Reno-Sparks Indian Colony Annex – Washoe County Regional Hazard Mitigation Plan



2020 Plan Update

Jurisdictional Annex

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1. INTRODUCTION

1.1 Reno-Sparks Indian Colony Hazard Mitigation Program

The Reno-Sparks Indian Colony (RSIC) has a fully integrated approach to hazard mitigation planning and program implementation. Throughout the 2019 update process, the following Hazard Mitigation Plan (HMP) participation roles were recorded:

Name	Position	Role in Hazard Mitigation
David Hunkup	Emergency Services Manager	Mitigation Program Lead
Stewart Handte	Police Chief	Subject Matter Expert and program imple- mentation

1.2 What's New in the 2020 Update?

With the 2020 HMP update, Washoe County and its regional partners have recognized changes in planning priorities by placing an added emphasis on incorporating actionable strategies in the mitigation implementation plan and moving away from including ongoing coordination activities. Recent disasters, primarily severe flooding in 2017, have also influenced the planning priorities and development of mitigation actions for the 2020 HMP update.

In the years since the release of the 2015 HMP, the RSIC has continued to slowly grow and to develop its Hungry Valley location. The increased population and structures have resulted in the increase of some vulnerabilities, while others have been effectively mitigated to an acceptable level. Planning priorities for the Tribe and the mitigation actions included in the 2020 HMP update have expanded to include new development in the Hungry Valley reservation.

The 2020 update of the Washoe County Regional HMP includes the following major revisions to the 2015 plan:

- Incorporation of additional hazards and more comprehensive risk assessments (see Chapter 3);
- Expanded capability assessment (see Chapter 4);
- Integration of hazard mitigation planning into existing mechanisms (see Section 4.5); and
- Comprehensive and focused mitigation strategy with prioritized mitigation actions (see Chapter 5).



A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for [Reno-Sparks Indian Colony]? (Requirement §201.6(c)(1))

See Appendix C of the Basic Plan for the completed Federal Emergency Management Agency (FEMA) Local Plan Mitigation Review Tool for the Washoe County Regional HMP.

1.3 Plan Adoption

44 CFR §201.6(c)(5) requires that the HMP be formally adopted by elected officials from each participating jurisdiction. Tribal Council formally adopted the 2020 update of the Washoe County Regional HMP on [Date].

This HMP was approved by FEMA Region IX on [Date]. A copy of the Tribe's adoption resolution is included in Appendix H of the Basic Plan.

2. COMMUNITY PROFILE



2.1 Tribal Sovereignty and Governance

The RSIC is a federally recognized Indian Tribe organized under the provisions of the Indian Reorganization Act of 1934. The constitution was adopted in 1936 by the residents of the Colony. A Chairman and eight-member Tribal Council is elected to serve as the governing body and to act in accordance with the provisions of the constitution. To be eligible, candidates must be enrolled members of the Colony, be 21 years of age by the election date, have no felony convictions, and physically reside on Colony land for not less than one year immediately prior to the election, as written in the <u>bylaws</u>.

The constitution gives the Tribal Council authority and responsibility to raise revenues, incur expenses, enter into contracts, borrow money, administer funds, purchase land, and provide services for the general welfare and benefit of the Colony members.

The RSIC's last Tribal election took place on November 4, 2017, and the next is scheduled for November 2019. Council seats have four-year terms, and four seats are up every two years, with staggering meant to improve continuity among the council.

The Colony is a growing organization, with over 1,000 members; it employs approximately 300 people, including over 150 Tribal members, and is progressively taking steps to provide for the needs of its members while maintaining Tribal culture and protecting sovereignty.

"Our vision is for a strong community that promotes and encourages individual spiritual, physical and emotional health to foster a long, abundant and prosperous life, which will lead to personal, family and community responsibility and prosperity" (www.rsic.org)

The RSIC's mission is "to offer opportunities for tribal members to improve their lives and enhance tribal values by making community programs, services, and projects available" (<u>www.rsic.org</u>).

2.2 Geography and Climate

The RSIC is located near Reno and Sparks, Nevada. The reservation lands consist of the original 28-acre residential Colony, located in central west Reno, the 15,426-acre Hungry Valley reservation, located 19 miles north of the Colony in a more rural setting in Eagle Canyon, west of Spanish Springs, and commercial properties near the original Colony location, in Verdi, In Spanish Spring, and in Hungry Valley. The Hungry Valley reservation is nearly 17 square miles. Figure 2-2 on the following page illustrates RSIC-controlled lands.

The area features a steppe climate, which means it is in the range between desert and humid. The Colony's climate is the same as the city of Reno's, with an average precipitation of 7.4 inches. Most rainfall and snow occurs in winter and spring, with the possibility of summer thunderstorms between April and October. Extreme highs have reached 104 to 108 degrees Fahrenheit, and lows -16 to 17 degrees Fahrenheit. Reno averages 300 days of sunshine per year. Figure 2-1 shows averages based on 1981-2010 weather normals.



Figure 2-1 City of Reno Temperature and Precipitation Averages



2.3 Population and Demographics

The RSIC comprises three Great Basin Tribes: the Paiute, Shoshone, and Washoe. It is unique in that it occupies both an urban setting and a rural land base. The RSIC records 1,191 Tribal members. The 2013–2017 American Community Survey 5-year estimates report that the RSIC has a total population of 1,108. The median age of the RSIC's population is 26.6 years (U.S. Census Bureau n.d.[a]).

The Colony's original Reno location has a smaller community than Hungry Valley due to constraints based on acreage. It is located between the cities of Reno and Sparks along a four-block stretch next to a freeway. The Colony's Hungry Valley community is located 19 miles away. The Hungry Valley community consists of two Tribal housing developments, a community center, emergency services, childcare, a cemetery, and pow-wow grounds. It covers 15,426 acres adjacent to BLM land. All the surrounding roads are dirt, except those in the housing area and going to the Community Center, which are paved. The Hungry Valley community has approximately 600 residents on average, with approximately 560 of those residents enrolled as members of the Tribe.

Other RSIC members live near the Colony due to a lack of housing on Tribal lands, but receive services and participate in Tribal programs, activities, and resources. The RSIC has deemed these members eligible for services at the Tribal Clinic, education programs, social services, and other tribally funded programs such as the Seniors Program. Most members residing off Colony lands are on the waiting list for housing that becomes available on the reservation occasionally. Indians from other tribes residing on the reservation also receive governmental and Tribal services as community residents.

The 2013–2017 American Community Survey 5-year Estimates report that the RSIC's population has a per capita income of \$11,907 and a median household income of \$31,912. Persons living below the poverty line made up 39.6% of the RSIC's population, which is more than double the rate of the U.S. overall. There are 302 housing units on the RSIC, with a median value for owner-occupied housing at \$85,000 (U.S. Census Bureau 2017).

2.4 Tribal Enterprises

The Tribal Council oversees Colony affairs and has final authority over all contracts, leases, and the business affairs of the Colony. The Colony created its planning and economic development department in 1975 to provide a revenue stream to pay for essential government services. The Colony attributes a positive track record of dealing with commercial tenants to its stable government, experienced staff, and consistency of purpose. The Colony's business development program is assisted by various federal incentives and its compact with the State of Nevada covering the collection of Tribal sales and excise taxes. The Colony manages four commercial development sites (see Figure 2-2), is landlord to 20 commercial tenants, and operates six smoke shops.

