Assessment Unit Leader, Planning Section
	Deploy law enforcement resources to support response activities and maintain law and order.	Operations Section Chief
	Ensure security (public safety and law enforcement) within the affected areas for the safety of first responders to conduct firefighting, search and rescue, and other emergency response operations.	Operations Section Chief
	Establish perimeter control around unsafe areas.	Operations Section Chief
	Establish security at critical facilities.	Operations Section Chief
	Determine if a curfew should be established.	City Managers or County Manager (Management Leadership Team)
	Provide access to resources for emergency responders (e.g., fuel, transportation) to perform operations.	Logistics Section Chief
	Activate the Community Emergency Response Team (CERT) to assist with assigned tasks as needed.	Logistics Section Chief
	Designate staging areas and begin planning to accommodate support personnel.	Logistics Section Chief
First 24 Hours	Prepare a situation status report describing emergency response operations and safety and security issues.	Operations Section Chief
	Work with Nevada Division of Emergency Management to request out-of-state mutual aid (EMAC).	REOC Director, Management Section
Within 48 Hours	Commit resources to support public safety by assisting incoming employees and gathering/distributing convergent resources from less-affected parts of Washoe County and out-of-area state and federal resources.	Logistics Section Chief
	Provide support to emergency responders, including monitoring their health and mental status and collecting injury information.	Operations Section Chief
Within 72 Hours	Review and enhance security plans to maintain public order.	Management Section Military Liaison
After 72	Monitor ongoing rescue operations and other emergency measures	Operations Section
----------	--	-----------------------------
Hours	including life safety, fire suppression, hazardous materials	Chief
	containment, and maintaining law and order.	
	Monitor air quality, hazardous materials spills, and other	Planning Section
	environmental situations; address risks.	Chief
2. Cond	uct search and rescue operations.	
First 12	Search and Rescue teams (from Washoe County Sheriff's Office	Operations Section
Hours	and Reno, Sparks, and Washoe County Fire Departments) convene	Chief
	at the REOC to coordinate priorities.	
	Make a quick assessment. Gather rapid damage assessment	Operations Section
	information to identify areas to conduct search and rescue	Chief
	operations.	
First 24	Assess the situation, establish goals, and develop a plan.	Operations Section
Hours		Chief
1100110	Prepare a situation status report with location and estimates of	Operations Section
	numbers of people trapped in collapsed structures. Review Regional	Chief
	Search and Rescue Plan.	Chief
Within	Ensure Washoe County Sheriff's Office provides a resource for	Operations Section
48	search and rescue under Unified Command and coordinates	Chief
Hours	priorities.	Cilici
	lish lines of supply for saving lives and property: Airports, Railro	ads and Roads
First 12	Assess the condition of the transportation system and develop	NDOT Unit Leader,
Hours	alternatives for moving critical resources into Washoe County.	Operations Section
110015	Utilize air operations to procure and deliver commodities into the	Reno Tahoe Airport
	affected area if roads and rail are not available.	Authority Unit
	anceled area in roads and rail are not available.	Leader, Operations
		Section
	Facilitate the movement of residents locally and across the Truckee	Ground Support and
		Transportation Unit
	River after immediate life safety issues are addressed and stabilized.	*
	staomzeu.	Leader, Logistics
First 24		Section RTC and NDOT Uni
	Prepare a situation status repost describing status (open, partial	
Hours	closure, or full closure) of roads, bridges, tunnels, under/over	Leaders, Operations
W/ 41 to	passes, primary service streets and bus lines.	Section
Within	Prioritize transportation resources to repair or restore roads,	RTC and NDOT Uni
48	bridges, tunnels, under/over passes, primary service streets and bus	Leaders, Operations
Hours	lines.	Section
Within	Evaluate the need to designate specific routes into Washoe County	RTC and NDOT Unit
72	for critical relief supplies. Consider designating specific lanes for	Leaders, Operations
Hours	express bus service.	Section
	ce hazards - suppress fire and contain hazardous materials.	
First 12	Direct fire suppression for existing structure fires and anticipate fire	Operations Section
Hours	spread based on conditions and historic precedent.	Chief
	Implement alternate fire suppression water sources.	Operations Section
		Chief
		1

First 24	Prepare a situation status report describing location and extent of	Operations Section
Hours	incidents including fires, landslides, and hazardous materials	Chief
nouis	incidents.	Cilici
5. Cond	luct safety and damage assessments.	
First 12	Gather rapid damage assessment information, identifying areas	Damage Assessment
Hours	affected, major incidents, and operational status of critical services.	Unit Leader,
110 010		Planning Section
First 24	Conduct assessments to determine whether structures are safe or in	Damage Assessment
Hours	need of repair or demolition. Coordinate the review of buildings	Unit Leader,
	with local damage assessment teams based on priority ranking.	Planning Section
	Inspect hospitals and care facilities, police and fire stations,	-
	emergency operations centers, water and wastewater facilities, and	
	schools first. Hire outside engineers and contractors as necessary.	
Within	Initiate damage assessment of Washoe County facilities, with	Damage Assessment
48	priority for facilities critical to response operations.	Unit Leader,
Hours		Planning Section
	Prepare a situation status report condition of critical public	Damage Assessment
	buildings, such as police and fire facilities, government buildings,	Unit Leader,
	correction facilities, schools, and essential private business	Planning Section
	facilities. Based on damage assessments, establish priorities for the	
	repairs of life safety issues first and then others.	
	Anticipate and support initial damage assessment visits by state and	Damage Assessment
	federal officials wanting to confirm the immediate and long-term	Unit Leader,
	recovery needs of Washoe County for their out of-area resources.	Planning Section
	Advise residents and Community Emergency Response Team	Damage Assessment
	(CERT) volunteers to complete the automated Damage Assessment	Unit Leader,
	Web Capture and Reporting application to enter damage reports	Planning Section
	received from the public via the telephone. Forward initial damage	
	reports to the proper jurisdictions' building inspectors for follow-up	
	and archive for FEMA reporting, historical records, and	
	reimbursement.	
	Translate damage assessment information into initial damage	Damage Assessment
	estimates required by FEMA.	Unit Leader,
		Planning Section
Within	Implement a process to allow limited entry where safe for recovery	Damage Assessment
72	of personal items and mental health counseling for people whose	Unit Leader,
Hours	homes have been red tagged.	Planning Section
After 72	Begin widespread safety and damage inspections of homes and	Damage Assessment
Hours	businesses.	Unit Leader,
		Planning Section

3.3.3 Health and Human Services

Timing Goal	Task	Responsibility		
1. Provi	1. Provide health and medical services (hospital and EMS), chronic care (medical special needs			
and n	and mental health) and execute patient evacuation and movement.			
First 12 Hours	Deploy emergency medical services to major incidents.	Emergency Response Branch, Operations Section		
	Establish collection points for initial treatment of the injured.	Hospital/Inter- Hospital Coordination Council (IHCC) Unit Leader, Operations Section		
	Assess conditions of medical facilities to identify facilities that can open and accept patients. Evaluate the need for mobile or temporary hospitals and initiate set-up.	Hospital/IHCC Unit Leader, Operations Section		
	 Monitor and address identified issues regarding patient load balancing among hospitals and the related patient transport system challenges. When activated, the Hospital/IHCC Unit Leader at the REOC will act as liaison and representative of the IHCC to staff the REOC to coordinate health and medical issues related to hospitals. Establish a scene management structure so when additional help arrives, it may be efficiently and effectively deployed. 	Hospital/IHCC Unit Leader, Operations Section		
	Identify people with special support requirements and transfer to appropriate care facilities.	Hospital/IHCC Unit Leader, Operations Section		
	Identify at-risk populations, notify them, and direct appropriate group to begin to evacuate them if necessary.	Care and Shelter/ARC Unit, Ops. Sec.		
First 24 Hours	Prepare a situation status report describing locations and status of 1) medical care points and 2) casualty collection sites.	Hospital/IHCC Unit Leader, Operations Section		
	Activate Alternate Care Site Plans for hospitals, rehabilitation centers, memory care facilities, and assisted living facilities.	Hospital/IHCC Unit Leader, Operations Section		
Within 48 Hours	Coordinate resources among pharmacies to assist citizens in gaining access to essential prescription medications, including medical support devices. Assess availability of refrigeration for prescriptions and medications.	Hospital/IHCC Unit Leader, Operations Section		

Within	Support hospital and other medical facility re-supply efforts.	Hospital/IHCC Unit
72		Leader, Operations
Hours		Section
	Re-evaluate mass care needs based on ongoing aftershocks and	Hospital/IHCC Unit
	subsequent damage.	Leader, Operations
		Section
After 72	Establish appropriate public health surveillance protocols.	Health Unit Leader,
Hours		Operations Section
2. Main	tain public health (food, water, vector control, food and water qua	lity inspection, and
surve	illance).	
First 12	Ensure life sustaining essential services and goods are available to	Support Branch
Hours	the public, such as food, water, emergency sanitation facilities, and	Leader, Logistics
	medical care.	Section
	Assess critical resource shortfalls and begin requesting support	REOC Director,
	through Mutual Aid and Nevada Division of Emergency	Management Section
	Management. Consider a 14-day period. Assess condition of	
	transportation system and develop alternatives for moving critical	
	resources into the city.	
First 24	Prepare a situation status report describing status of health and	Health and
Hours	medical services.	Hospital/IHCC Unit
		Leaders, Operations
		Section
	Engage the private sector, non-governmental, and community- and	Logistics Section
	faith-based organizations to assist the impacted community; attempt	Chief and Operations
	to reach individuals with disabilities and others with access and	Section Chief
	functional needs, including children and the elderly. Assistance	
	may include mass care, sheltering, animal control, damage	
	assessment, disaster welfare inquiry, financial assistance, food	
	distribution, transportation, and emergent volunteer staffing and	
	donations management.	
Within	Conduct outreach for situation status and resource needs for	Logistics Section
48Hours	affected facilities needing support, including ancillary medical	Chief and Operations
	institutions, transit sites, educational centers, commercial buildings,	Section Chief
	and sites of historic or cultural significance.	
Within	Open relief supply and food distribution points other than the	Food and Supply
72	emergency shelters and evacuation centers.	Unit Leader,
Hours		Logistics Section
After 72	Survey all licensed food establishments, including the emergency	Health Unit Leader,
Hours	shelters and evacuation centers, feeding sites, and disaster kitchens	Operations Section
	to ensure there are no unsafe food handling or other sanitation or	
	safety concerns.	
L	1	

First 12	Identify potential sites for evacuation centers to accommodate	Care and
Hours	displaced populations while emergency shelters are being opened.	Shelter/American Red Cross (ARC) Unit Leader, Operations Section
	Assess conditions at designated emergency shelter sites and begin	Care and
	to supply with beds, water, food, medical support, generators,	Shelter/ARC Unit
	sanitation, temperature control, air quality, and facility security; and	Leader, Operations
	begin to open emergency shelters to residents.	Section
	Open evacuation centers. Open shelters for disaster service workers	Care and
	as applicable and if possible.	Shelter/ARC Unit
		Leader, Operations
		Section
	Identify and evaluate potential animal shelter facilities, including	PIO, Management
	UNR Equestrian Center, Iron Wood Equestrian Center, and	Section and Animal
	Palomino Valley. Parks are available but do not meet Animal	Services Unit Leade
	Services' needs.	Operations Section
	Identify overflow veterinary as well as large and small animal	PIO, Management
	facilities, possibly in other counties not impacted.	Section and Animal
		Services Unit Leade
		Operations Section
First 24	Prepare a situation status report describing requirements for a large-	Care and
Hours	scale evacuation and estimated number of displaced persons	Shelter/ARC,
	including location and occupancy of established shelters, results of preliminary structural assessment of designated emergency shelters, and estimated number of displaced persons requiring special accommodations.	Operations Section
	Ensure unaccompanied minors and individuals with functional and	PIO, Management
	access needs are appropriately repatriated and reunited with family	Section and Humar
	members.	Services
		Agency/Family
		Assistance Center
		Unit Leader,
		Operations Section
First 48	Activate the Nevada Humane Society in areas outside the affected	Animal Services Un
Hours	area if necessary. Engage volunteers for the large animal	Leader, Operations
	evacuation team program. If possible, use the Livestock Event	Section
	Center and parks for large animals. Animal Services will follow the	
	American Red Cross and set up facilities for small animals.	

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Within	Establish shelter support coordinator teams and evaluate the shelter	Care and
72 hours	sites to identify site damage, critical support requirements, site	Shelter/ARC Unit
	security, adequacy of feeding and medical care arrangements, and	Leader, Operations
	shelter demographics (gender, children, medical needs, language	Section
	barriers, and disability needs).	
	Establish plans for providing care for people with special support	Care and
	requirements that cannot be met in congregate care shelters.	Shelter/ARC Unit
		Leader, Ops Section
	Participate in discussions with FEMA on assessing services	Care and
	residents will require to recover from the disaster.	Shelter/ARC Unit
		Leader, Ops Section
	Identify interim housing solutions and begin working with those in	Care and
	need, including individuals with pets or functional and accessibility	Shelter/ARC Unit
	needs.	Leader, Ops Section
After 72	Establish teams to visit shelters.	Care and
Hours	• Identify people requiring special support that need to be	Shelter/ARC Unit
	relocated into other types of care facilities.	Leader, Operations
	• Identify site modifications necessary to better accommodate	Section
	residents with sight, hearing, mobility, or other limitations.	
	Ensure communications are consistent among shelters, volunteers,	PIO, Mgmt. Sec. and
	and American Red Cross staff.	Care and
		Shelter/ARC Unit
		Leader, Ops Section
4. Cond	uct mass fatality operations.	Louder, ops section
First 12	Implement Disaster Mortuary Operational Response Teams	Medical Examiner
Hours	(DMORTs) and Departments of Defense Mortuary Affairs Team to	(M.E.) Unit Leader,
nouib	assist with processing and identification; manage shortages in	Operations Section
	capable mortuary and other personnel. Request mutual aid.	operations section
	Request state resources, such as National Guard.	
F : (24	Prepare a situation status report with preliminary estimates of the	M.E. Unit Leader,
First 24	number and location of deaths.	Operations Section
Hours		Human Services
	Establish temporary morgues and begin process of collecting remains. Open Family Support Center. Begin working to identify	
	decedents (fingerprinting, photo identifications, etc.)	Agency/Family
	decedents (mgerprinting, photo identifications, etc.)	Assistance Center
		Unit Leader and M.E.
		Unit Leader,
****		Operations Section
Within	Begin performing autopsies and postmortem examinations.	M.E. Unit Leader,
48	Continue working to identify decedents and notify family members.	Operations Section
Hours	Notify legal next of kin and release human remains to mortuaries.	M.E. Unit Leader,
and		Operations Section
Ongoing	Issue death and burial permits and certificates.	M.E. Unit Leader,
0	1	Operations Section

3.3.4 Infrastructure

Timing Goal	Task	Responsibility
1. Stabili	ze and provide critical utilities – water, sewer, power, communica	tions, and natural
gas.		
First 12 Hours	Prepare for immediate response by establishing communications and command and control within Public Works, assessing and prioritizing, establishing and preparing dump sites, and developing the initial plan.	Operations Section Chief and Planning Section Chief
	 Deploy teams and resources. Dispatch field service and mobile fuel trucks to perform emergency repairs. Trucks are parked at mechanics' homes. Mobile fuel truck parked at Longley Lane Complex. 	Operations Section Chief
	Assess damage to infrastructure and perform emergency protective measures; repair, replace, and restore damaged critical infrastructure.	Operations Section Chief
	Supply emergency water and sanitation needs for response operations. Evaluate water and wastewater conditions and assist in distributing potable water and emergency sanitation solutions until repair and restoration can be accomplished.	Operations Section Chief
	Establish emergency power and fuel lines and ensure that an adequate, stable system is in place to fuel emergency vehicles and maintain generators providing power to critical facilities until a more permanent supply line is established.	Operations Section Chief
First 24 hours	Prepare a situation status report describing damage to energy transmission and distribution systems, including electrical transmission, natural gas, and petroleum distribution infrastructure. Also describe damage to water and sewer.	Operations Section Chief
	Procure contracted support, including engineers and general contractors.	Operations Section Chief
	Order and construct new transmission towers prior to having full service available on major 500 kV lines.	Operations Section Chief and NV Energy
	Determine if it is cheaper and faster to lay new pipe rather than repair the existing infrastructure.	Operations Section Chief and TMWA.
	Implement emergency drinking water plan. Receive and process requests for water resources.	Operations Section Chief and Truckee Meadows Water Authority (TMWA)
Within 48 Hours	Establish a distribution network for drinking water and food for persons who are not residing in mass care facilities but are without basic services.	Food and Shelter Unit Leader, Operations Section

Within	Evaluate water and wastewater conditions and assist in	Food and Shelter
72 Hours	distributing potable water and emergency sanitation solutions until	Unit Leader,
	repair and restoration are completed.	Operations Section
After 72	Establish portable toilet sanitation stations and related cleaning	Food and Shelter
Hours	and pumping program.	Unit Leader,
		Operations Section
2. Condu	ct debris clearance and disposal.	*
First 12	Prepare for immediate response by establishing communications	Operations Section
Hours	and command and control within Public Works, assessing and	Chief
nouis	prioritizing, establishing and preparing dump sites, and developing	
	the initial plan.	
	Work with NDOT to designate primary routes and implement	Operations Section
	debris clearance, route recovery, and traffic control.	Chief
	Deploy teams and resources to clear debris from critical	Operations Section
	infrastructure.	Chief
First 24	Implement debris removal in the following phases:	Operations Section
	1. Push aside to clear a path, move to adjacent open areas to	Chief
Hours	clear roadways, or demolish heavily damaged structures and	Chief
	secure site until debris removal is possible.	
	2. Remove the debris to a staging area where it will be sorted	
	and reduced, with recyclable materials separated.	
	3. Move from the staging area to final disposal sites or to	
	recycling facilities.	
	Initially prioritize Washoe County debris removal resources for	
	Search and Rescue missions and clearance of priority routes.	
	Establish the following:	Operations Section
	\circ Staging areas for heavy equipment.	Chief
	• Temporary staging and reduction sites for debris with access	
	to highways.	
	• Locations for disposal and recycling. Work with governing	
	agencies to develop a regional solution to limited disposal	
	capacity. Appropriate sites may be in demand for other uses,	
	such as staging of resources for response operations. Work	
	with Logistics Section to evaluate potential sites and prioritize	
	among competing uses.	
Within	Contact various programs and personnel at local, state, and federal	Operations Section,
48 Hours	agencies as well as from volunteer organizations for the removal	Public Works
	of debris from the roadways.	
Within	Establish procedures for demolition and removal of debris from	Operations Section,
72 Hours	public and private property. Ensure appropriate procedures for	Public Works
	condemnation and "hold harmless" are in place.	
After 72	Develop plans for long-term debris removal.	Operations Section ,
Hours	~ ~	Public Works

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SECTION 4: ROLES AND RESPONSIBILITIES

Section 4 identifies by emergency function the specific roles and responsibilities of each discipline as well as other partners.

4.1 Overview

Regional Partners have various roles and responsibilities throughout the response to and recovery from an earthquake. Therefore, it is particularly important the regional command structure be established to support response and recovery efforts and maintain a significant amount of flexibility to expand and contract as the situation changes. It is imperative to develop and maintain depth of qualified staff within the command structure and response community.

4.2 Responsibilities by Discipline

The Regional Earthquake Plan identifies and assigns specific areas of responsibility for performing functions across Regional Partner departments and agencies in response to an earthquake. The Emergency Management Accreditation Program (EMAP) identifies 29 areas of responsibility that are addressed in this section. Specific areas of responsibility are noted with appropriate Emergency Support Function (ESF) that may be applicable during the earthquake response and recovery.

See *Regional Emergency Operations Plan, Section 4.2: Responsibilities by Discipline* for tables listing partners, primary departments, and support departments for each discipline as well as responsibilities of special districts, tribal nations, and Nevada Division of Emergency Management.

4.2.1 Administration and Finance

Administration and finance responsibilities following an earthquake include maintaining to the greatest extent possible the financial systems necessary to keep the Region functioning during an earthquake:

- Manage payroll.
- Pay for goods and services (handled by Purchasing in the Comptroller's Department).
- Increase procards limits and adjust codes for purchases to address Washoe County's resource needs.
- Perform revenue collection.
- Process claims (if Washoe County facilities are affected, enhance monitoring the effects on Washoe County property, buildings, land, and equipment).
- Document and record financial transactions for cost recovery.

See Administration and Finance Plan in WebEOC.

4.2.2 Agriculture and Natural Resources (ESF 11)

Agriculture and natural resources related responsibilities following an earthquake include the following:

- Lead Agency Washoe County Regional Animal Services:
 - Coordinate with local, state, and federal authorities to rescue and shelter animals.

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- Serve as the lead agency to provide animal resources with Regional Partners and the private sector.
- Coordinate with the Public Information Officer for the release of public information regarding issues related to animals effected by the earthquake.
- Support Agencies:
 - Washoe County Emergency Management and Homeland Security will alert the Region when activation for agricultural and natural resources is necessary.
 - University of Nevada, Reno, will provide advice, assistance, and resources to address agricultural and natural resources issues.
 - Nevada National Guard upon approval of the Governor, assists with aviation and ground transportation of feed for livestock and water transport.
 - Code 3 Associates, American Society for the Prevention of Cruelty to Animals, International Fund for Animal Welfare, and Humane Society of United States are national groups that deploy to support Washoe County upon request in a disaster for animal evacuation and sheltering.
 - All Washoe County employees may assist in the transportation of food and water to distribution sites as directed through the Regional Emergency Operations Center (REOC).
 - Washoe County Parks and Open Spaces will assist the Region with natural resources expertise and serve as a lead department for natural resources issues.
 - Washoe County Health District (WCHD) will provide food safety and food borne disease prevention consultation and regulatory oversight regarding agricultural-related food sources, storage, preparation, and distribution facilities.

See Agriculture and Natural Resources Plan in WebEOC.

4.2.3 Alert and Notification

Alert and notification responsibilities following an earthquake include the following:

- Monitor emergency communications networks.
- Disseminate alerts as requested by the on-scene Incident Commander, REOC Director, and Public Information Officer.
- Receive and disseminate information to the public and key regional officials.

Washoe County Regional Communications System staff and other Washoe County Technology Services staff will serve as the primary resources involved in establishing or maintaining emergency alert systems.

See Alert, Notification and Warning (EAS) Plan in WebEOC.

4.2.4 Communications (ESF 2)

Communications responsibilities following an earthquake include the following:

- Establish and maintain emergency communications systems.
- Coordinate the use of all public and private communication systems necessary following the earthquake.
- Manage and coordinate all emergency communication within the REOC upon activation.

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• Manage and coordinate all emergency notifications to departments and officials (e.g., during transition to continuity facilities or succession notification).

Washoe County Regional Communications System staff and other Washoe County Technology Services staff will serve as the primary resources involved in establishing or maintaining emergency communications systems.

See Communications and Emergency Public Information and Education Plan and Alert, Notification and Warning (AES) Plan in WebEOC.

4.2.5 Critical Infrastructure and Key Resource Restoration

Critical infrastructure includes all assets, systems, and networks, whether physical or virtual, so vital to the Region that their destruction would have a debilitating effect. Critical infrastructure and key resource restoration responsibilities following an earthquake include but are not limited to the following:

- Transportation Systems,
- Energy,
- Communications,
- Water, and
- Emergency Services.

The Bureau of Reclamation, a federal agency, is responsible for Stampede, Boca, and Posser Dams in California. Boca Dam has gone through seismic upgrades to withstand a magnitude 8.0 earthquake.

The Cybersecurity and Infrastructure Security Agency (CISA), a federal agency, will activate when the State Operations Center is activated; activation will occur within three-to-six hours to coordinate critical infrastructure and supply chain requests. CISA's primary focus in an earthquake include:

- 1. I-80 and I-580,
- 2. Kinder-Morgan Pipeline running from California to Sparks, then to Fallon Naval Air Station,
- 3. Rockslides on Mt Rose Highway which could prevent transporting fuel to the communications towers on Slide Mountain,
- 4. Public safety communications, and
- 5. Airports that if damaged, could prevent large planes used for mutual aid.

See Critical Infrastructure and Key Resources Plan in WebEOC.

4.2.6 Damage Assessment

Damage assessment responsibilities following an earthquake include the following:

- Establish a damage assessment team among partner departments with assessment capabilities and responsibilities.
- Train and provide damage plotting team members to the REOC.
- Assist in reporting and compiling information regarding deaths, injuries, and dollar damage to tax-supported facilities and to private property.
- Assist in determining the geographic extent of the damaged area.

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• Evaluate the effect of damage on the Region's economic index, tax base, bond ratings, insurance ratings, etc. for use in long-range recovery planning.

See *Damage Assessment Plan* and *Damage Assessment User Manual* in WebEOC in the Document Library for additional guidance on using the Damage Assessment Web Capture and Reporting applications. Access the system at http://eoc.washoecounty.us/da/.

4.2.7 Debris Management

Debris management responsibilities following an earthquake include the following:

- Provide heavy equipment support for search and rescue operations.
- Conduct damage-assessment surveys of public facilities, roads, bridges, and other infrastructure.
- Inspect damaged structures.
- Clear debris from roadways and make repairs to regional transportation arteries.
- Make expedient repairs to essential public facilities to restore operations or protect them from further damage.
- Remove debris from public property and manage debris disposal operations for public and private property.
- Assist in controlling public access to hazardous areas.

Public Works and Engineering coordinates with private, state, local, tribal, and federal stakeholders, and partners in preparation for a catastrophic earthquake. Actions include, but are not limited to, planning, organizing, training, equipping and tracking inventory, exercising and drills, evaluating, and taking corrective actions.

The following dump sites are available for debris:

- 1. Northern Area Silver Knolls Pit, Red Rock Road, Reno, Nevada 89508
- 2. Central Area Longley Yard, 3101 Longley Lane, Reno, Nevada 89502
- 3. Southern Area Jumbo Grade Pit, Jumbo Grade, New Washoe City, Nevada 89704

See Debris Management Section in Public Works and Engineering Plan in WebEOC.

4.2.8 Detection and Monitoring

Detection and monitoring responsibilities following an earthquake include the following:

- Provide local public safety officials, law enforcement, and first responders with information relative to intelligence-led policing,
- Enhance and insure an efficient response to earthquakes in the Region.
- Enable efficient management and assist in mitigating impact from earthquake that impact the immediate Region.

The United States Geological Survey (USGS) is a science bureau within the United States Department of the Interior. USGS provides science about the natural hazards that threaten lives and livelihoods; the water, energy, minerals, and other natural resources we rely on; the health of our ecosystems and environment; and the impacts of climate and land-use change. USGS scientists develop new methods and tools to enable timely, relevant, and useful information about the Earth and its processes.

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The Nevada Seismological Laboratory is a research division within the College of Science at the University of Nevada, Reno. The Laboratory has overall responsibility for instrumental studies of earthquakes in the Nevada region. The laboratory operates a statewide network of seismographic stations and investigates the sizes, frequencies of occurrence, and distribution of earthquakes in the region, and other problems related to seismic risk in Nevada.

See Detection, Monitoring, Collection and Analysis Plan (NNRIC) in WebEOC.