"The tribal council strives to maintain positive, constructive relationships and tribal unity. These important elements are the guiding principles for tribal economic development which exists to improve the quality of life for all, even those yet to be born" (<u>www.rsic.org</u>)

Many tribes outside of Nevada build casinos for economic benefit without competition; Nevada Tribes, however, compete within in an already glutted gaming market within the state. The RSIC previously relied upon sales revenue from its five smoke shops but has leased and developed its commercial sites to diversify the Colony's general fund from sole reliance on tobacco revenues. Revenues from the Colony's commercial real estate projects provide funds for the Colony's government, which provides essential services to Tribal members, residents, and other urban Indians. For example, the RSIC leased land to Walmart in 2003. The resulting tax revenues enabled RSIC to secure a 2006 Bond Issue to finance the design and construction of a 65,000 square foot health center for the RSIC, which was completed in 2008 (RSIC) (Assistant Secretary – Indian Affairs, IEED n.d.).

The RSIC itself employs more than 300 people, over 150 of whom are members of the Tribe.

Development highlights:

- One new smoke shop in Spanish Springs Smoke Shop VI at 7655 Pyramid Way
- Remains a landlord for car dealerships.
- Looking to build new housing in Hungry Valley. There will first be a master plan, with planning to include sites for 100 to 125 homes.
- There are no plans for economic development activities within Hungry Valley.
- The RSIC has issued a request for proposals (RFP) to identify a consultant to assist with the update of its Long Range Transportation Plan (last updated in 2007) and Indian Road Reservation inventory (last updated in 2011), which will facilitate prioritization of road improvement/construction projects to meet transportation needs.
- The RSIC has also issued an RFP for design of a Hungry Valley Pow Wow Shower Room Building and Recreational Vehicle (RV) Trailer Park.



New smoke shop in Spanish Springs

RSIC member celebrates grand opening of her business Alluring Beauty Salon in Sparks in 2017.

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2.5 Tribal Lands and Ownership Trends

Archeological evidence places the earliest residents of Nevada—the Paiute, Washoe, and Shoshone people—at 10,000 years ago. Major land changes began with the discovery of gold in California, with increasing settlement from travelers in the mid-1800s whose concepts of and laws surrounding land ownership were at odds with those of the Indians, and ultimately resulted in legislation around the formation of reservations. The Moapa River Paiute Reservation and then the Walker River Paiute Indian Reservation were established by executive order in 1873. According to the RSIC website (www.rsic.org), the U.S. Department of Interior recommended in 1859 that land be set aside for Indian use north of the Truckee River and including Pyramid Lake. Though an executive order was issued in 1874 to establish the Pyramid Lake Reservation, the legal year of establishment is 1859.

According to its website, the RSIC was formed in response to a series of legislative actions, starting with the Indian Removal Act of 1830 and up to the Dawes Act of 1887, that resulted in disillusionment and a loss of traditional community structure and freedom of movement among lands. The RSIC was created to bring together Indians under their own government. In 1917, the federal government purchased 20 acres for non-reservation Indians of Nevada and for homeless Indians in land that is now the Colony. In 1928 the Supreme Court ruled that there is no distinction between a reservation and a colony, which enabled the RSIC to procure an additional 8 acres of land.

The Colony became a federally recognized Indian Tribe organized under the provisions of the Indian Reorganization Act of 1934. The constitution was adopted in 1936 by the residents of the Colony.

In 1937 the RSIC attempted to purchase an additional 1,080 acres but failed due to political challenges. In 1984, 1,920 acres were put into trust for the Tribe in Hungry Valley. The Nevada Native Nations Land Act (Public Law 114-232), enacted by Congress on October 7, 2016, conveyed approximately 13,434 acres of land in Hungry Valley previously administered by the Bureau of Land Management to the RSIC to be part of the Hungry Valley reservation. This act expanded the Tribe's reservation from 1,960 to 15,263 acres. At present, the reservation includes 15,426 acres in Hungry Valley.

The land expansion alleviates housing strain in the increasing density of the RSIC. In a <u>2007 article</u> <u>published in Indian Country</u>, Tribal Chairman Arlan Melendez is quoted as saying, "The tribe is always looking for a larger land base because of the overcrowding here on the downtown colony, which was 28 acres originally ... There was no room for growth and many of the families were stacking up" He said the expansion was for residential growth in specific areas, but not for commercial development of the land, and that it would remain a significant piece of acreage for recreation. (Modebach 2007)

The RSIC developed an <u>Allowed and Prohibited Use Map</u> in 2017—available on its website—to clarify allowed and prohibited types of recreational use of the land. The Tribal Council's resolution allows for "nondestructive, peaceful uses of the land" and prohibits activities like target shooting, dumping, hunting, campfires, use of alcohol, and disturbance of cultural sites.

2.6 Natural Resources

The 2007 Indian Country article highlights Tribal Chairman Melendez's vision for acquisition of the Hungry Valley land as one of preserving American Indian heritage in northern Nevada. "We've been

environmentalists ourselves ... We're really concerned about plant and animal life and the trees. ..We know through our ancestors it is the crossing of Indian tribes. There were many tribes crossing that area that went out to California and Susanville and Tahoe" (Mosebach 2007).

Hungry Valley is where the western edge of the Mojave ecosystem intersects with the coastal mountain range. Natural resources of Hungry Valley have been significantly disturbed due to heavy off-highway vehicle recreational use. Information from the <u>Soil Ecology and Restoration Group</u> lists impacts to the soil to include "physical, chemical and biological factors such as: reduced infiltration and fertility, increased compaction and soil strength, reduced biological activity and resultant decrease in the above-ground biomass. These factors lead to a change in how water flows through the system, causing increased runoff, peak flow and erosion potential." (Soil Ecology Restoration Group 1997)

Hungry Valley has three shrub communities (mixed shrub, juniper shrub, and pinyon juniper-oak woodland), and major tree species in the area include cottonwood, willow, and sycamore, which provide food, nesting, and perching for a large number of birds. It hosts over 16 species of reptiles and amphibians, as well as diverse small mammals.

3. HAZARD PROFILES AND VULNERABILITY ASESSMENTS

Chapter 3 contains hazard profiles and vulnerability assessments to determine the potential impact of hazard to the people, economy, and built and natural environments of the Reno-Sparks Indian Colony. They have been streamlined to increase the effectiveness and usability of the HMP. Additional details are provided in Appendix F of the Basic Plan.

EMA	 B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect [the Reno-Sparks Indian Colony]? (Requirement §201.6(c)(2)(i)) B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for [the Reno-Sparks Indian Colony]? (Requirement §201.6(c)(2)(i)) B3. Does the plan include a description of each identified hazard's impact as well as an overall summary of the vulnerability of the tribal planning area? [44 CFR § 201.6(c)(2)(ii)]
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3.1 General

The County has received 20 major disaster declarations, including four since the previous HMP update. Table 3-1 identifies the declarations since 2015 that are relevant to the RSIC.

Disaster Number	Individual Assistance Program Declared	Public Assistance Program Declared	Hazard Mitigation Program Declared	Declaration Date	Title
4307	No	Yes	Yes	3/27/2017	Severe Winter Storms, Flooding, and Mudslides
4303	No	Yes	Yes	2/17/2017	Severe Winter Storms, Flooding, and Mudslides
4303	No	Yes	Yes	2/17/2017	Severe Winter Storms, Flooding, and Mudslides
4303	No	Yes	Yes	2/17/2017	Severe Winter Storms, Flooding, and Mudslides

 Table 3-1
 Major Disaster Declarations in Washoe County

Source: FEMA 2019

The hazard profiles and vulnerability assessments contained in this chapter represent a considerable amount of work performed by the Mitigation Planning Team (MPT). MPT members ranked hazards using several key considerations, followed up by activities to validate hazard analysis results and identify specific areas of risk. Table 3-2 displays the high-priority hazards that the RSIC representatives to the MPT rated at a level of 3.0 or higher (on a scale of 1 to 5).