4.2.9 Direction, Control, and Coordination

Direction, control, and coordination responsibilities following an earthquake include the following:

- Identify the appropriate command structure, specifying who will be in charge during earthquake response operations.
- Ascertain the authorities of and limitations on key response staff, such as an Incident Commander (IC).
- Determine how emergency response organizations will be notified when it is necessary to respond.
- Describe the means that will be used to obtain, analyze, and disseminate information (for decision-making, requesting assistance, reporting, etc.).
- Identify the relationship between the Emergency Operations Center (EOC) and the Incident Command Post (ICP), when used.
- Describe the provisions made to coordinate and communicate among all the jurisdictions and agencies (to include all federal response agencies) that may be involved in the earthquake response.

See Direction, Control and Coordination Section in REOC Standard Operating Procedures in WebEOC.

4.2.10 Donation Management

When the REOC is activated, a public call-taker center is also activated. Through media efforts, this number is widely advertised to the public as an option to call to receive information, answer citizen questions, and receive donations offers. The Community Emergency Response Team (CERT) volunteers staff this center. The call center is the central location for donation offers from the public and works closely with members of the REOC. Steps are taken by Washoe County Emergency Management staff and partner agencies in the event of an incident regarding donations management and the flow with which donations will be accepted.

See Volunteer and Donation Management Plan in WebEOC.

4.2.11 Emergency Public Information (ESF 15)

The overall responsibility for providing earthquake information and instructions to the public rests with the County Manager. Regional Partners must maintain working relationships with public information staff from neighboring jurisdictions and mutual aid partners to fulfill mutual needs during earthquakes.

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See Communications and Emergency Public Information Plan in WebEOC.

4.2.12 Energy and Utilities Services (ESF 12)

Washoe County Emergency Management Program established the Life Line Utilities Group, a coalition of governmental and non-governmental utilities in the area, to maximize efficiency in an emergency response. The Utilities/NV Energy Unit Leader is the focal point for the Life Line Utilities Group in the REOC.

The Utilities/NV Energy Unit Leader is the liaison with the Life Line Utilities Group and is responsible for maintaining effective relationships with various utility providers for emergency response activities in Washoe County, coordinating with the utility departments in the Region as needed, and functioning as the primary liaison with other REOC activities.

NV Energy will perform the following tasks after a major earthquake:

- Implement its own EOC to coordinate the earthquake response and send a representative to the REOC if staff is available.
- Deploy resources on the gas and electrical side to perform damage assessment to gas and electric infrastructure and document needs for restoration materials and labor.
- Coordinate with local first responders to gain access into closed areas and communicate safety concerns in the area.
- Prioritize restoration and allocate resources accordingly until additional resources can be brought in as needed.
 - NV Energy applies different factors to prioritize restoration service to customers, including materials, labor, and safety and will do their best to restore as many customers as quickly as possible.
 - NV Energy will inspect, patrol, and restore in this order to ensure proper and safe restoration: 1) generation plants, 2) substations, 3) transmission lines, and 4) distribution lines.
 - NV Energy is on the First Net Priority list for cell phone coverage from AT&T and Verizon so staff can communicate with one another.
- Bring in Mutual Assistance crews and materials as needed and able to decrease the restoration time, including crews from our other non-impacted territories in Eastern and Southern Nevada.
- Work with sister companies within Berkshire Hathaway Energy to fill any gaps.
- As another option, reach out to Western Energy Institute and ask other Western Region Utility companies for assistance.
- Rely on generator contracts with Gen Tech and request generators from other districts throughout the state.
- Use all and any media outlets to keep customers updated on the restoration process.

Truckee Meadows Water Authority (TMWA)

- TMWA has its own EOC and will activate when a damaging earthquake occurs.
- TMWA will send a representative to sit at the REOC 24/7 who will coordinate water needs and next steps.
- TMWA will deploy inspectors to evaluate damage to water lines, wells, tanks, and pumps. They will prioritize inspections based on their emergency operations plan.

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- TMWA has a map with locations of their wells, tanks, and pumps. Because of security concerns, the locations are available as needed only.
- TMWA trucks are equipped with 800 MHz radios.
- TMWA has satellite phones.
- TMWA will coordinate with NV Energy for their power needs to keep water supply functional; some of their critical equipment has generators.

Truckee Meadows Water Reclamation Facility (TMWR)

• TMWRF does not foresee any risks posed by an earthquake to downstream properties because downstream from TMWRF is the Truckee River that flows east into an area not highly populated.

See Energy and Utilities Plan in WebEOC.

4.2.13 Evacuation and Shelter-in-Place

Evacuation and shelter-in-place responsibilities following an earthquake include the following:

- Define responsibilities of partner agencies and private-sector groups.
- Identify high-hazard areas and corresponding numbers of potential evacuees.
- Coordinate evacuation planning, including:
 - Movement control,
 - Health and medical requirements,
 - Transportation needs,
 - Emergency public information materials, and
 - Shelter and reception locations.
- Develop procedures for sheltering in place.
- Provide guidance on commuting arrangements for essential workers during the evacuation period.
- Assist with control and safety measures in the evacuated area and reassign staff during the evacuation period.
- Notify the American Red Cross if an evacuation is instituted.

See Evacuation, Sheltering, and Mass Care Plan in WebEOC.

4.2.14 Fatality Management and Mortuary Services

Regional Partners rely on Washoe County Regional Medical Examiner (WCRME) to provide fatality management and mortuary services. The WCRME may need outside resources to assist during an earthquake.

See Mass Fatality Management Plan in WebEOC.

4.2.15 Firefighting and Fire Protection (ESF 4)

Firefighting and fire protection responsibilities following an earthquake include the following:

• Provide fire prevention, fire suppression, and emergency medical aid to prevent loss of life, loss of property, and damage to the environment.

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- Perform specialized rescue (e.g., water, high-angle, or structural collapse) as needed and practical.
- Perform life-safety inspections and recommendations for activated emergency shelters.

See Fire Protection Plan in WebEOC.

4.2.16. Food, Water, and Commodities Distribution

Food, water, and commodities distribution responsibilities following an earthquake include the following:

- Address the needs of the Access and Functional Needs (AFN) population.
- Address the at-home population.
- Identify other individuals that may need assistance with food, water, and commodities.

See Resource Management, Logistics, and Donations Plan in WebEOC.

4.2.17 Hazardous Materials

Hazardous materials responsibilities following an earthquake include the following:

- Conduct hazardous materials response (chemical, biological, etc.).
- Provide remote consultation as needed.
- Assess the potential health effects of a hazardous materials release.
- Identify the needs for hazardous materials incident support from Regional and State agencies.
- Recommend protective actions related to hazardous materials.

See Hazardous Materials Plan in WebEOC.

4.2.18 Information Collection, Analysis, and Dissemination

Information collection, analysis, and dissemination responsibilities following an earthquake include the following:

- Provide coordination of resources and emergency communications at the request of the on-scene Incident Commander.
- Maintain contact with neighboring jurisdictions.
- Maintain the REOC in an operating mode as required or ensure the REOC space can be converted into operating condition.
- Request REOC position representatives (by title) to report to the REOC and develop procedures for crisis training.
- Ensure REOC staff operates in accordance with the Incident Command System (ICS).
- Ensure accurate record keeping.
- Develop and identify duties of staff, use of displays and message forms, and procedures for REOC activation.

See Detection, Monitoring, Collection, and Analysis Plan in WebEOC.

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4.2.19 Law Enforcement, Public Safety, and Security (ESF 13)

Law enforcement (public safety and security) responsibilities following an earthquake include the following:

- Protect life and property and preserve order.
- Provide law enforcement and criminal investigation.
- Provide traffic control, crowd control, and site security.
- Isolate damaged areas.
- Provide damage reconnaissance and reporting.

See Law Enforcement Plan (Active Assailant Response Plan) in WebEOC.

4.2.20 Mass Care and Sheltering (ESF 6)

Mass care and sheltering responsibilities following an earthquake include the following:

- Maintain and implement procedures for care and shelter of displaced citizens.
- Maintain and implement procedures for the care and shelter of animals in an emergency.
- Coordinate support with other Regional Partners, departments, relief agencies, and volunteer groups.
- Designate a coordinator or liaison to participate in all phases of the Region's emergency management program when necessary or as requested.
- Provide emergency counseling for disaster victims and emergency response staff suffering from behavioral and emotional disturbances.
- Coordinate with faith-based organizations and other volunteer agencies.
- Work with organized disaster relief agencies, such as the American Red Cross and Salvation Army to identify emergency feeding locations, identify sources of clothing for earthquake victims, and secure sources of emergency food supplies.
- Coordinate operation of shelter facilities operated by the Regional Partners, local volunteers, or organized disaster relief agencies.
- Coordinate special care requirements for sheltered groups, such as unaccompanied children and the elderly or individuals with functional and access needs.
- Assist first responders with childcare needs.

See Evacuation, Sheltering and Mass Care Plan in WebEOC.

4.2.21 Mutual Aid

Mutual aid is essential when Washoe County resources become exhausted because of a major earthquake. The Incident Commander or Emergency Manager contacts the most appropriate source of mutual aid assistance from Regional Partners, outside agencies and private sector partners. Essential agencies maintain their own mutual aid agreements.

The Emergency Management Assistance Compact (EMAC) is an all hazards and all disciplines mutual aid compact that serves as the cornerstone of the nation's mutual aid system. EMAC establishes a firm legal foundation for sharing resources among states.

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See Resource Management, Logistics, and Donations Plan in WebEOC.

4.2.22 Private Sector Coordination (Prepare Washoe)

Private sector coordination responsibilities following an earthquake include the following:

- Involve the private sector at the REOC for information gathering and sharing.
- Assist in helping businesses respond and recover from the earthquake to minimize impacts and ensure a rapid recovery.
- Assist businesses with the implementation of business continuity plans.
- Manage donations from the private sector.

See Private Sector Coordination Plan (Prepare) in WebEOC.

4.2.23 Public Health and Medical Services (ESF 8 and ESF 8-1)

Public health and medical services responsibilities following an earthquake include the following:

- Coordinate with hospitals, clinics, nursing homes, care centers, and behavioral health organizations for adequate provision of services, including making provisions for populations with Access and Functional Needs (AFN).
- Coordinate public health surveillance.
- Coordinate mass fatality operations with the Washoe County Regional Medical Examiner and funeral directors to provide identification and disposal of decedents.
- Coordinate dissemination of public health information.

See Public Health and Medical Plan in WebEOC.

4.2.24 Public Works and Engineering (ESF 3)

Public works and engineering responsibilities following an earthquake include the following:

- Conduct pre-incident and post-incident assessments of public works and infrastructure.
- Execute emergency contract support for lifesaving and life-sustaining services.
- Coordinate repair of damaged public infrastructure and critical facilities.
- Coordinate repair and restoration of the Region's critical infrastructure.
- Coordinate disaster debris management activities.

Public Works and Engineering coordinates with private, state, local, tribal, and federal stakeholders, and partners in preparation for a catastrophic earthquake. Actions include, but are not limited to, planning, organizing, training, equipping/tracking inventory, exercising/drills, evaluating, and taking corrective actions.

In an earthquake, the FEMA National Response Coordination Center coordinates a "push" of federal resources in the first 24 hours and deployment within 72 hours. A transition to "pull" (or bring back) resources occurs after 72 hours as continued requirements are more clearly defined. Avenues of approach to the incident area are determined based on infrastructure damage to transportation corridors. Available air and land avenues of approach are used to push federal teams and resources.

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See Public Works and Engineering Plan in WebEOC.

4.2.25 Resource Management and Logistics (ESF 14 Recovery and ESF 7 Purchasing)

Resource management and logistics responsibilities following an earthquake include the following:

- Establish procedures for employing temporary staff for disaster operations.
- Establish and maintain a staffing reserve in cooperation with law enforcement.
- Establish emergency purchasing procedures and a disaster contingency fund.
- Maintain records of emergency-related expenditures for purchases and staff.

See Resource Management, Logistics, and Donations Plan in WebEOC.

4.2.26 Search and Rescue (ESF 9)

Search and rescue responsibilities following an earthquake include the following:

- Coordinate available resources to search for and rescue persons lost or buried in rubble.
- Cooperate with and extend assistance to surrounding jurisdictions on request and as resources allow.
- Establish and monitor training standards for certification of search and rescue staff.

See Search and Rescue Plan in WebEOC.

4.2.27 Transportation Systems and Resources (ESF 1)

Transportation systems and resources responsibilities following an earthquake include the following:

- Monitor and report the status of and any damage to the transportation system and infrastructure.
- Identify temporary alternative transportation solutions for implementation by others when systems or infrastructure are damaged, unavailable, or overwhelmed.
- Coordinate the restoration and recovery of transportation systems and infrastructure.
- Coordinate support of emergency operations activities among transportation stakeholders within the authorities and resources limitations.

Nevada Department of Transportation (NDOT)

When a major earthquake effects the transportation system, Interstates 80 and 580 most likely will suffer significant damage. NDOT is responsible for these major routes. NDOT's priorities and policies are as follows:

- Life Safety is the top priority.
- NDOT will obtain the Shake Cast from USGS within one hour to identify roads, bridges, and NDOT buildings that most likely suffered damage.
- Immediately send crews to inspect roads and bridge to determine what is passible and impassible and clean debris. (Local agencies are responsible for county and city roads.)
- Identify alternate routes if major highways are damaged; work with Nevada Highway Patrol and Washoe County departments as necessary.

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- Perform structural inspections of roads and bridges. If overwhelmed, the affected district will seek assistance from other districts or hire consultants.
- The PIO and 511 will provide information on current road conditions.
- Communicate with radio if cell phones are not operational.

Regional Transportation Commission (RTC) of Washoe County

- The RTC actively supports the provision of emergency transportation service for any regional public safety emergencies.
- The RTC plays a significant role in the provision of Essential Services Function 1: Transportation as part of the National Response Plan.
- The RTC will respond to public safety agency requests for services as part of the ESF.
- RTC can be contacted directly via RTC RIDE Dispatch 775-348-0413 or through the Reno Emergency Communications Center.

Reno Tahoe Airport Authority (RTAA)

- Shelter-in-place until the earthquake ends, then evacuate buildings.
- Operations performs immediate airfield self- inspection; flight operations are suspended until this inspection is completed.
- RTAA Airport Rescue Firefighters coordinates and conducts fire, rescue, and triage in the event of building collapse.
- RTAA Facilities/Maintenance performs immediate inspection of utility connections to evaluate risks from secondary hazards.
- RTAA Police Department/Security assists with evacuation and restricts or controls access to damaged areas and checks perimeter for vulnerabilities.
- Recovery:
 - 1. Restrict or control access to damaged areas/facilities.
 - 2. Coordinate with REOC for staff and tenant movement to and from the airport.
 - 3. Initiate debris clearing of airport access and airfield.
 - 4. Perform initial damage assessments.
- Restoration
 - 1. Airfield operating infrastructure (Part 139 requirements).
 - 2. Passenger support infrastructure, to include administrative areas and utility services.
 - 3. Other operating areas.
 - 4. Prepare FEMA and Federal Aviation Administration documentation to facilitate restoration.

See *RTAA Airport Emergency Plan, Appendix 3 Natural Disasters*. This document was published in 2012 and updated in 2021 and awaiting approval by the Federal Aviation Administration (FAA).

See Transportation Systems Plan in WebEOC.

4.2.28 Volunteer Management

Volunteer management is necessary after an earthquake.

• Government-sponsored/organized volunteers respond to incidents that exceed the Region's resources. Government-sponsored volunteer organizations, such as Community Emergency

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Response Teams (CERTs), American Red Cross, Fire Corps and Medical Reserve Corps, and volunteers associated with the faith-based community provide vital support to emergency response agencies in completing their assigned tasks.

• Unaffiliated volunteers can support earthquake response efforts in many ways, and it is essential the Region plan ahead to effectively incorporate volunteers into its response activities.

See Volunteer and Donations Management Plan in WebEOC.

4.2.29 Warning

A warning is used when the user cannot proceed to the next step unless the required action is taken. Warning responsibilities following an earthquake include receiving and disseminating warning information to the public and key regional officials.

Washoe County Regional Communications System staff and other Washoe County Technology Services staff will serve as the primary resources involved in establishing or maintaining emergency warning systems.

See Alert, Notification and Warning (EAS) Plan in WebEOC.

4.3 Responsibilities of Other Partners

4.3.1 Regional Partners

All the Regional Partners - City of Reno, City of Sparks, Reno Sparks Indian Colony, Pyramid Lake Paiute Tribe, University of Nevada, Reno, Washoe County Health District, and Washoe County School District - has a Quick Guide in the *Regional Emergency Operations Plan* (found on WebEOC) that addresses the planned response to extraordinary emergency situations, including earthquakes. These emergencies generate unique situations requiring expanded emergency response.

The Quick Guides are designed to be consistent with Nevada and federal plan requirements:

- Supports the Incident Command System (ICS) utilized by field responders,
- Provides Emergency Operations Center (EOC) staff with procedures, documentation, and userfriendly checklists to effectively manage emergencies, and
- Provides detailed information on supplemental requirements such as public information, damage assessment, and recovery operations.

4.3.2 Schools

4.3.2.1 Washoe County School District

Washoe County School District (WCSD) has an immediate response plan for schools to implement in an earthquake. If an earthquake causes widespread damage, WCSD will need assistance from local first responders to conduct search and rescue operations, building assessments, and debris removal.

4.3.2.2 Truckee Meadows Community College

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Truckee Meadows Community College (TMCC) has three levels of emergencies: Level 1- Minor, Level 2 - Major, and Level 3 - Disaster.

In a large earthquake, TMCC would active under either Level 2 or Level 3 depending on the level of the damage. A Level 2 emergency is a major event affecting an area or building of the college community, causing significant life safety concerns, and impacting mission critical functions. A Level 3 disaster affects extend beyond the college, not only disrupting and halting operations and functions of the college, but also those of the surrounding community.

External emergency resources will likely be required and will assume command of the emergency response effort with input from college resources. The Policy Group and Crisis Management Team will activate and determine whether the Emergency Operations Center should be staffed partially or fully. College Incident Command will be activated to handle internal functions and may participate in Unified Command with local responders.

Complete details can be found the TMCC's Emergency Operations Plan. https://www.tmcc.edu/sites/default/files/documents/vpfa-emergency-operations-plan.pdf

4.3.3 Casinos

In an earthquake, Security will immediately activate the initial response procedures and begin rescue operations.

Engineering will inspect for damage, propane leaks, electrical shorts, and other hazardous conditions. Facilities and Security Departments must be notified immediately. Engineering to shut off propane, water, sewer, and electricity as necessary.

If inside a building, employees should:

- Stay inside.
- Move away from windows, temporary walls, cabinets, overhead fixtures, or items that may fall.
- If possible, get underneath a solid desk, table, or stand braced in a doorway.
- Use telephone for emergency calls only.
- Be prepared for aftershocks.
- Evacuate if directed. Use stairways or exit, once determined it is safe and DO NOT USE ELEVATORS.
- If inside an elevator, when the doors open, immediately exit. Seek the nearest safe shelter.

If outside of a building, employees should:

- Move away from buildings, trees, or exposed wires, remain out in the open.
- Report any downed power lines and/or broken pipes to facilities staff when it is safe to do so.

After the earthquake:

- Inspect your area for injured personnel, guests, damage, and possibility for further damage or danger and report them to the facilities.
- Assist with the injured.
- If a fire has started, refer to fire procedures.

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SECTION 5: REGIONAL EMERGENCY OPERATIONS CENTER

Section 5 highlights the setting in which the Regional Emergency Operations Center (REOC) exists.

5.1 Overview

The principal purpose of the Regional Emergency Operations Center (REOC) is to provide a venue for jurisdictional/Regional strategic level guidance, resource support, and management of information/data related to regional emergency management. The REOC can communicate with local, state, and federal agencies by various means and has the primary function of providing support for multi-jurisdictional situational awareness, strategic planning, public information, comprehensive resource management, and other consolidated functions.

The REOC may be activated during an earthquake that has exceeded the resources of Regional Partner EOCs and requires regional collaboration through a multi-jurisdictional response effort from a central location. The REOC is usable and may be activated by any Regional Partner in collaboration with the other Regional Partners

See *Regional Emergency Operations Plan Section 5: Regional Emergency Operations Center* for details on alternate REOC locations, Regional Partners, staffing, record-keeping, and reporting.

5.2 REOC Activation

The activation of the Washoe County REOC occurs when an authorized official determines the Incident Commander(s) in the field require assistance or direction for their response because of the scope or magnitude of an emergency. A Department Operating Center (DOC) may be activated to supplement the County level REOC and is utilized to provide more detailed management of department-specific field operations.

The process for activating the REOC is initiated with the request to escalate from one of the Regional Partners. Following this initial request, a conference call between the involved jurisdictions is scheduled to discuss the situation and whether it warrants escalation to regional operations. Participants in this discussion are, at a minimum, the County/City Managers, County/City senior staff, County/City Emergency Managers, and tribal representatives.

If it becomes the consensus of the conference call participants that escalation is warranted, the incident will be deemed Regional. This will trigger the following actions:

- 1. Determine level of REOC staffing.
- 2. Notify all Incident Commanders, DOCs, and EOCs of the initiation of a Multi-Agency Coordination (MAC) or Unified Command (UC).
- 3. Notify Nevada Division of Emergency Management (NDEM) via the Duty Officer NDEM duty officer primary number: 775-687-0498

NDEM duty officer via Nevada Highway Patrol dispatch: 775-687-0400

See *Regional Emergency Operations Plan Section 5.4: REOC Activation* and *Section 5.6 REOC Deactivation* for details and checklists.

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5.3 Operations

When the REOC is activated, it will consist of the MAC Group and the five primary REOC functions -Management, Operations, Planning, Logistics, and Finance. Within each section, there may be several sub-functions established as Branches and Units.

The <u>Management Section</u> is responsible for directing all REOC activity and overseeing overall emergency policy and coordination through the joint efforts of government agencies and private organizations. The Management Section is led by the REOC Director and has support staff authorized to perform functions, such as public information, legal, liaison, safety, and security based on the type and status of the incident. See *Regional Emergency Operations Plan Section 9: Management Section Checklists and Position Guides*.

The <u>Operations Section</u> of the REOC is responsible for acting as a liaison to Regional Partner EOC Operations Sections. The REOC Operations Section will assist Regional Partner EOCs with the receipt and coordination of information and requests related to emergency response operations and will escalate requests to the State and federal levels if necessary. See *Regional Emergency Operations Plan Section 10: Operations Section Checklists and Position Guides*.

The <u>Planning Section</u> is responsible for the collection, evaluation, and dissemination of information related to the incident or emergency and for the preparation and documentation of any REOC Incident Action Plans. The Planning Section also maintains information on the current and forecasted incident status. See *Regional Emergency Operations Plan Section 11: Planning Section Checklists and Position Guides*.

The <u>Logistics Section</u> is responsible for providing services, supplies, equipment, staff, and other resources to support all emergency response operations related to the incident. See *Regional Emergency Operations Plan Section 12: Logistics Section Checklists and Position Guides.*

The <u>Finance Section</u> is responsible for monitoring costs, procurements, contracts, and other financial considerations for all emergency response operations related to the incident. See *Regional Emergency Operations Plan Section 13: Finance Section Checklists and Position Guides*.

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Incident Command System Organizational Chart

5.3.1 Planning "P" Process

The Planning "P" Process establishes joint emergency operations strategies and priorities within the REOC by enabling REOC staff to operate in an environment that considers status and assessments to develop and communicate direction, priorities, and resource allocation to effectively respond to an incident.

The Emergency Operations Planning Cycle (Planning "P") is essential to guide initial earthquake management and the continuing collective planning processes at the REOC. The planning processes should provide current information to accurately describe the earthquake and resource status, predictions of the probable course of events; alternative strategies to attain critical event objectives; and an accurate, realistic Incident Action Plan for the next operational period.

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See a fully detailed *Planning "P"" sequence* in WebEOC in the Plan Library.

5.3.2 Additional Policies, Protocols, and Tools

5.3.2.1 Preliminary Damage Assessment

It is important to quickly gain situational awareness of the extent of the damage the earthquake has caused. This information is used to coordinate response efforts, determine whether EOC and REOC activation is warranted, and support requests for disaster declarations. The Washoe County Geographical Information System (GIS) Department has developed an automated system; the Damage Assessment Web Capture and Reporting application allows residents to enter damage reports or for Community Emergency Response Team (CERT) volunteers to enter damage reports received from the public via the telephone. Once data is entered into this system, the GIS Section can quickly generate reports and plot damage on maps.

The system is designed so initial damage reports can be forwarded to the proper jurisdictions' building inspectors for follow-up. The building inspector can then verify and refine data in the system so preliminary damage reports can evolve into specific and detailed damage assessments. This data is then archived for FEMA reporting, historical records, and reimbursement if necessary.

See the *Damage Assessment User Manual* in WebEOC in the Document Library for additional guidance on using the Damage Assessment Web Capture and Reporting applications. Access the system at http://eoc.washoecounty.us/da/.

5.3.2.2 WebEOC

When the REOC is activated, WebEOC is the primary means for reporting situational awareness and communications infrastructure information during an incident. WebEOC is an information sharing program accessible by any authorized user with an internet connection, anywhere in the world. WebEOC allows the Regional Partners to run a virtual REOC and can connect to the State EOC and local government EOCs to help minimize the need for all staff to occupy one facility for incident response.

WebEOC contains data that would normally be posted on REOC charts, ICS forms, position and section logs, and regional resource lists, as well as maps and assorted other emergency data. Every position in the REOC is equipped to have Internet access and is hardwired into the REOC's secure server to run WebEOC. All staff assigned to an REOC position is an authorized user. Each REOC computer workstation includes position-specific logon information. REOC staff will use the login information at their workstations and are required to document and submit records of all activities, position logs, and any relevant forms.

Note: Do not log into WebEOC with your usual work profile in the REOC. Log in with the positionspecific login posted at each workstation.

See WebEOC Document Library for additional guidance on using WebEOC.

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SECTION 6: RELATED PLANS

Section 6 lists the other plans that may be implemented during an earthquake, including Continuity of Government, Continuity of Operations, and Washoe County Functional Annexes found in WebEOC.

6.1 Overview

During an earthquake requiring activation of the Regional Emergency Operations Center (REOC), there are plans in place to guide the REOC staff. Many of the plans are related to one another. It is possible that during REOC activation, plans may provide conflicting instruction. If there is a conflict in direction given in various plans, the REOC Director will determine which plan takes precedence.

6.2 Continuity of Government and Continuity of Operations

Continuity of Government (COG) is the principle of establishing defined procedures allowing a government to continue its essential operations in case of a catastrophic event, such as nuclear war. COG is an outcome of a viable continuity capability, not a program. COG is intended to preserve the statutory and constitutional authority of elected officials at all levels of government across the United States. Washoe County maintains a COG Plan.

Continuity of Operations (COOP) addresses emergencies from an all-hazards approach and provides a roadmap for the implementation and management of the Continuity Program. COOP establishes policy and guidance ensuring critical functions continue and staff and resources are relocated to an alternate facility in case of emergencies.