Hazard Type	Hazard Name
Natural Hazards	Flooding Wildland Fire Earthquake
Human-Caused Hazards	Criminal Acts and Terrorism
Technological Hazards	Energy Emergency

Table 3-2Hazards Addressed in the Plan

3.2 Hazard Ranking Methodology

The hazards identified in the HMP were initially ranked based on MPT feedback during MPT Meetings #1 and #2. Following the individual hazard ranking activity, the results were added up and aggregated to show an average score for all the RSIC representatives to the MPT (see Table 3-3).

3.3 Hazard-Specific Profiles and Risk Assessments

The following sections profile and assess the risks associated with hazards that are high planning priorities for the RSIC, which are hazards that were scored an average of 3.00 or higher during the hazard ranking activity. No natural hazards that have the potential to affect the tribe were omitted from the initial hazard assessment and ranking activity. The hazard profiles and risk assessments align with EMAP standards by focusing on hazards with a high magnitude or high probability. Each risk assessment considers the following attributes:

- **Location:** An indication of geographic areas that are most likely to experience the hazard.
- Past Occurrences/History: Similar to location, a chronological highlight of recent occurrences of the hazard accompanied by an extent or damage cost, if available.
- **Extent/Probability:** A description of the potential magnitude of the hazard, accompanied by the likelihood of the hazard occurring (or a timeframe of recurrence, if available).
- Vulnerability: A description of the potential magnitude of losses associated with the hazard.
 Vulnerability may be expressed in quantitative or qualitative values, depending upon available data. Identifies development trends' impact on the Tribe's vulnerability to each hazard since the 2012 plan development (increased, decreased, or unchanged).

Note: Hazard Descriptions, Potential Impacts from Future Climate Conditions, and Cascading Impacts can be found in Chapter 4 of the HMP Basic Plan, as these are not place-specific.

Table 3-3RSIC Hazard Rankings

	Jurisdiction: Reno-Sparks Indian Colony - Hazards											
	Probability (1=lowest, 5=highest)	Magnitude (1=lowest, 5=highest)	Frequency (1=lowest, 5=highest)	Onset (1=slowest, 5=fastest)	Duration (1=shortest, 5=longest)	Change in Risk (↑, ↓, ↔ since 2015)*	Average	Rank				
Energy Emergency	5.00	1.50	4.00	3.50	1.50	-	3.50	1				
Flooding	4.00	3.00	2.50	4.00	3.50	-	3.38	2				
Wildland Fire	4.50	2.00	3.00	4.00	2.50	-	3.38	2				
Earthquake	4.50	3.00	2.50	3.00	2.00	-	3.25	4				
Criminal Acts and Terrorism	3.00	2.50	2.50	4.50	1.00	-	3.13	5				
Hazardous Materials Incident	3.00	2.50	3.00	3.00	1.00	-	2.88	6				
Drought	3.50	2.50	2.50	2.50	3.50	-	2.75	7				
Severe Storms (Winter Storm)	3.00	2.50	3.00	2.50	2.00	-	2.75	7				
Infectious Disease	3.00	1.50	3.00	3.00	3.00	-	2.63	9				
Severe Storms (Windstorm)	3.50	1.00	2.50	2.00	1.50	-	2.25	10				
Avalanche and Landslide (Landslide)	1.00	1.00	1.00	3.00	1.50	-	1.50	11				

Note: No responses were provided to indicate change in risk since 2015.

Radiological waste transport and volcano hazards were not initially ranked by the MPT. In subsequent meetings, these hazards were identified as low probability but potentially high magnitude hazards. Risk assessments for both hazards are included in Section 4.5 of the Basic Plan. Avalanche and Landslide and (Landslide) and Transportation Incident (Aircraft Crash) were not identified as hazards for the RSIC.

3.3.1 Energy Emergency

Energy Emergency									
Probability	Probability Magnitude Frequency Onset Duration Average Rank								
5.00	1.50	4.00	3.50	1.50		3.50	1		

Location

Any area of the RSIC may potentially be impacted by a power outage or other energy emergency. Hungry Valley, which is at the edge of the regional electrical grid, is more vulnerable than the Tribe's Reno campus to power outages. Hungry Valley receives power via a single transmission line from Lemmon Valley. The Tribe experiences approximately three to four outages per year in Hungry Valley and less frequent outages at the Reno campus.

Previous Occurrences/History

Historically, power outages have been caused by natural events and human-caused accidents, but have not been recorded in a way that is publicly accessible. Numerous power outages occur every year, with outage times ranging in duration from a few minutes to over two days. The County average (based on data from 2014–2018 provided by electric utility NV Energy) is 1,079 outages annually at an average of 52 for minutes each outage. Data from the Reno substation accounts for 44 outages in 2018. A power outage in July 2019 affected more than 2,000 customers in Reno. The Spanish Springs substation experienced 131 outages in 2018.

Interruptions in energy services may also be planned—for example, to allow for system repairs or maintenance. In 2019, NV Energy began implementing extensive public safety outage management programs in areas with extreme fire risks. To prevent downed power lines and damaged equipment from causing fires, NV Energy may de-energize parts of the electrical grid during weather conditions conducive to wildland fires (e.g., high temperatures, low humidity, high winds, lightning storms) or based on field observations or information from first responders (NV Energy 2019). Planned outages by NV Energy or Pacific Gas and Electric Company (PG&E) in California have the potential to affect fuel availability for the Tribe. Outages affecting PG&E's system would cut power to the equipment that controls operation of the fuel pipeline serving the region.

Extent and Probability

It is difficult to predict the impacts of future power outages, but they have the potential to impact all government and business operations and cause extensive economic losses, among other impacts. Due to the sporadic nature of outages, it is also difficult to estimate how frequently such failures will occur, or their duration. The city's electric provider, NV Energy, generally deals with power outages multiple times per year, with many of them only lasting a matter of hours. Every several years, more significant power outages are experienced.

Future Probability Trend – Based on potential increases in heat waves and increasing regional development resulting in greater demand, the RSIC may be impacted by an increase in the probability of future power outages.

Energy Emergency

Vulnerability

NV Energy has provided electric power to northern Nevada for over 150 years. Customers in the Reno-Sparks area are served by multiple power generation facilities and a transmission system with built-in redundancy, which decreases the risk for widespread and longer-duration power outages. However, power outages have the potential to disrupt government and business operations over time periods ranging from several hours to several days. Electricity customers in areas on the fringes of the electric system may be some of the last to have service restored as repairs to urban areas with more customers are prioritized.

Elderly Tribal members and those who are sick or economically disadvantaged are more vulnerable to the effects of extended power outages. Depending on the season, if a power outage occurs, the Colony will activate incident command. The Fire Department and Tribal Clinic perform welfare checks for vulnerable residents at Hungry Valley and the Reno campus to ensure they have enough food and critical supplies.

Existing Mitigation Case Study

Some Tribal facilities, including the Hungry Valley gym and portions of the Health Center and Administrative Offices, have emergency generators to provide emergency power to critical offices and functions, like the pharmacy and the Tribe's server room.