Washoe County maintains COOP documents for all departments. The plans follow National Security Presidential Directive-20 (NSPD-51/HSPD-20). Each Regional Partner is responsible for maintaining all legal documents affecting the organization and administration of emergency management functions, and staff from each Regional Partner is responsible for ensuring these documents are secured, protected, and preserved in accordance with state law.

6.3 Washoe County Functional Annexes

The following plans are in the Washoe County Functional Annexes in WebEOC.

- Administration and Finance Plan
- Agriculture and Natural Resources Plan
- Alert, Notification, and Warning (EAS) Plan
- Communications and Public Information Plan
- Critical Infrastructure and Key Resources Plan
- Damage Assessment Plan
- Detection, Monitoring, Collection, and Analysis Plan (NNRIC)
- Energy and Utilities Plan
- Evacuation, Shelter and Mass Care Plan
- Hazardous Materials Plan

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- Law Enforcement Plan (Active Assailant Response Plan)
- Mass Fatality Management Plan
- Multi-year Training and Exercise Plan (MYTEP)
- Private Sector Coordination Plan (PREPARE)
- Public Health and Medical Plan
- Public Works and Engineering Plan
- Resource Management, Logistics, and Donations Plan
- Search and Rescue Plan
- Transportation Systems Plan
- Volunteer and Donation Management Plan
- Wildland Fire Protection Plan

See *Regional Emergency Operations Plan Section 6.3 Washoe County Functional Annexes* for descriptions of each of these plans.

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SECTION 7: PLAN DEVELOPMENT AND MAINTENANCE

Section 7 outlines the method for developing, maintaining, and improving the Regional Earthquake Plan.

7.1 Overview

The Regional Earthquake Plan has been developed and maintained in accordance with applicable standards, best practices, and technical guidance, including National Incident Management Systems (NIMS). Updating the Regional Earthquake Plan is the responsibility of Washoe County Emergency Management (WCEM). The WCEM serves as the custodian of the plan by maintaining the electronic files and records, printing documents, and monitoring/tracking distribution of the plan.

7.2 Plan Maintenance

The process used by WCEM to maintain and improve all plans is illustrated below. The actions taken to implement this process are coordinated by the WCEM with the assistance and support of the designated lead and support agencies for Washoe County. The WCEM will review and update the Regional Earthquake Plan every five years.

Regional Earthquake Plan Maintenance Process



The steps to update the Regional Earthquake Plan will generally involve the following:

- 1. WCEM initiates the process for updating the plan:
 - Establish the schedule,
 - Assign staff or contractor to accomplish the necessary work,
 - Conduct meetings with stakeholders, and
 - Review applicable requirements and other changes in the community.
- 2. Under the direction of the WCEM, the assigned staff or contractor utilizes the inputs to the planning process to develop a draft of the updated plan for review by all stakeholders.
- 3. A schedule for review of the draft is established by the WCEM, and the documents are distributed to the involved stakeholders.
- 4. As indicated, meetings between the WCEM and the assigned staff may be necessary to discuss modifications to the draft plan.

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- 5. The assigned staff or contractor modifies the draft plan according to the outcome of the review process and prepares a final draft plan.
- 6. If indicated, another review of the final draft plan is conducted by the participating agencies and organizations, and a final plan is prepared.
- 7. The final plan is distributed by the WCEM to the participating Regional Partners, jurisdictions, agencies, and organizations for final approval.

7.3 Plan Approval, Promulgation, Implementation, and Evaluation

The final Regional Earthquake Plan is presented to the Washoe County Commissioners and Regional Partners for review and adoption. Regional Partners are advised of plan updates and all primary and support agencies conduct preparedness actions as needed to maintain readiness to implement the actions prescribed in the Regional Earthquake Plan.

Plans are evaluated on a continuing basis between normally scheduled updates, and such evaluations are used to improve and enhance the effectiveness of the plans during the next update. Since the evaluation of the effectiveness of the Regional Earthquake Plan is a continuing process, the plan should be viewed as a document in a constant state of change and improvement. Whenever possible, the WCEM will make changes to the plan and circulate such modifications. The Regional Earthquake Plan will be updated in accordance with changes to laws, rules, and situations. Any Regional Partner may propose an update to the Regional Earthquake Plan at any time.

7.4 Training and Exercises

Training and exercise of the Regional Earthquake Plan will occur based on the guidance provided within the Multi-Year Training and Exercise Plan (MYTEP), annual stakeholder input and involvement, and determination by the Emergency Manager. Implemented corrective action solutions will be tested and validated through training and exercise.

See *Regional Emergency Operations Plan Section 7: Plan Development and Maintenance* for minimum training requirements and recommendations.

7.5 Improvement Planning

The primary tool for identifying areas of both success and in need of improvement is an After-Action Report (AAR). An AAR is completed at the conclusion of any exercise or significant earthquake. Every AAR developed by the WCEM follows Homeland Security Exercise and Evaluation Program (HSEEP) guidance, utilizes the same standard format, includes an Improvement Plan, and is the responsibility of the corresponding staff for the noted program. Any major or substantial items identified in the Improvement Plan are included on the AAR/IP Corrective Actions Matrix for priority attention.

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SECTION 8: AUTHORITIES AND REQUIREMENTS

Section 8 outlines Federal, State and Partner-specific emergency management authorities, references, and requirements pertaining to the Region's roles and responsibilities.

8.1 Overview

The Regional Earthquake Plan is written and issued in accordance with and under the provisions of the Nevada Revised Statutes (NRS) Chapter 414 which establishes the authority for jurisdictions to establish an Emergency Management Organization (EMO) and appoint an "Emergency Management Director" who will be responsible for the organization, administration, and operation of the EMO (NRS 414.090).

EMOs within the Region are consistent with the National Incident Management System (NIMS). Procedures supporting NIMS implementation and training for the Region were developed and formalized by the Regional Partners' respective Emergency Managers or corresponding positions. The Emergency Managers or their designees will implement the appropriate plan based on the activation and resources needed.

The table below sets forth the federal, State of Nevada, and local legal authorities upon which the organizational and operational concepts of the Regional Earthquake Plan are based.

Legal Authorities		
Federal		
Federal Emergency Management Agency (FEMA) Policy		
Crisis Response and Disaster Resilience 2030 (July 30, 2013)		
FDOC 104-008-1: A Whole Community Approach to Emergency Management (December 2011) FEMA Administrator's Intent (2015–2019)		
FEMA Incident Management and Support Keystone (March 2015)		
FEMA Publication: 1 The Federal Emergency Management Agency (January 2020)		
FEMA Strategic Plan (2018-2022)		
National Disaster Housing Strategy (May 2014)		
National Disaster Recovery Framework (October 2018)		
National Incident Management System (January 2020)		
National Preparedness Goal (May 2018)		
National Response Framework (February 2020)		
Homeland Security Presidential Directive 5: Management of Domestic Incidents (2003)		
Presidential Policy Directive 8: National Preparedness (January 2020)		
Public Law 93-288 Robert T. Stafford Disaster Relief and Emergency Assist. Act (amended June 2019)		
Public Law 107-296 The Homeland Security Act of 2002		
Public Law 109-295 The Post-Katrina Emergency Management Reform Act (2007)		

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State of Nevada
NRS Chapter 234 – Appointment by Governor
NRS Chapter 239 – Records Management
NRS Chapter 239C – Homeland Security
NRS Chapter 244 – Counties: Government
NRS 244.335 - Grants power to regulate business
NRS 244.2961 - Grants power to maintain a fire department, establish a fire code, and regulate the
storage of explosive, combustible, and inflammable material
NRS 245 – Appointments by County Commission
NRS Chapter 248 – Sheriffs
NRS Chapter 278 – Planning and Zoning
NRS 414 (All) - Authorizes local emergency management programs (Nevada Civil Defense Act of
1953, as amended)
NRS 415 (All) – Ratification of the interstate Emergency Management Assistance Compact
NRS 455.80 -455.180 – Nevada One Call Law. This law requires Nevadans to call 1-800-227-2600
before they start digging, blasting, drilling, or any other kind of excavating.
NRS 459 (all) – Governs the storage and transportation of hazardous materials
NRS 474.160 – Grants fire departments/districts the power to regulate the hazards of fires and
explosion relating to the storage, handling and use of hazardous substances, materials, or devices
Washoe County
Washoe County Code 65.300 – Establishes the Washoe County Division of Emergency Management, and grants authorities and responsibilities

Regional Partners

City of Sparks City Charter – Establishes roles and functions of the local government Sparks Municipal Code 1.30.010 – Adopts the Emergency Response Plan Sparks Municipal Code 2.20 – Establishes the emergency powers of the Mayor, City

Manager, and the powers of the Emergency Management Team

City of Reno Administrative Code 8.34 - Emergency Management

8.2 Authorities and Requirements

The Regional Earthquake Plan complies with the following authorities and requirements:

- Authorities of State Emergency Management The Nevada Revised Statutes (NRS) authorizes State of Nevada staff to act during manmade and natural emergencies and/or disasters.
- Authorities of Local Emergency Management Washoe County Emergency Management staff is authorized to act during manmade and natural emergencies and or/disasters.
- Statement of National Incident Management Systems (NIMS) Adoption The execution of this plan complies with National Incident Management Systems (NIMS) throughout the jurisdiction and partner organizations to prevent, protect against, mitigate, respond to, and recover from incidents.
- Title II of American Disabilities Act (ADA) The execution of this plan must follow Title II of the Americans with Disabilities Act (ADA) prohibiting discrimination against qualified individuals with disabilities in all programs, activities, and services of public entities.
- Nevada Revised Statutes as Amended Nevada Revised Statutes (NRS) are the current codified laws of State of Nevada. They are a compilation of all legislation passed by the Nevada Legislature during a particular Legislative Session. Current laws can be amended during a session.
- Non-Governmental Organizations (NGO) Plans and Authorities NGO's, such as Truckee Meadows Water Authority and NV Energy have developed Emergency Operations Centers (EOC) to activate during emergencies and/or disasters. Other Regional Partners, such as the City of Reno and the City of Sparks have developed local codes specific to their respective regions to implement during an emergency or disaster.
- Federal Authorities The Regional Earthquake Plan complies with the laws and regulations developed to guide the Federal Government during the time of national crisis, such as a national emergency or disaster.

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SECTION 9: GLOSSARY AND ACRONYMS

Section 9 contains a glossary and list of acronyms that are used throughout the Regional Earthquake Plan to ensure Regional Partners use common terminology.

9.1 Glossary

Word or Phrase	Meaning
Access and Functional	Individuals who need assistance due to any condition (temporary or
Needs	permanent) that limits their ability to act
Aftershock	A smaller earthquake that follows an earthquake and occurs in the same
	vicinity. Many times, aftershocks are adjustments of the earth to the main
	event.
At-Risk Populations	Individuals or groups whose needs are not fully addressed by traditional
	service providers or who feel they cannot comfortable or safely use the
	standard resources offered during preparedness, response, and recovery
	efforts. These groups include people who are physically or mentally
	disable (e.g., blind, deaf, hard-of-hearing, have learning disabilities,
	mental illness and/or mobility limitations), people with limited English
	language skills, geographically and/or culturally isolated people, homeless
	people, senior citizens, and/or children.
Bridge scour	The process of erosion around a bridge foundation caused by flooding;
	this is the leading cause of bridge failure.
Code Red	A phone notification system to alert residents in times of crisis.
Continuity of	A coordinated effort within each of the executive, legislative, and judicial
Government (COG)	branches to ensure that essential functions continue to be performed
	before, during, and after an emergency or threat.
Continuity of Operations	A continuity of operations plan establishes policy and guidance ensuring
(COOP)	that critical functions continue, and that staff and resources are relocated
	to an alternate facility in case of emergencies. COOP includes procedures
	for alerting, notifying, activating, and deploying employees.
Damage Assessment	A preliminary onsite evaluation of damage or loss caused by an accident
	or natural event. It is an integral part of facilitating effective and efficient
	response by governmental agencies and other organizations.
Deactivate	Cause to be inactive or to remove effectiveness – in the Regional
	Earthquake Plan, it refers to individuals
Demobilize	Disband or render inoperative – in the Regional Earthquake Plan, it refers
	to equipment
Disability	A physical or mental condition that limits a person's movements, senses,
D: /	or activities
Disaster	A sudden event that causes great damage or loss of life
Donations Management	Process used to organize all the donations received at your organization

Section 9: Glossary and Acronyms - Page 1

Emergency	The state in which normal procedures are interrupted, and immediate
Linergeney	measures need to be taken to prevent that state turning into a disaster
Emergency Declaration	A government can declare such a state of emergency during a natural
Emergency Declaration	disaster, medical pandemic/epidemic, civil unrest, or armed conflict
Emergency Event	An occurrence, natural or manmade that requires a response to protect life
Emergency Event	or property, triggering the activation of the REOC
Emergency Operations	A central command and control facility responsible for carry out the
Center	principles of emergency preparedness and emergency management
Emergency Support	The grouping of governmental and certain private sector capabilities into
Function	an organization structure to provide support, resources, program
	implementation, and services that are most likely needed to save lives,
	protect property and the environment
Epicenter	Location of the earth's surface directly overlying an earthquake, or if the
1	earthquake is large enough, where the earthquake begins (hypocenter).
Fault	A fracture or fracture zone in the earth where rocks or soils have offset.
Foreshock	Smaller earthquakes preceding an earthquake, occurring proximal to
	where that earthquake will eventually occur.
Incident Command	A standardized approach to the command, control, and coordination of
System (ICS)	emergency response providing a common hierarchy within with
•	responders from multiple agencies can be effective
Incident Management	Provides on-scene incident management support during incidents or
Team (IMT)	events that exceed a jurisdictions or agency's capability or capacity.
	Teams include members of local, state, tribal, and territorial entities;
	Nongovernmental Organizations (NGO); and private sector organizations.
Intertie	An interconnection permitting passage of current between two or more
	electric utility systems.
Joint Field Office	A temporary federal multi-agency coordination center established locally
	to facilitate field level response activities
Joint Information Center	A central location where staff with public information
	responsibilities perform critical emergency information functions
	and crisis communications
Joint Information	Integrates incident information and public affairs into a cohesive
System	organization designed to provide consistent, coordinated, accurate,
	accessible, timely, and complete information during crisis or
	incident operations
Landslide	The downward sliding or falling of a relatively dry mass of earth, rock,
Lundbilde	and mixtures of the two.
Life-Line Utilities	A coalition of governmental and non-governmental utilities in the area to
Group	maximize efficiency in an emergency response
Liquefaction	The temporary transformation of saturated, sandy alluvium from a solid to
-	a liquid due to earthquake shaking.
Local Mutual Aid	Agreements between neighboring jurisdictions or organizations that
	involve a formal request for assistance and generally cover a larger
	geographic area than automatic mutual aid