Recent Development Trends

- Economic: NV Energy is actively diversifying its energy generation facilities by adding renewable energy facilities to its system. NV Energy handles planning, expansion, and maintenance of its electric facilities in accordance with Nevada Public Utility Commission regulations. (Decreased Vulnerability)
- Land Use: The RSIC's ability to develop land in the Colony is already limited by its acreage, resulting in no increased vulnerability in the Colony's current location. However, further development of assets that rely on electricity in Hungry Valley will result in increased vulnerability to outages.

Future Land Use

The Colony has installed solar panels on a few of its government buildings. The solar panels that have been installed at Hungry Valley facilities are connected to the electric grid and would not be able to provide power in the event of a grid outage. The Colony will invest in renewable energy projects as resources become available to reduce its vulnerability to power outages.

3.3.2 Flooding

Flooding									
Probability	Magnitude	Frequency	Onset	Duration		Average	Rank		
4.00	3.00	2.50	4.00	3.50		3.38	2		

Location

The RSIC is not located in a 100-year or 500-year flood zone. However, the land just south of Mill Street and to the east across Interstate 580 (I-580) is within a 500-year flood zone. The Truckee River is less than a quarter mile north of the northern edge of the reservation, making flooding—particularly during the annual spring thaw—a potential hazard for those near the Truckee River.

The Hungry Valley community is not located within a flood zone. However, impacts of rainstorms and flash flooding can result in impassability of Hungry Valley's evacuation routes. The RSIC is looking into paving an all-weather road to help address this issue.

The Colony owns a 24-acre parcel in Spanish Springs at 7655 Pyramid Way that includes a 7-Eleven and the Eagle Canyon Smoke Shop. A storm water ditch was constructed along the western boundary of the site, directing storm water flows into the Washoe County storm water channel located at the north end of the parcel. The storm water channel is in the 100-year floodplain. Culverts that have been installed where these drainage ditches cross roads are substantially undersized for the amount of water that drains to this area, which has resulted in recurring flooding.

The burn scar from the Hungry Fire in September 2019 represents an area of increased flooding risk until vegetation becomes reestablished. The burn scar is located in a canyon in the Hungry Range above the Colony's cemetery. The Colony is planning to install signage warning the public that the area is a burn scar and flooding is a possibility and install concrete barriers to divert run-off back into natural areas. When storms are forecasted, the Colony will monitor drainages in the area to ensure they are free from debris.

Previous Occurrences/History

In January 2017, northern Nevada experienced significant flooding from a storm that dropped 3 to 6.5 inches of rain in the region, and snow in the mountains. The combination of heavy rain and mountain snow led to flood conditions in the valleys of the Reno-Sparks area, significantly impacting the RSIC. There was also localized flooding in places near irrigation ditches, designed to carry water from the Truckee River to agricultural areas south of Reno.

RSIC members have also mentioned incidents of flooding near the Eagle Canyon smoke shop.

Extent and Probability

Severe flooding may result in serious injuries and deaths, as well as damage to public facilities and private property. Extent of flooding can be determined by the height of river flows in comparison to flood stages determined by U.S. Geological Survey stream gauges located throughout the area. It can also be measured by past flooding damages.

Reno may experience limited, localized flooding on an annual basis. Major riverine flooding has occurred approximately once a decade, and major alluvial fan floods have occurred approximately once every 20 years (Regional Water Planning Commission 2003).

Flooding

Future Probability Trend – Based on potential increase in high-intensity precipitation events and increased probability of wildland fires, Reno may be impacted by an **increase** in the probability of future flooding and flash flooding. Hungry Valley may experience an increase in flash flooding.

Vulnerability

Given that the Colony is not located within a 100-year flood zone, the probability of flooding risk is low. However, given the proximity of the Reno RSIC campus to the Truckee River, the Colony should be prepared for a flooding event. The Colony's Public Works department has a weekly, monthly, and annual preventative maintenance program for infrastructure maintenance and repair. Part of this is cleaning out drainage ditches monthly, which reduces flooding risk.

The RSIC completed an abatement project—a flood wall protecting the Glendale Avenue and I-580 area in 2017 to help mitigate potential rising waters in the Truckee River.

The evacuation route for Hungry Valley is a vulnerability, as rainstorms and snowstorms can impact the routes to the point of being impassable. The RSIC is looking into paving an all-weather road to help address this issue.

Recent Development Trends

- **Economic:** The Colony's newest economic asset, the Spanish Spring smoke shop, experiences occasional flooding. (Increased Vulnerability)
- Land Use: Increased residential development in Hungry Valley exposes additional persons to vulnerability from loss of access routes. Until the all-weather roads are addressed, this results in increased vulnerability.

Future Land Use:

No new development is planned within a flood zone.

3.3.3 Wildland Fire

Wildland Fire									
Probability Magnitude Frequency Onset Duration Average									
4.50	2.00	3.00	4.00	2.50		3.38	2		

Location

Fires are a high risk in the Hungry Valley reservation; the entire reservation is in a high-risk area for wildland fires. As planned residential development moves forward, this reservation will be at increasing risk for loss of property. As no economic development is planned for the reservation, at this time, the economic loss to tribal enterprise would be small. However, land under commercial development (a smoke shop and 7-Eleven) in nearby Spanish Springs has a low fire risk, resulting in less risk to economic enterprises in this area.

The RSIC is located in a low risk area, and benefits from the nearby Reno Fire Station 21, located just past I-580. The RSIC is buffered on all sides by an expanse of Low Fire Risk that extends northward to North McCarran Boulevard, westward toward the Sierra Foothills, eastward through urban Sparks, and southward along US Highway 395.

Previous Occurrences/History

The following recent wildland fires have occurred in close proximity to Tribal assets:

Impacting Hungry Valley Reservation:

- September 9, 2019 The Hungry Fire burned a total of 305 acres. The fire threatened structures on the Hungry Valley reservation, including the water tank and communications tower, but was contained without damaging any structures. This fire also threatened areas of Spanish Springs. No known cultural sites were damaged.
- July 2019 **Big Dog Fire** in Hungry Valley 5 acres
- The Jasper Fire burned 1,165 acres before it was fully contained on Tuesday, July 16, 2019. It started Saturday, July 13, around 3PM in the area of Chimney Drive and Leon Drive in Sun Valley, burning in grass and sagebrush, then spread into Spanish Springs. This fire resulted in a temporary closure of Eagle Canyon Road, the main, paved route leading into and out of the RSIC Hungry Valley land base.
- July 2017 The Hungry Valley Fire Department contained a 13.62-acre fire on the reservation.
- July 11, 2017 The Long Valley Fire took 10 days of intense firefighting against unpredictable winds, extremely high temperatures, and saturating humidity. The blaze burned 83,733 acres, or about 131 square miles. It started near Doyle, California, and burned into the north end of Spanish Springs Valley toward Pyramid Lake. It could be seen by Hungry Valley residents.
- July 4, 2017 The Winnemucca Ranch Fire east of Pyramid Highway and in Palomino Valley burned around 4800 acres. Although 58 structures were threatened at the onset of the fire, it only wound up destroying one mobile home and two outbuildings on Amy Road. The fire was human-caused. This fire did not directly impact the Hungry Valley community, but was nearby.

Wildland Fire

Impacting the RSIC in Reno: While there is no record of the following fires resulting in direct damage to the Colony, smoke from nearby fires would have adversely impacted residents.