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Magnitude	The measure of the size of an earthquake, usually determined by		
	measurements from seismometers.		
Mass Care	The capability to provide immediate shelter, feeding centers, basic first		
	aid, bulk distribution of needed items, and related service to persons		
	affected by a large-scale incident		
Mitigation	The effort to reduce loss of life and property by lessening the impact of		
	disaster		
Multi-Agency	Part of the United States standardized Incident Command System		
Coordination System	designed to provide the basic architecture for facilitating the allocation of		
(MACS)	resources, incident prioritization, coordination, and integration of multiple		
	agencies for large-scale incidents and emergencies		
National Incident	NIMS is a comprehensive, national approach to incident management that		
Management System	is applicable at all jurisdictional levels and across functional disciplines.		
(NIMS)	The intent of NIMS is to be applicable across a full spectrum of potential		
	incidents and hazard scenarios, regardless of size or complexity.		
National Decrease	Part of the National Strategy for Homeland Security that presents the		
National Response Framework	guiding principles enabling all levels of domestic response partners to		
Framework			
	prepare for and provide a unified national response to disasters and		
	emergencies		
Preparedness	A very concrete research-based set of actions that are taken as		
	precautionary measures in the face of potential disasters. These actions		
	can include both physical preparations (such as emergency supplies		
	depots, adapting buildings to survive earthquakes and so on) and trainings		
	for emergency action.		
Protected Group	A group of people qualified to special protection by a law, policy, or		
	similar authority		
Recovery Support	The coordinating structure for key functional areas of assistance in the		
Function	National Disaster Recovery Framework		
Resilience	The capacity to recover quickly from difficulties, toughness		
Risk	A situation involving exposure to danger		
Risk Analysis	The determination of the likelihood of an event (probability and the		
	consequences of its occurrence (impact) for the purpose of comparing		
	possible risks and making risk management decisions		
Risk Assessment	Determines possible mishaps, their likelihood and consequences, and the		
NISK ASSESSIIICIII			
	tolerances for such events. The results of this process may be expressed in		
Diale Management	a quantitative or qualitative fashion.		
Risk Management	The application of disaster risk reduction policies and strategies to prevent		
	new disaster risks, reduce existing disaster risks, and manage residual		
	risks to strengthen resilience and reduce losses		
~	ShakeCast is an application for automating ShakeMap delivery to critical		
ShakeCast			
ShakeCast	users and for facilitating notification of estimated shaking levels at user-		
ShakeCast	users and for facilitating notification of estimated shaking levels at user- specific facilities. Full Web-based Graphical User Interface, notification		
ShakeCast	users and for facilitating notification of estimated shaking levels at user- specific facilities. Full Web-based Graphical User Interface, notification services, and documentation.		

Standard Operating	A set of step-by step instructions complied by an organization to help		
Procedures/Guidelines	workers carry out complex routine operations		
Vulnerable Populations	A specific group of individuals subject to potential harm from a hazard		
_	(such as those individuals who are downstream from a dam at risk or		
	breaking or in an emergency planning zone of a power plant).		
Warning	A warning requires immediate actions to protect life, health, and property		
-	and is typically issued when there is a confirmed threat posing an		
	immediate danger to the public.		

9.2 Acronyms

Acronyms	Meaning
AAR	After Action Report
AFN	Access and Functional Needs
ARES	Amateur Radio Emergency Services
ARRL	American Radio Relay League
CAT	Crisis Action Team
ССР	Casualty Collection Point
CERT	Community Emergency Response Team
CISA	Cybersecurity and Infrastructure Security Agency
COG	Continuity of Government
COOP	Continuity of Operations Plan
CSD	Community Services Department
DBOH	Washoe County District Board of Health
DHS	Department of Homeland Security
DOC	Department Operations Center
EAS	Emergency Alert System
EEI	Essential Elements of Information
EMAC	Emergency Management Assistance Compact
EMO	Emergency Management Organization
EMPG	Emergency Management Performance Grant
EMS	Emergency Management System
EOC	Emergency Operations Center
EPC	Emergency Planning Committee
FAC	Family Assistance Center
FEMA	Federal Emergency Management Agency
FSC	Family Service Center

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GIS	Geographical Information System
HSEEP	Homeland Security Exercise and Evaluation Program
IAEM	International Association of Emergency Managers
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IHCC	Inter-Hospital Coordinating Council
IMT	Incident Management Team
IP	Improvement Plan
IS	Independent Study
IT	Information Technology
JFO	Joint Field Office
ЛС	Joint Information Center
ЛІЅ	Joint Information System
LEPC	Local Emergency Planning Committee
MAC	Multi-Agency Coordination
MACS	Multi-Agency Coordination System
MAEA	Mutual Aid Evacuation Agreement
MCIP	Mass Casualty Incident Plan
MYTEP	Multi-Year Training and Exercise Plan
NDEM	Nevada Division of Emergency Management
NDMS	National Disaster Medical System
NDOT	Nevada Department of Transportation
NEMAC	Nevada Emergency Management Assistance Compact
NEPA	Nevada Emergency Preparedness Association
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NNG	Nevada National Guard
NNRIC	Northern Nevada Regional Intelligence Center
NRF	National Response Framework
NRS	Nevada Revised Statutes
PDA	Preliminary Damage Assessment
PIO	Public Information Officer

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PSAP	Public Safety Answering Point
REMSA	Regional Emergency Medical Services Authority
REOC	Regional Emergency Operations Center
REOP	Regional Emergency Operations Plan
RSCVA	Reno Sparks Convention and Visitors Authority
SCEMP	State Comprehensive Emergency Management Plan
RSF	Recovery Support Function
SEOC	State Emergency Operations Center
SIRT	Security Incident Response Team
SITREPS	Situation Reports
SME	Subject Matter Expert
SOG	Standard Operating Guidelines
SOP	Standard Operations Procedures
TEPW	Training and Exercise Planning Workshop
THIRA	Threat Hazard Identification Risk Assessment
TMCC	Truckee Meadows Community College
TMWA	Truckee Meadows Water Authority
TMWR	Truckee Meadows Water Reclamation
TT&E	Test, Training, and Exercise
UAC	Unified Area Command
UC	Unified Command
UNR	University of Nevada, Reno
UPG	Unified Planning Group
USAR	Urban Search and Rescue
VOAD	Volunteer Organization Active in Disasters
WCEM	Washoe County Emergency Management and Homeland Security Program
WCHD	Washoe County Health District
WCRME	Washoe County Regional Medical Examiner
WCSD	Washoe County School District
WCSO	Washoe County Sheriff's Office

Washoe County Emergency Management and Homeland Security Program

ANNEX A: BUILT ENVIRONMENT

Annex A includes detailed maps and tables indicating locations of critical buildings and infrastructure.

A.1 Airports



A.2 Bridges



Tredits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

Bridge Number	Feature Intersected: Narrative	Facility Carried by Structure	Location
<u>B 12</u>	NORTH TRUCKEE DRAIN	180	SPARKS
<u>B 16</u>	TRUCKEE RVR	SR427 OLD US40	WADSWORTH
B 127	HIGHLAND DITCH (OLD)	I 80	WEST OF RENO
<u>B 177</u>	DRY CREEK	SR430 S VIRGINIA	RENO
<u>B 227</u>	DITCH	SR430 N VIRGINIA	RENO
<u>B 253</u>	MULLEN CRK	SR445 PYRAMID HWY	SOUTH OF SUTCLIFFE
<u>B 303</u>	TRUCKEE RVR	SIERRA ST	RENO
<u>B 304</u>	TRUCKEE RVR	LAKE ST	RENO
<u>B 334</u>	INCLINE CREEK	LAKE SHORE BL	SOUTH OF INCLINE VILLAGE
<u>B 378</u>	TRUCKEE RVR	SR425 3rd ST	EAST SIDE OF VERDI
<u>B 380</u>	TRUCKEE RVR	SR425 3rd ST	WEST OF VERDI
<u>B 417</u>	POWER CANAL	SR 425 THIRD ST	VERDI
<u>B 578N</u>	TRUCKEE RIVER	SR 667/KIETZKE LN	RENO
<u>B 578S</u>	TRUCKEE RIVER	SR 667/KIETZKE LN	RENO
<u>B 624</u>	STEAMBOAT CRK	SR341 GEIGER GRADE	SOUTH EAST OF RENO
<u>B 650</u>	TRUCKEE RVR	FR WA16	EAST OF RENO
<u>B 716W</u>	TRUCKEE RVR	I 80W	WEST OF FERNLEY
<u>B 752</u>	GALENA CRK	US 395	PLEASANT VLY SOUTH OF RENO
<u>B 764E</u>	TRUCKEE RIVER	I 80	SOUTHWEST OF VERDI
<u>B 764W</u>	TRUCKEE RIVER	180	SOUTHWEST OF VERDI
<u>B 766</u>	POWER CANAL	FR WA02/CRYSTAL PK	SOUTHWEST OF VERDI
<u>B 815</u>	ORR DITCH	SR 445/PYRAMID L.	SPARKS
<u>B 820</u>	DITCH	180	NEAR VERDI
<u>B1053</u>	HIGHLAND DITCH (OLD)	FR WA05	WEST OF MOGUL
<u>B1300</u>	TRUCKEE RIVER	SR 659/MCCARRAN	SPARKS
<u>B1349</u>	OVERFLOW RELIEF CULVERT	180	RENO
<u>B1351</u>		SR 447 GERLACH RD	SOUTH OF NIXON
<u>B1424</u>	BOYNTON SLOUGH	SR659 EMcCARRAN	SPARKS
<u>B1425</u>	DRY CREEK	SR659 E McCARRAN	SOUTH OF RENO
<u>B1487</u>		MAYBERRY DR	WEST OF RENO
<u>B1521</u>		SR431 MT ROSE HW	EAST OF INCLINE VILLAGE
<u>B1523</u> B1520		SR648 GLENDALE AV	SPARKS
<u>B1530</u> B1531		KEYSTONE AV	RENO S PRIDCE
<u>B1531</u> <u>B1532</u>	TRUCKEE RVR TRUCKEE RVR	ARLINGTON AV ARLINGTON AV	RENO - S BRIDGE RENO - N BRIDGE
<u>B1532</u> B1533	TRUCKEE RIVER	CENTER ST	RENO
B1535 B1534	TRUCKEE RVR	ROCK BL	SPARKS
<u>B1580</u>	AIRPORT SLOUGH	LONGLEY LN	RENO
B1621	TRUCKEE RIVER	BOOTH STREET	RENO
<u>B1682</u>	SMOKE CRK	IRR OLD SR 33	NORTH OF SUTCLIFFE
B1684	BUFFALO SLOUGH	IRR OLD SR 33	WEST OF GERLACH
B1685	SQUAW CRK	SMOKE CREEK RD	NORTHWEST OF GERLACH
B1686	POWER CANAL	BRIDGE ST VERDI	VERDI
B1687	TRUCKEE RIVER	BRIDGE STREET	NORTH OF VERDI
B1688	DOG CREEK	BRIDGE STREET	NORTH OF VERDI
B1690	TRUCKEE RVR	PAINTED ROCK RD	SOUTHWEST OF WADSWORTH
B1691	STEAMBOAT CREEK	PEMBROKE DRIVE	EAST OF SE CONNECTOR
B1700	STEAMBOAT CREEK	CLEAN WATER WAY	SOUTHEAST OF SPARKS