- 2016 The Little Valley Fire resulted from an escaped prescribed burn, causing a blaze that consumed 2,300 acres in Washoe Valley, just south of Reno.
- 2012 Careless disposal of hot ashes ignited brush that destroyed 26 homes and closed US Highway 395. The fire occurred along the southern outskirts of Reno, blackening 2,000 acres of suburban scrubland and causing the death of one elderly man.
- 2011 The Coughlin Fire a wildland urban interface fire started in the low Sierra Nevada foothills, at the west edge of the city of Reno, Nevada. Strong winds contributed to the fire, which burned 1,935 acres, destroyed 28 homes, and damaged an additional 15 homes. Forty-three homes were destroyed or damaged by this fire, and an estimated 4,500 homes were threatened. The estimated market value of the property lost was over \$10,400,000. About 445 personnel on 59 firefighting apparatuses, hand crews, and support vehicles responded to this incident. The 2000-acre fire resulted in the evacuation of 9,000+ people, the death of 1 man during evacuation, and the admittance of 17 to the hospital for smoke inhalation and burns (one firefighter).

Extent and Probability

Tribal assets within the RSIC urban campus are better positioned for support from Reno's many fire stations. Hungry Valley, however, is poised for development of over 100 new homes that will all be in a region rated as High fire risk, with just one volunteer fire department in proximity.

Weather conditions greatly influence the impact and extent of wildland fires. Drought, high temperatures, and wind contribute to dynamic and changing conditions of wildland fires. Fuel load and vegetation contribute to the size and intensity of wildland fires.

Wildland fires are frequent and inevitable. Within the region, the vast majority of wildland fires burn between May and October.

Future Probability Trend – Based on projected changes in the timing and quantity of snowmelt and increases in the frequency and magnitude of drought and extreme heat, the RSIC may be impacted by an **increase** in the probability of future wildland fires.

Vulnerability

Hungry Valley is especially vulnerable to risk of fire because it is located within a High-Risk fire area, and also due to the limited road infrastructure. This vulnerability is demonstrated by closure of the main paved route in and out of Hungry Valley from the 2019 Jasper Fire. Hungry Valley also has a number of volatile fuels, like cheat grass, sage brush, and juniper, which can start a fire very easily. An additional vulnerability is that all of Hungry Valley's evacuation routes are within High Risk Fire Areas.

The Tribe's urban campus is within the Reno Fire Department's jurisdiction. However, the Tribe has not adopted the International Fire Code, which means its structures are at an increased risk for wildland fire damage.

Members of the Tribe are vulnerable to the effects of fire and may be displaced by fires that spread to residential areas of the reservation. Fires outside of the RSIC may also affect Tribal members by worsening air quality. Tribal elders and those with existing medical conditions like asthma would be most at risk of experiencing health effects due to smoke from wildland fires; however, during periods

Wildland Fire

of very poor air quality, all Tribal members may be at risk.

Existing Mitigation Case Study

The Tribe is working to manage/mitigate fuels for wildland fire and has worked with FEMA on a fuels mitigation project. The Fire Department mowed areas of the Hungry Valley Reservation last year and is planning a proactive approach to mow defensible space once each year for five years to kill off cheatgrass and mustard weed and ultimately reduce the need to manage the area. Sagebrush will remain, leaving one source of combustible fuel.

The RSIC has established firebreaks within the community and maintains roads to serve as firebreaks.

The Colony has developed an air quality plan that is being implemented by the Environmental Department. The Colony refers to this plan when poor air quality conditions are forecasted. Actions that are taken on poor air quality days include providing N-95 masks, which have the appropriate particulate rating for smoke, to Tribal members, residents, and personnel. The Colony also distributes materials advising residents to shelter in place and activate the Reno and Hungry Valley gyms as designated shelters.

Property

 Carports in new residential developments in Hungry Valley pose a fire risk due to the potential for blown embers to cause a fire. Flammable materials may be stored in carports, and fuels like dead leaves and other debris might collect in carports, making them pose a fire risk.

Recent Development Trends

- **Economic:** The Tribe has developed an additional smoke shop in Spanish Springs, which is prone to fire events. (Increased Vulnerability)
- Land Use: The RSIC is planning development of 100 to 125 homes in Hungry Valley. In addition, the RSIC has issued an RFP for design of a Hungry Valley Pow Wow Shower Room Building and RV Trailer Park. (Increased Vulnerability)

Future Land Use:

Any future development in Hungry Valley will be in a high-risk zone for wildland fire, increasing overall risk to assets.

See Appendix F1 of the Basic Plan for a full Risk Exposure Table and Appendix F2 for maps.

3.3.4 Earthquake

Earthquake									
Probability	Magnitude	Frequency	Onset	Duration		Average	Rank		
4.50	3.00	2.50	3.00	2.00		3.25	4		

Location

The State of Nevada is the third most seismically active state in the U.S. Washoe County is located in one the most seismically active areas in Nevada. Most occurrences of earthquakes are small enough to be nearly undetectable by people, but larger magnitude earthquakes can cause significant damage to homes and infrastructure.

There are at least two faults running through the region that may be capable of a large, damaging earthquake of magnitude 7 or more, larger than the Northridge earthquake in January 1994. There are also many more smaller faults. According to Graham Kent, Director of the Nevada Seismological Laboratory, the geography is further complicated by the basin geology: "The minute you punch energy into a basin it goes back and forth and back and forth, and that can cause a lot of problems" (Hendry 2016).

During an earthquake, the developed areas of the reservation and its commercial districts may experience various seismic ground motion hazards.

- The northern half of the original RSIC colony (encompassing Indian Colony Corners, RSIC Smoke Shop I, and the Tribal Police, for example) is in an area of seismic ground motion hazard of a 2% probability in 50 years of a 64+ range earthquake, which causes violent or extreme shaking and heavy to very heavy damage. Further south—in the vicinity of the recreation center, for example—the range is 48 to 64, which would be experienced as severe shaking capable of causing moderate to heavy damage.
- The Hungry Valley RSIC location is also within the 48 to 64 range, so it has a 2% probability in 50 years of experiencing severe shaking capable of heavy damage.
- The smoke shop located in Spanish Springs and the Verdi property are also in the 48 to 64 range.

Previous Occurrences/History

Information on previous major earthquakes with magnitudes greater than 5 on the Modified Mercalli Intensity (MMI) Scale in Washoe County is included in Section 4.5.4 of the Basic Plan. Shaking from these earthquakes would have been felt in Reno and may have caused structural damage.

Recent earthquakes in the area within the past year include a set of earthquakes in Sun Valley in June 19 at 1.7, 1.8, and 1.5 magnitude. This is near the Hungry Valley RSIC community.

The largest earthquake in the past 50 years in Washoe County occurred on April 25, 2008. Small earthquakes began in the western Reno, Nevada, region in February 2008 and grew in size and frequency until mid-April. On April 15, 2008, seismic activity greatly increased, producing four events of magnitude 3 and above. The earthquake swarm increased again on April 24, 2008, with two magnitude 4 events. The mainshock occurred on April 25, 2008, with a magnitude of 5 and caused violent shaking at Mogul and Somersett. A vigorous aftershock sequence followed into summer 2008.

Earthquake

While buildings overall survived the shock well, reports indicated that the violent rocking of buildings led to some structural damages, such as cracked paint and plaster along drywall seams, wall and ceiling corners, and doors and entry ways.

Extent and Probability

A major earthquake has the potential to cause widespread and significant damage to structures in the RSIC communities, as well as injuries, and deaths. Because of their potential to cause damage to structures, roads, and utilities, earthquakes may disrupt government operations and the local economy for a period of days to weeks and may require evacuations or create increased demand for emergency medical services. Response to and recovery from an earthquake may require federal support.

Future Probability Trend – A total of 17 earthquakes with a magnitude greater than 5 on the MMI Scale have occurred in Washoe County in the last 150 years. The probability of future occurrence can be estimated at 10%; this means that there is roughly a 10% chance of an earthquake with magnitude >5 to occur every year. Climate, economic, and land use trends do not affect the probability of an earthquake; however, economic trends and land use patterns can affect the amount of damage caused by an earthquake. This **increases** the probability that future earthquakes will result in damage to structures, roads, utilities, and any new development.

Vulnerability

Earthquakes have the potential to cause significant, widespread structural damage throughout the region. The Tribal Health Center, the Tribe's newest government facility, meets seismic standards as of 2008. However, several other government facilities, including the Reno gym, Reno health clinic, Hungry Valley gym, and Hungry Valley community center, are cinderblock construction and have not been retrofitted. Existing homes at the Reno campus and Hungry Valley reservation have not been retrofitted to meet current seismic standards. The Tribe's Housing Department is planning to construct additional homes in Hungry Valley, and these new homes will be constructed to current seismic standards.

Property

- The Tribe identified the Cultural Resources Department building as more vulnerable to earthquake damage.
- The Reno gym—a cinderblock building—has also been identified as at risk of earthquake damage, which is an additional vulnerability, as the gym has been identified as a shelter facility for the RSIC urban campus residents. The Tribe has identified retrofitting this facility as a priority.
- Other cinderblock facilities owned by the Tribe include the Reno health clinic, Hungry Valley gym, and all buildings in the Hungry Valley community center.
- All RSIC properties on all lands have a 10% chance in 50 years of experiencing either a 32–48 or 48–64 level earthquake. These levels of shaking range from moderate to severe shaking, capable of producing moderate to heavy damage.

Earthquake

Recent Development Trends

- **Economic:** New residential housing development is taking place at the Hungry Valley site. However, new development is likely to be up to code. (No change in vulnerability)
- Land Use: Construction of the new residential sites in Hungry Valley, as well as the Hungry Valley Pow Wow Shower Room Building, would only increase the RSIC's vulnerability to earthquakes if facilities are not constructed to current seismic standards. (No change in vulnerability)

Future Land Use:

Given the area's proximity to fault lines and history of earthquake activity, any development that takes place will be vulnerable to damage from earthquakes and secondary hazards like seiches.

See Appendix F1 of the Basic Plan for full Risk Exposure Tables and Appendix F2 for maps.

3.3.5 Criminal Acts and Terrorism

	Criminal Acts and Terrorism									
Probability	Magnitude	Frequency	Onset	Duration		Average	Rank			
3.00	2.50	2.50	4.50	1.00		3.13	5			

Location

Any populated area can be impacted by acts of violence or acts of terrorism. These areas include, but are not limited to, shopping centers, business centers, financial districts, clinics/hospitals, schools, and government offices and buildings. The Reno health clinic, water treatment plant, other government buildings, and the Tuscarora pipeline that runs across approximately 6 miles Tribal property are the primary concerns for the Colony in preventing criminal acts and acts of terrorism.

Previous Occurrences/History

While there have not been any recent active threat events that have directly impacted the Colony, there have been a number of active shooter events in the Reno-Sparks area, including the following:

- November 28, 2017: A 30-year-old male gunman rained gunfire down onto Sierra Street from the eighth floor of the Montage condominiums in downtown Reno and barricaded himself and a hostage inside of an apartment. The suspect died after being taken into custody after the Reno Police Department and the Washoe County Sheriff's Office SWAT team breached the room. The hostage was uninjured, but one minor injury was reported from a passerby.
- October 29, 2015: A Reno Walmart employee shot and wounded three Walmart employees.
- September 6, 2011: A gunman opened fire at an International House of Pancakes Restaurant (IHOP), killing four people and wounding seven others.
- October 21, 2013: A 12-year old student opened fire with a semi-automatic handgun at Sparks Middle School, injuring two students and killing a teacher.

Criminal Acts and Terrorism

- December 17, 2013: A gunman entered the Center for Advanced Medicine and accessed Urology Nevada. He shot two doctors and a patient. One of the doctors later died of their injuries.
- November 28, 2017: A gunman was shot and killed by police in downtown Reno after he fired multiple shots from a hotel. A bystander reported a minor injury.

Extent and Probability

With no existing records of recent active threat directly impacting the Tribe, it is difficult to estimate the extent or probability of its occurrence. Nonetheless, it can be deduced that active threat could affect all areas of the RSIC; government facilities and schools may be most likely targeted.

Future Probability Trend – Future weather conditions have no direct connections to active threats. However, increased development and urbanization have the potential to **increase** the probability of a future active threat.

Vulnerability

No estimates are available to determine potential losses associated with active threat. However, we can assume that if an active threat were to be directed at the Colony, schools and government buildings would likely be a top target. Active threats could have an impact on the community in the following ways: loss of human life, damage to buildings and structures, temporary displacement during the threat and/or investigation, stress on medical and security services, loss of commercial business during the event, and an increased need for emergency services and funding.

Existing Mitigation Case Study

Members of the RSIC prepared for potential terrorism incidents through participation in a radiation mass casualty drill in June 2018. The Colony also hired a consultant to complete a study of vulnerabilities to criminal acts at the Tribal health center. Based on the results of this study, the RSIC organized two active shooter training sessions in the fall of 2019.

Recent Development Trends

- Economic: Active threats pose no new risk to economic interests. (Unchanged Vulnerability)
- Land Use: Active threats pose no new risk to land use. (Unchanged Vulnerability)

Future Land Use:

Development of any buildings or infrastructure where many people congregate or that has higher publicity will be somewhat vulnerable to acts of violence.

3.4 Vulnerability Assessment

3.4.1 Asset Inventory

Local assets that may be affected by hazards include members of the Tribe, properties, and utilities and infrastructure. Geographic information system (GIS) data from federal, state, and local databases was used to inform the vulnerability assessment and identify critical infrastructure. Section 4.4.2 and

Appendix F1, both in the Basic Plan, discuss the sources and types of data used in the HMP. Data collection for the vulnerability assessment was complicated by the fact that the region has never comprehensively identified critical infrastructure; therefore, the list of critical infrastructure owned by the RSIC may be incomplete. Similarly, valuation information has not been compiled by the region, so valuation data was not available to be included in the vulnerability assessment. Washoe County and its partners are committed to continuing to refine and build on the list of critical infrastructure over the next five years to improve the data provided in the next plan update.

3.4.3 Repetitive Loss Properties

The Colony does not maintain a repetitive loss property inventory that meets the Repetitive Loss or Severe Repetitive Loss criteria.

3.4.4 Exposure Assessment

Table 3-4 shows exposure of the Tribe's identified critical facilities to natural hazards that are able to be mapped. (Note: Address and location information for some Tribal facilities is not publicly available. Hazard risks for these facilities are not included in the table.)