B1716	TRUCKEE RIVER	GREG ST	SPARKS
B1801	EVANS CREEK	SR 667/DELMONTE LN	RENO
B1814	EVANS CRK	SR430 S VIRGINIA	RENO
B1819	N TRUCKEE DRAIN	BARING BLVD	NORTHEASTERN SPARKS
B1820	NORTH TRUCKEE DRAIN	SPRINGLAND DRIVE	NORTHEASTERN SPARKS
B1821	NORTH TRUCKEE DRAIN	PRATER WAY	NORTHEASTERN SPARKS
B1822	NORTH TRUCKEE DRAIN	EAST LINCOLN WAY	EASTERN SPARKS
B1825	NORTH TRUCKEE DRAIN	SPARK BL	NORTHEASTERN SPARKS
B1828	GALENA CRK	JOY LAKE RD	SOUTHWEST RENO
B1829	DRY CRK	1 580	SOUTH RENO
B1832	DRY CREEK	COUNTRY ESTATES CI	RENO
B1833	DRY CREEK	SR 671/HUFFAKER LN	RENO
B1838	MULLEN CREEK	FAS 446	WEST OF NIXON
B1860	NORTH TRUCKEE DRAIN	VINTAGEHILLS PKW	SPARKS
B1862	N TRUCKEE DRAIN OVERFLOW	I 80 RAMP 3A	SPARKS BLVD INTERCHANGE
B1863	TRUCKEE RIVER	KIRMAN AV	RENO
B1898	NORTH TRUCKEE DRAIN	SHADOWBROOK LN	SPARKS
B1943	THOMAS CRK	US 395&ON/OFF RAMP	RENO
B1944	STEAMBOAT CRK	ANDREW LN	PLEASANT VLY
B1947	Browns Creek	1 580	North of Washoe Valley
B1948N	Galena Creek	1 580	Pleasant Valley
B1948S	Galena Creek	1 580	Pleasant Valley
B1953	STEAMBOAT CREEK	MIRA LOMA	STEAMBOAT
B1954	STEAMBOAT CRK	MIRA LOMA	STEAMBOAT
B2022	WHITES CRK	US 395	RENO
B2023	WHITES CRK	US 395	RENO
B2030	WHITES CRK	1 580	RENO
B2033	STEAMBOAT DITCH	WEDGE PKW	SOUTH OF RENO
B2046	TRUCKEE RIVER	WHITE FIR ST	WEST OF RENO
B2152	TRUCKEE RVR	SR 655 WALTHAM WY	EAST OF RENO (PATRICK)
<u>B2202</u>	TRUCKEE RIVER	VIRGINIA STREET	DOWNTOWN RENO
<u>B2245</u>	N TRUCKEE DRN	KLEPPE LN	SPARK
<u>B2249</u>	ALUM CREEK	MAYBERRY DRIVE	WEST OF RENO
<u>B2341</u>	Pleasant Valley Creek	I 580	Pleasant Valley
<u>B2352</u>	TRUCKEE RVR	MUSTANG RD	EAST OF LOCKWOOD
<u>B2450</u>	ALUM CRK	CAUGHLIN PW	200 Y E. OF HAWKEN ROAD
<u>B2452</u>	WHITE'S CRK	THOMAS CREEK RD	NORTH OF MT ROSE HW
<u>B2453</u>	OVERFLOW CULVERT	DANT BLVD	NORTH OF MANZANITA LN
<u>B2454</u>	THOMAS CRK	DBL DIAMOND PW	SOUTHEAST RENO
<u>B2455</u>	THOMAS CRK	SOUTH MEADOWS PW	SOUTHEAST RENO
<u>B2456</u>	ALUM CRK	CAUGHLIN PW	CAUGHLIN RANCH
<u>B2457</u>	ALUM CRK	SR659 W.McCARRAN	RENO, NEAR CAUGHLIN RNCH
<u>B2464</u>	CHANNEL	ARROWCREEK PW	SOUTH WEST OF RENO
<u>B2465</u>	WHITE CRK BRANCH	WEDGE PW	SOUTHWEST OF RENO
<u>B2466</u>	WHITE CRK BRANCH	WEDGE PW	SOUTHWEST OF RENO
<u>B2467</u>	WHITES CRK	WEDGE PW	SOUTH WEST OF RENO
<u>B2468</u>	WHITES CRK	ARROWCREEK PW	SOUTH WEST OF RENO
<u>B2469</u>	WHITES CRK	ARROWCREEK PW	SOUTH WEST OF RENO
<u>B2470</u>	WHITES CRK	ARROWCREEK PW	SOUTH WEST OF RENO
<u>B2473</u>	STEAMBOAT CRK	CONESTOGA CIR	PLEASANT VLY
<u>B2474</u>	STEAMBOAT CRK	BLACKWILLOW WY	PLEASANT VALLEY
<u>B2502</u>	GALENA CRK	CALLAHAN RANCH RD	SOUTH WEST OF RENO

B2521	Steamboat Creek	1 580	North of Galena
B2522	Galena Forest	1 580	Steamboat area
B2527	THOMAS CRK	DOUBLE R BL	SOUTH EAST RENO
B2528	LUMBERJACK CHNL	DOUBLE R BL	SOUTHEAST RENO
B2529	THOMAS CRK	TERABYTE CT	SOUTHEAST RENO
<u>B2530</u>	THOMAS CRK	TERABYTE CT	SOUTH EAST RENO
B2530 B2531	THOMAS CRK	TERABYTE CT	SOUTHEAST RENO
B2531 B2537	CHANNEL	SR 445 PYRAMID HWY	SPANISH SPRINGS
B2549	THOMAS CRK	GATEWAY DR	SOUTHEAST RENO
B2550	THOMAS CRK	GATEWAY DR	SOUTHEAST RENO
B2550 B2580	WHITES CRK	OLD VIRGINIA RD	SOUTH RENO
	N TRUCKEE DRN	SPANISH SPRINGS RD	SPARKS
<u>B2581</u> B2621		SR430 VIRGINIA ST	SOUTH WEST
<u>B2621</u>	DRY CREEK DRY CREEK	NEIL RD	SOUTH WEST
<u>B2622</u>		RANGE VIEW LN	
<u>B2636</u>	EVANS CRK		SOUTHWEST RENO
<u>B2637</u>	THOMAS CRK		SOUTHWEST RENO
<u>B2650</u>		SIERRA CENTER PW	SOUTHWEST RENO
<u>B2652</u>	CHANNEL	DOUBLE R BL	SE RENO
<u>B2695</u>	SUN VLY DVRSN	SPARKS BL	SPARKS
<u>B2696</u>	CHANNEL	HARBOR COVE DR	SPARKS
<u>B2697</u>	CHANNEL	LOS ALTOS PW	SPARKS
<u>B2698</u>	EVANS CRK	EVANS CREEK DR	SW RENO
<u>B2712</u>	CHANNEL	LOS ALTOS PW	SPARKS
<u>B2717</u>	CHANNEL	SPARKS BL	SPARKS
<u>B2727</u>	CHANNEL	WINGFIELD SPRINGS	SPARKS
<u>B2728</u>	CHANNEL	WINGFIELD SPRINGS	SPARKS
<u>B2732</u>	CHANNEL	STEAMBOAT PKWY N	SE RENO
<u>B2733</u>	STEAMBOAT CRK	STEAMBOAT PW-N	SE RENO
<u>B2734</u>	CHANNEL	DAMONTE RANCH PKWY	SE RENO
<u>B2764</u>		STEAMBOAT PS-S	SE RENO
<u>B2797</u>			WEST OF WADSWORTH
<u>B2831</u>	STEAMBOAT CRK	SOUTH MEADOWS PW	RENO
<u>B2839</u>	CHANNEL	LOGAN RIDGE TR	SOMERSETT
<u>B2860</u>	WASH	SR445 PYRAMID HWY	PYRAMID LAKE / SUTCLIFF
<u>B2882</u>	TOE OF SPARKS DAM	VISTA DEL RANCHO	N SPARKS
<u>B2887</u>	STEAMBOAT CREEK	VETERANS PW	SE RENO
<u>B2888</u>	DRAINAGE	VETERANS PW	SE RENO
<u>B2889</u>	DRAINAGE	RIO WRANGLER PWY	SE RENO
<u>B2890</u>	DRAINAGE	RIO WRANGLER PWY	SE RENO
<u>B2891</u>	DRAINAGE	RIO WRANGLER PWY	S RENO
<u>B2892</u>	DRAINAGE	ARROWSPRINGS DR	S RENO
<u>B2899</u>	STEAMBOAT CREEK	CARAT AVE	SE RENO
<u>B2900</u>	STEAMBOAT CREEK	VETERANS PW NB	SE RENO
<u>B2930</u>	DRY CREEK CHANNEL	AIRWAY DR	SE RENO
<u>B2970</u>	CHANNEL	OLD VIRGINIA ROAD	SOUTHEAST OF RENO
<u>B3096</u>	CROSS DRAINAGE	VETERANS PARKWAY	RENO-SE CONNECTOR
<u>B3097</u>	CROSS DRAINAGE	VETERANS PARKWAY	SE CONNECTOR
<u>B3098</u>	CROSS DRAINAGE	VETERANS PKWY	RENO-SE CONNECTOR
<u>B3099</u>	THOMAS CREEK	VETERANS PKWY	RENO-SE CONNECTOR
<u>B3100</u>	CROSS DRAINAGE	VETERANS PKWY	RENO-SE CONNECTOR
<u>B3101N</u>	ALEXANDER LAKE RD/CREEK	VETERAN'S MEM PKWY	RENO-SE CONNECTOR
<u>B3101S</u>	ALEXANDER LAKE RD/CREEK	VETERAN'S MEM PKWY	RENO-SE CONNECTOR

<u>B3102</u>	CROSS DRAINAGE	VETERANS PKWY	RENO-SE CONNECTOR
<u>B3103</u>	CROSS DRAINAGE	VETERANS PKWY	RENO-SE CONNECTOR
<u>B3104</u>	MIRA LOMA DRAINAGE	VETERAN'S PKWY	RENO-SE CONNECTOR
<u>B3105</u>	CROSS DRAINAGE AND GCP	VETERANS PKW	RENO-SE CONNECTOR
<u>B3106N</u>	DRAINAGE AND MAINTENANCE	VETERANS PARKWAY	RENO-SOUTHEAST CONNECTOR
<u>B3106S</u>	DRAINAGE AND MAINTENANCE	VETERANS PARKWAY	RENO-SE CONNECTOR
<u>B3107</u>	BOYNTON SLOUGH	VETERANS PARKWAY	RENO-SOUTHEAST CONNECTOR
<u>B3108</u>	CROSS DRAINAGE	VETERANS PKWY	SE CONNECTOR
<u>B3109</u>	CROSS DRAINAGE	VETERANS PKWY	SE CONNECTOR
<u>B3110N</u>	YORI DRAIN	VETERANS PARKWAY	SOUTHEAST CONNECTOR
<u>B3110S</u>	YORI DRAIN	VETERANS PARKWAY	SOUTHEAST CONNECTOR
<u>B3111</u>	CROSS DRAINAGE	VETERANS PKWY	SE CONNECTOR
<u>B3112</u>	CROSS DRAINAGE	VETERANS PARKWAY	SE CONNECTOR
<u>B3113</u>	CROSS DRAINAGE	PEMBROKE DRIVE	STEAMBOAT CREEK
<u>B3114</u>	STEAMBOAT CREEK	CLEANWATER WAY	SE CONNECTOR
<u>B3115</u>	CROSS DRAINAGE	VETERAN'S PKWY	SE CONNECTOR
<u>B3117N</u>	TRUCKEE RIVER, BIKE PATH	VETERAN'S PARKWAY	SOUTHEAST OF SPARKS
<u>B3117S</u>	TRUCKEE RIVER, BIKE PATH	VETERAN'S PARKWAY	SOUTHEAST OF SPARKS
<u>B3264</u>	WHITES CREEK	CALLAHAN ROAD	SW RENO-MT ROSE
<u>B3267</u>	STEAMBOAT CREEK	ALEXANDER LAKE RD	SE CONNECTOR
<u>B3281</u>	CHANNEL C	MILITARY ROAD	LEMMON VALLEY
<u>G 579</u>	SR 667/KIETZKE LN	SPRR	RENO, KIETZKE LANE
<u>G 751</u>	SPRR	FR WA09 CANYON WAY	EAST OF SPARKS
<u>G 765E</u>	SPRR AND POWER CANAL	180	SOUTHWEST OF VERDI
<u>G 765W</u>	SPRR AND POWER CANAL	I 80	SOUTHWEST OF VERDI
<u>G 772E</u>	TRUCKEE RIVER & SPRR	I 80	WEST OF RENO
<u>G 772W</u>	TRUCKEE RIVER & SPRR	180	WEST OF RENO
<u>G 897</u>	SR 668/ROCK BL	SPRR	SPARKS
<u>G 996</u>	180	UPRR	RENO
<u>G1092N</u>	UPRR, PANTHER, NEWPORT	US 395N	NORTH OF RENO
<u>G1092S</u>	UPRR	US 395S	NORTH OF RENO
<u>G1129</u>	SR 659/N.MCCARRAN	UPRR	RENO
<u>G1131</u>	SPRR	SR 659/E.MCCARRAN	SPARKS
<u>G1200</u>	SPRR	SR 674/GREG ST	EAST SPARKS
<u>G1233</u>	SR647 4TH ST, SPRR	I 580	RENO
<u>G1233L</u>	SR647 4TH ST, SPRR	I 580 RAMP	RENO
<u>G1233R</u>	SR647 4TH ST, SPRR	I 580 RAMP	RENO
<u>G1276</u>	4TH&5TH, SPRR, TRUCKEE	WELLS AV	RENO
<u>G1474</u>	180	SPRR	EAST OF SPARKS
<u>G1504</u>	MAYBERRY DR	SPRR	WEST OF RENO
<u>G1697N</u>	UPRR	US 395N	NORTH OF RENO
<u>G1697S</u>	UPRR	US 395S	NORTH OF RENO
<u>G1748N</u>	UPRR	US 395N	NORTH OF RENO
<u>G1748S</u>	UPRR	US 395S	NORTH OF RENO
<u>G1850</u>	SPRR	SPARKS BL	SPARKS
<u>G1864</u>	UPRR & TRUCKEE RIVER	SR 659/MCCARRAN	WEST RENO
<u>G2766</u>	UPRR	KEYSTONE AV	RENO
<u>G2767</u>	UPRR	VINE ST	RENO
<u>G2768</u>	UPRR	WASHINGTON ST	RENO
<u>G2769</u>	UPRR	RALSTON ST	RENO
<u>G2771</u>	UPRR	N ARLINGTON AV	RENO
<u>G2772</u>	UPRR	WEST ST	RENO