Туре					Seismic Ground Hazards	und Motion ards	Landslide	Wildland Fire
	Name	Address	Jurisdiction	Flood Zone	with 2 Percent Probability	with 10 Percent Probability	Susceptibility	Hazard Potential
Hospital	Tribal Health Center	1715 Kuenzli St, Reno, NV 89502	RSIC		48-64	32-48	low	1
Police Station	Tribal Police Station	405 Golden Ln, Reno, NV 89502	RSIC		48-64	48-64	low	1
Fire Station	Hungry Valley Fire Station	9075 Eagle Canyon Dr, Sparks, NV 89441	RSIC		48-64	32-48	low	1
School	Hungry Valley Gym/Rec Center	9055 Eagle Canyon Dr, Sparks, NV 89441	RSIC		48-64	32-48	low	1-2
School	Reno Gym	34 Reservation Rd, Reno, NV 89502	RSIC		48-64	48-64	low	1
Social Services	Hungry Valley Child Care Center	9055 Eagle Canyon Dr, Sparks, NV 89441	RSIC		48-64	32-48	low	1-2
Social Services	Reno Child Care Center	34 Reservation Rd, Reno, NV 89502	RSIC		48-64	48-64	low	1
School	Hungry Valley Head Start Center	9055 Eagle Canyon Dr, Sparks, NV 89441	RSIC		48-64	32-48	low	1-2
School	Reno Head Start Center	34 Reservation Rd, Reno, NV 89502	RSIC		48-64	48-64	low	1
Social Services	Reno Senior Center	34 Reservation Rd, Reno, NV 89502	RSIC		48-64	48-64	low	1
Government Building	Tribal Administration	34 Reservation Road, Reno, NV 89502	RSIC		48-64	48-64	low	1

				Flood Zone	Seismic Ground Motion Hazards		Landslide	Wildland Fire
Туре	Name	Address	Jurisdiction		with 2 Percent Probability	with 10 Percent Probability	Susceptibility	Hazard Potential
Government Building	Records and Archives	15 Reservation Rd, Reno, NV 89502	RSIC		48-64	48-64	low	1
Government Building	Enrollment Office	1933 Prosperity St, Reno, NV 89502	RSIC		48-64	48-64	low	1
Government Building	Public Works	400 Sunshine Ln, Reno, NV 89502	RSIC		48-64	48-64	low	1
Government Building	Planning/Rentals	1925-1939 Prosperity St, Reno NV 89502	RSIC		48-64	48-64	low	1
Government Building	Housing	9055 Eagle Canyon Rd, Sparks, NV 89441	RSIC		48-64	32-48	low	1
Government Building	Tribal Court	1900 Prosperity St, Reno, NV 89502	RSIC		48-64	48-64	low	1
Water Treatment Plant	Hungry Valley Water Treatment Plant	272 Loop Rd, Sparks, NV 89441	RSIC		48-64	32-48	low	1-2
Wastewater Treatment Plant	Wastewater Lagoons	272 Loop Rd, Sparks, NV 89441	RSIC		48-64	32-48	low	1
Water	Water Storage Tank	272 Loop Rd, Sparks, NV 89441	RSIC		48-64	32-48	low	1
Enterprise	Smoke Shop I	2001 E. 2 nd St, Reno, NV 89502	RSIC		48-64	48-64	low	1
Enterprise	Smoke Shop II	901 Golden Ln, Reno, NV 89502	RSIC		64+	48-64	low	1
Enterprise	Smoke Shop III	90 Auto Center Dr, 89511	RSIC		48-64	32-48	low	1

Туре					Seismic Ground I Hazards	und Motion ards	Landslide Susceptibility	Wildland Fire
	Name	Address	Jurisdiction	Flood Zone	with 2 Percent Probability	with 10 Percent Probability		Hazard Potential
Enterprise	Verdi Smoke Shop (Smoke Shop IV)	420 Old Hwy 40, Verdi, NV 89439	RSIC		48-64	32-48	mod	1
Enterprise	Smoke Shop V	1962 Pyramid Way, Sparks, NV 89431	RSIC		48-64	32-48	low	1
Enterprise	Smoke Shop (Smoke Shop VI)	7655 Pyramid Hwy, Spanish Springs, Sparks, NV 89441	RSIC		48-64	32-48	low	1
Enterprise	Wal-Mart Site	2425 East Second St, Reno, NV 89502	RSIC	500-year flood zone	48-64	48-64	low	1
Social Services	Hungry Valley Community Center	9055 Eagle Canyon Rd, Sparks, NV 89441	RSIC		48-64	32-48	low	1-2
Government Building	Facility Building – Reno	357 Golden Ln, Reno, NV 89502	RSIC		48-64	48-64	low	1
Enterprise	Vacant	2A Sunshine Lane, Reno, NV 89502	RSIC		48-64	48-64	low	1
Enterprise	Joe Scalia Motors, Car Dealership	690 Sunshine Lane, Reno, NV 89502	RSIC		64+	48-64	low	1

Key:

N/A = Information not available

-- = Critical facility is not in a mapped flood zone

Note: Hazard exposure for assets within the Hungry Valley reservation has been estimated based on hazards present within the reservation boundary.

3.5 Land Use and Development Trends

FEMA D1. Was the plan

D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))

The RSIC has no commercial development intentions for its Hungry Valley community; however, there will be an increase in residential development, including plans for an RV park. This growing residential population will be at an increased risk of wildland fire and faces concerns from impact of weather events to seasonal roads that may become impassable during an emergency.

The vulnerability subsection of each hazard profile in Section 3.3 outlines recent development trends to illustrate ways in which vulnerability may have changed over the past five years. Vulnerability changes have been measured for cultural resources, economic interests, and land use trends. Each measure has been identified as having an increased, decreased, or unchanged vulnerability. Table 3-5 provides a snapshot of how vulnerability has changed since development of the 2015 HMP.

Hazard	Economic	Land Use
Energy Emergency	+	+
Flooding	+	+
Fire	+	+
Earthquake	=	=
Criminal Acts and Terrorism	=	=

Table 3-5 Recent Development Trends

+ Increased vulnerability

- Decreased vulnerability

= Unchanged vulnerability

4. CAPABILITY ASSESSMENT



C1. Does the plan include a discussion of the tribal government's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including an evaluation of tribal laws and regulations related to hazard mitigation as well as to development in hazard-prone areas? (Requirement §201.6(c)(3)(iv))

4.1 Human and Technical Resources

Table 4-1 describes the RSIC's human and technical capabilities to engage in and improve mitigation planning and program implementation.

Resource	Department	Tasks and Activities Integrated into Mitigation Planning
Tribal Administrator	Administrator's Office	Ensure mitigation program is incorporated into the Tribe's daily business
Manager of Emergency Services	Emergency Services	Oversee mitigation program and encourage integration of mitigation planning into all tribal activities
Emergency Response Coordinator – Reno Tribal Health Center	Emergency Response	Oversee emergency preparedness for public health.
Fire Management Coordinator	Hungry Valley Fire Department	Plan and implement mitigation for wildland fires.
Housing Director	Housing Department	Manage construction and maintenance of tribal housing
Environmental Program Manager	Planning Department	Manage environmental resources, health, and safety within the Tribe's properties
Utilities Supervisor	Utility Department	Repair and maintain Tribal utility infrastructure
Business Enterprises and Economic Development Director	Business Enterprises and Economic Development Director	Integrate risk reduction into Tribal business enterprises
Fund Development Coordinator	Fund Development Department	Write grant applications and manage the Tribe's grant programs
Contracts and Grants Manager	Finance Department	Manage grant applications and project budgets for tribal programs
Tribal Historic Preservation Officer	Tribal Historic Preservation Office	Integrate risk reduction into protection of tribal cultural resources
Other		
Planners	Planning Department	Integrate risk assessments and mitigation tactics into ongoing tribal projects
Hazardous Materials Planning	Washoe County Local Emergency Planning Committee	Develop capacity for local jurisdictions to prepare for and respond to hazardous materials incidents

Table 4-1 Human and Technical Resources Integrated with Hazard Mitigation

4.2 Financial Resources

C2. Does the plan include a discussion of tribal funding sources for hazard mitigation projects and identify current and potential sources of Federal, tribal, or private funding to implement mitigation activities? (Requirement §201.6(c)(3)(iv and v))

The RSIC maintains many fiscal and financial resources to support its mitigation program. Table 4-2 identifies specific resources accessible for use.