<u>G2773</u>	UPRR	SIERRA ST	RENO
G2774	UPRR	N VIRGINIA ST	RENO
G2775	UPRR	N CENTER ST	RENO
G2776	UPRR	LAKE ST	RENO
<u>G2777</u>	UPRR	EVANS AV	RENO
<u>G2798</u>	UPRR	USA PW	CLARK STATION
<u>H 392</u>	VERDI GLEN DR	SR425 3RD ST VERDI	WEST OF VERDI
H 643	CLARK STATION RD.	180	EAST OF SPARKS
<u>H 703E</u>	EQUIPMENT UNDERPASS	I 80E	SOUTH OF WADSWORTH
H 703W	EQUIPMENT UNDERPASS	1 80W	SOUTH OF WADSWORTH
<u>H 767E</u>	MAE ANNE AV	I 80E	NEAR VERDI
<u>H 767W</u>	MAE ANNE AV	1 80W	NEAR VERDI
<u>H 768</u>	180	CEMETERY ROAD	WEST OF RENO
	GILPIN RD	I-80E	NEAR WADSWORTH
<u>H 842E</u>	GILPIN RD	I-80W	NEAR WADSWORTH
<u>H 842W</u>		1-8000	SPARKS
<u>H 866E</u>	CITY STREETS(NUGGET)		SPARKS
<u>H 866W</u>	CITY STREETS(NUGGET)	180	
<u>H 990</u>	180	WASHINGTON ST RALSTON ST	RENO RENO
<u>H 991</u>	180		
<u>H 993</u>	180	VIRGINIA ST EVANS ST	RENO
<u>H 995</u>	180		RENO
<u>H 997</u>	I 80 SR 666 SUTRO ST	VALLEY RD I 80	RENO RENO
<u>H 999</u>	SR667 EL RANCHO	180	SPARKS
H1003	WEDEKIND RD	US 395	RENO
H1090	COMSTOCK DR	SR659 McCARRAN BL	RENO
H1130	STOKER AV	I 80E	RENO
<u>H1162E</u>			
H1162W	STOKER AV I 80	I 80W VINE ST	RENO RENO
H1199	SR668 ROCK BL	CRANE ST	SPARKS
H1228	SR667 & TRUCKEE RVR	1 580	RENO
<u>H1234</u> H1247	PECKHAM LN	1580	RENO
<u>H1247</u> H1249	CROSS ROAD	SR 28	INCLINE VILLAGE
<u>H1243</u> H1251	VASSAR ST	1 580	RENO
<u>H1231</u> H1529	FOSTER DR	KEYSTONE AVE	RENO
<u>H1553</u>	SR659 McCARRAN BL	SUMMIT RIDGE	WEST OF RENO
	KLEPPE LN	SPARKS BL	SPARKS
H1753	SR659 McCARRAN BL	I 580	SOUTH RENO
H1798	SR671 HUFFAKER LN	1580	SOUTH RENO
<u>H1830</u> <u>H1840</u>	SR668 ROCK BLVD	RMP 180E TO NUGGET	SPARKS
<u>H1946</u>	Parker Ranch Road	1 580	Old Washoe City
<u>H1948</u> H2008	OLD VIRGINIA RD	1580	RENO
<u>H2342N</u>	St. James Parkway	1580	West of old Washoe City
H2342N	St. James Parkway	1580	West of old Washoe City
<u>H2654</u>	4TH STREET	RMP KIETZKE-395N/S	SPARKS
	CLEAN WATER WAY	VETERAN'S PKWY	SE CONNECTOR
<u>H3116</u>	COUNTY ROAD	I 80	EAST OF SPARKS
<u>1660</u>			
<u>1670</u> 1671	CROSS ROAD CROSS ROAD	I 80 I 80	EAST OF RENO WEST OF WADSWORTH
<u>1671</u>		CROSS ROAD-THISBE	EAST OF SPARKS
<u>l 681</u> I 683N	l 80 SR673 STEAD BL	US 395N	STEAD
<u>I 683N</u> <u>I 683S</u>	SR673 STEAD BL	US 395N	STEAD
10033	SHOTS STEAD DE		JILAU

1 7005		I 80E	WEST OF WADSWORTH
<u>1700E</u>	SR427 OLD US 40 SR427 OLD US 40	1 80W	WEST OF WADSWORTH
<u>1700W</u>	1 80	LOCKWOOD DR	EAST OF SPARKS
<u>1 750</u> I 753E	CROSS ROAD	I 80E	EAST OF SPARKS
1753U	CROSS ROAD	180L 180W	EAST OF SPARKS
1753W 1763	180	SR425 THIRD ST	VERDI
<u>1705</u> 1770	180	GARSON RD	WEST OF RENO
1773E	SR425 THIRD ST	I 80E	WEST OF RENO
1773U	SR425 THIRD ST	I 80W	WEST OF RENO
1774E	FRONTAGE ROAD	I 80E	WEST OF RENO
1774W	FRONTAGE ROAD	1 80W	WEST OF RENO
1775E	SR647 W 4TH ST	I 80E	WEST OF RENO
1775W	SR647 W 4TH ST	1 80W	WEST OF RENO
1812N	EASTLAKE BLVD	I 580N/US 395N	NORTH OF CARSON CITY
<u>1812S</u>	EASTLAKE BLVD	I 580S/US 395S	NORTH OF CARSON CITY
1987	SR657 KEYSTONE AV	1 80	RENO
1992	180	SIERRA ST	RENO
1994	180	CENTER ST	RENO
<u>1 998</u>	WELLS AV	180	RENO
11000	180	RMP 395S TO 80E	RENO
11001	180	RMP 80W TO 395S	RENO
11002	SR647 4TH ST	180	SPARKS
11002R	SR647 4TH STREET	RMP I 80 TO US395	SPARKS
11005E	SR668 ROCK BL	I 80E	SPARKS
11005W	SR668 ROCK BL	I 80W	SPARKS
11006	SR445 PYRAMID WAY	180	SPARKS
11007E	SR659 E McCARRAN	I 80E	SPARKS
11007W	SR659 E McCARRAN	I 80W	SPARKS
11008	180	VISTA BL	SPARKS
<u>11010</u>	SR667 KIETZKE LN	RMP I 80W TO 4TH	SPARKS
<u>11086</u>	180	US 395	RENO
<u>11087</u>	180	RMP I80E TO US395N	RENO
<u>11088</u>	I 80	RMP US395N TO 180W	RENO
<u>11089</u>	SR663 ODDIE BL	US 395	RENO
<u>11091N</u>	SR443 CLEARACRE LN	US 395N	NORTH RENO
<u>110915</u>	SR443 CLEARACRE LN	US 395S	NORTH RENO
<u>11093N</u>	SR430 N VIRGINIA ST	US 395N	RENO
<u>110935</u>	SR430 N VIRGINIA ST	US 395S	RENO
<u>11149</u>	RMP I80E TO US395N	I 580	RENO
<u>11171</u>	NINTH ST	RMP US395S-I80E&W	RENO
<u>11172</u>	RMP 80W TO 395S, 9TH ST	US 395	RENO
<u>11173</u>	NINTH ST	RMP I80W TO US395N	RENO
<u>11248</u>	MOANA LN	I 580	RENO
<u>11250</u>	SR653 PLUMB LN	I 580	RENO
<u>11252</u>	MILL ST	I 580	RENO
<u>11253</u>	SR648 GLENDALE AV	I 580	RENO
<u>11261</u>	1 580	BELLEVUE RD	NORTH OF CARSON CITY
<u>11289N</u>	FR WA26 RED ROCK RD	US 395N	NORTH OF RENO
<u>112895</u>	FR WA26 RED ROCK RD	US 395S	NORTH OF RENO
<u>11290</u>	US 395	WHITE LAKE PKWY	NORTH OF RENO
<u>11291</u>	US 395	FRWA30 VILLAGE PW	BORDERTOWN N/O RENO
<u>11301E</u>	SR 659 W McCARRAN	I 80E	WEST OF RENO

I1301W	SR 659 McCARRAN BL	I 80W	WEST OF RENO
11305	US 395	SR659 McCARRAN BLV	NE RENO
11305R	RMP US395N-CLEARACRE	RMP McCARRAN-395N	NORTH OF RENO
11556	180	SPARKS BL	SPARKS
11749N	GOLDEN VALLEY RD	US 395N	NORTH OF RENO
<u>117495</u>	GOLDEN VALLEY RD	US 395S	NORTH OF RENO
<u>11770N</u>	LEMMON DR	US 395N	NORTH OF RENO
<u>117705</u>	LEMMON DR	US 395S	NORTH OF RENO
<u>11772</u>	TERMINAL WY	RMP RTIA TO I 580N	RENO
<u>11773</u>	RMP PLUMB TO I580S	RMP I 580S TO RTIA	RENO
<u>11774</u>	I 580, TERMINAL WY	RMP I 580S TO RTIA	RENO
<u>11799</u>	SR430 S VIRGINIA ST	I 580	RENO
<u>11799R</u>	SR430 VIRGINIA ST	RMP I 580	RENO
<u>11800</u>	SR667 NEIL RD	I 580	RENO
<u>11831</u>	SR430 S VIRGINIA ST	I 580	RENO
<u>11922</u>	180	ROBB DR	WEST RENO
<u>11945</u>	1 580	SR 429	Washoe Valley
<u>11949N</u>	SR431 MT ROSE HW	I 580	RENO
<u>119495</u>	SR 431 Mt Rose	I 580	SW of Reno
<u>11950</u>	SR430 S VIRGINIA ST	1 580	RENO
<u>11951</u>	DAMONTE RANCH PW	1 580	RENO
<u>11952</u>	SOUTH MEADOWS PKWY	1 580	RENO
<u>12007</u>	OLD VIRGINIA RD	RMP S VA TO US395N	RENO
<u>12009</u>	OLD VIRGINIA RD	RMP US 395-S VA ST	RENO
<u>12796</u>	I-80	USA PARKWAY	WEST OF WADSWORTH
<u>12936</u>	MEADOWOOD MALL WY	I 580	SOUTH RENO
<u>13261</u>	US395	PARR-DANDINI BLVD	NORTH RENO
<u>P1177</u>	180	ARLINGTON PED	RENO
<u>P1277</u>	180	COM. BUSINESS	RENO
<u>P1297</u>	VIRGINIA ST.	UNR PED	RENO
<u>P1356</u>	SR648 GLENDALE AV	PEDESTRIAN WALK	RENO
<u>P2720</u>	GOLF CART PATH	VISTA BL	SPARKS
<u>P2727</u>	GOLF CART PATH	WINGFIELD SPRINGS	SPARKS
<u>P2728</u>	GOLF CART PATH	WINGFIELD SPRINGS	SPARKS

Washoe County Emergency Management and Homeland Security Program

A.3 Building Materials



Basemap Credits: Estl, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS

Washoe County Emergency Management and Homeland Security Program

A.4 Bus Routes



Washoe County Emergency Management and Homeland Security Program

A.5 Communications



Washoe County Emergency Management and Homeland Security Program

A.6 Dams



Basemap Credits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS

Washoe County Emergency Management and Homeland Security Program

Washoe County Dams (none are very large):

- 1. Derby Dam Reno/Sparks/Fernley
- 2. East Wash Diversion Dam Reno
- 3. Highland Reservoir Dam Reno
- 4. Hunter Creek Dam Verdi
- 5. Hunter Creek Dam Mt Rose
- 6. Hunter Creek Dam Reno
- 7. Marble Bluff Dam Nixon
- 8. Numana Dam Nixon
- 9. Swan Lake Reservoir Dam Stead
- 10. Upper Peavine Creek Dam Reno
- 11. West Wash Dam Reno
- 12. Wheeler Resevoir Dam Reno

A.7 Debris Generated by Earthquake



Washoe County Emergency Management and Homeland Security Program

A.8 Evacuation Routes

Following a large earthquake, a Traffic Management Plan can be found in Appendix 1.3 of the *Evacuation, Sheltering and Mass Care Plan* in WebEOC.



Annex A: - Page 16

Washoe County Emergency Management and Homeland Security Program

A.9 Gas Pipelines



Basemap Credits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

Washoe County Emergency Management and Homeland Security Program

A.10 Government Buildings



Basemap Credits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS

Washoe County Emergency Management and Homeland Security Program

A.11 Hospitals and Medical Facilities



Washoe County Emergency Management and Homeland Security Program

Saint Mary's Regional Medical Center Stead Medical Saint Mary's Medical Center Sun Valley Clinic Sierra Regional Center Tahoe Pacific Hospital West Renown Medical Group Urgent Care Center Eastern Sierra Medical Group and Faster Care Pyramid Health Center Washoe Progressive Care Center Northern Nevada Medical Center West Hills Hospital **Trinity Services** Washoe Medical Center Clinic Mediquik Renown Regional Medical Center Renown Medical Group Urgent Care Center Ryland Life Care Center of Reno Ioannis A Lougaris Veterans Administration Medical Center HAWC Clinic Charles Drive Home Willow Springs Center Manor Care Health Services Saint Marys Redfield Clinic ARC Med Center Regent Care Center of Reno Saint Marys Family Walk-In Center South Reno Medical Plaza Saint Mary's Medical Center at Galena Hearthestone of Northern Nevada Physicians Hospital for Extended Care Renown South Meadows Medical Center Renown Medical Group Urgent Care Center Vista Tahoe Pacific Hospital Meadows Renown Rehabilitation Hospital Tahoe Pacific Hospital (historical) Saint Mary's Urgent Care Medical Center Saint Mary's Urgent Care Center at Mae Anne Summit Ridge Medical Center Renown Health Urgent Care Center Renown Medical Group Urgent Care Center

Washoe County Emergency Management and Homeland Security Program

A.12 Police and Fire Stations



Basemap Credits: Esrl, HERE, Garmin, SafeGraph, METT/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

A.13 Power Distribution



Washoe County Emergency Management and Homeland Security Program

A.14 Railroads



Basemap Credits: Esri, MERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

Washoe County Emergency Management and Homeland Security Program

A.15 Schools



Basemap Credits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

Washoe County Emergency Management and Homeland Security Program

A.16 Utilities



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