Table 4-2 Accessible Financial Resources

Financial Resource	Accessible?
Community Development Block Grants	Yes
Capital Improvement Project Funding	Yes
Insurance	Yes, including real property, personal property, and loss of rents/bodily injury coverage
User Fees for Utility Services	Yes, for sewer and water service and garbage disposal
Incur Debt	Yes
State-sponsored Grant programs	Yes

Table 4-3 identifies current and potential sources of funding to implement identified mitigation actions contained within the HMP. As a federally recognized tribe, the RSIC can access funding directly through the federal government. In addition, funding is also available from the State of Nevada and, potentially, through Washoe County.

In cases where funding is obtained through federal grants, the Tribe will comply with all applicable federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR Parts 200 and 3002. The Tribe will amend this annex when needed to reflect changes in Tribal or federal laws and statutes.

Funding Source	Fund Administrator	Description			
Local					
General Fund	Tribal Council	Funds allocated annually for capital improvement projects. RSIC departments submit project proposals to request funding.			
Federal					
Pre-Disaster Mitigation Program	Nevada Division of Emergency Management	Provides funding to develop hazard mitigation plans and implement mitigation actions contained within.			
Hazard Mitigation Grant Program	Nevada Division of Emergency Management	Post-disaster funds to hazard reduction projects impacted by recent disasters.			
Flood Mitigation Assistance Program	Nevada Division of Emergency Management	Provides funds for flood mitigation on buildings that carry flood insurance and have been damaged by flooding.			
Community Development Block Grant Program	U.S. Department of Housing and Urban	Funds projects that benefit low- and moderate-income communities, prevent or eliminate slums or blight, or meet urgent			

Table 4-3	Financial Resources	Integrated with	Hazard Mitigation
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Funding Source	Fund Administrator	Description
	Development/Governor's Office of Economic Development	community development needs posing a serious and immediate threat to community health or welfare.
Emergency Management Performance Grants Program	FEMA/Nevada Division of Emergency Management	Provides funding to states for local or tribal planning, operations, acquisition of equipment, training, exercises, and construction and renovation projects.
Flood Mitigation Assistance	Nevada Division of Emergency Management	Provides funding to support development of the flood hazard portion of state and local mitigation plans and up to 100% of the cost of eligible mitigation activities. This funding is only available to communities participating in the National Flood Insurance Program.
Earthquake State Assistance Program	National Earthquake Hazards Reduction Program/ Nevada Resiliency Advisory Committee/ Nevada Division of Emergency Management	Funds activities including seismic mitigation plans; seismic safety inspections of critical structures and lifelines; updates of building codes, zoning codes, and ordinances; and earthquake awareness and education.
State Fire Assistance Program	U.S. Forest Service/ Nevada Division of Forestry	Provides funding opportunities for local wildland-urban interface planning, prevention, and mitigation projects, including fuels reduction work, education and prevention projects, community planning, and alternative uses of fuels.
Risk Mapping, Assessing, and Planning	FEMA	Provides funding and technical support for hazard studies, flood mapping products, risk assessment tools, mitigation and planning, and outreach and support.
State		
Emergency Assistance Account	Nevada Division of Emergency Management	Provides support to state agencies and local jurisdictions during declared emergencies at the state or local level.
Disaster Relief Account	Interim Finance Committee	Special account intended to stabilize the operation of the state government following a disaster. Used to match federal funding for declared disasters.
Wildfire Emergency and Mitigation Funds	Nevada Division of Forestry/ Nevada Division of Emergency Management	Administers funding from FEMA, BLM, and U.S. Forest Service for certain types of wildland fire emergency and mitigation funding.
Earthquake Mitigation Funds	Nevada Resiliency Advisory Committee/ Nevada Division of Emergency Management	Allocates FEMA money for earthquake mitigation efforts.
Conservation Reserve Program	USDA Farm Service Agency and Natural Resource Conservation Service	Retires eligible cropland from agricultural production and plans the land with permanent grass cover to reduce wind erosion and dust hazards.
University of Nevada, Reno partnership with the USGS National Landslide Hazards Program	USGS/University of Nevada, Reno	Conducts studies of landslide hazards

Table 4-3 Financial Resources Integrated with Hazard Mitigat
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Funding Source	Fund Administrator	Description
Western States Fire Managers Grants	U.S. Forest Service/ Nevada Division of Forestry	Provides funding for fuel reduction, restoration of fire adapted ecosystems, prevention education, and community wildland fire protection planning.
Landscape Scale Restoration Grants	U.S. Forest Service/ Nevada Division of Forestry	Provides funding for projects that cross property ownership, management and/or jurisdictional boundaries and involve collaborative efforts among multiple stakeholders to address issues identified in Nevada's Forest Action Plan.
Hazardous Fuels- Community Protection Grants	U.S. Forest Service/ Nevada Division of Forestry	Provides funding for priority fuels management projects identified in a Community Wildfire Protection Plan that are adjacent to a recent, current, or planned project on U.S. Forest Service lands.
Regional Conservation Partnership Program	U.S. Forest Service/ Nevada Division of Forestry	Provides grant funds for wildland fire restoration and other sagebrush ecosystem improvements, including weed and pre- emergent treatments; riparian improvements; prescribed, targeted, or deferred grazing; and brush management.
Nevada State General Fund	Nevada State Legislature	Nevada State General Fund money is used to pay the labor costs of state employees working to support statewide and local hazard mitigation activities and as non-federal cost share for federally funded projects.
Other		
Community Planning Assistance Teams	American Planners Association Foundation	Provides pro bono technical assistance for planning frameworks or community vision plans for communities needing extra assistance. Local governments are responsible for travel costs.

 Table 4-3
 Financial Resources Integrated with Hazard Mitigation

4.3 Legal and Regulatory Resources

Table 5-4 describes the legal and regulatory capabilities, including plans, policies, and programs that have integrated hazard mitigation principles into their operations.

Table 4-4	Legal and Regulatory Resources Integrated with Hazard Mitigation
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Capability Type	Capability	Description	Key Accomplishments (2015-2019)	Hazard Mitigated
	Master Plan	Guides future land use and development on the Tribe's reservation	 Continued plan implementation 	All
Plans	Capital Improvement Plan	Describes and provides budget and schedule information for the Tribe's planned capital improvement projects	 Continued plan implementation 	All
	Economic Development Plan	Describes economic development strategies and projects	 Continued plan implementation 	All

4. Capability Assessment

Capability Type	Capability	Description	Key Accomplishments (2015-2019)	Hazard Mitigated
	Emergency Operations Plan	Provides an organizational framework and directs action during response to natural disasters and other emergencies	 Continued plan implementation 	All
	Hungry Valley Wildfire Community Protection Plan	Includes strategies and planned projects to decrease the community's vulnerability to wildland fire	 Established fuel break on edge of Hungry Valley community Tribe is working with the Bureau of Indian Affairs to obtain additional funding for fuels mitigation Within the past two years, the Fire Department has completed full scale exercises that covered evacuation, sheltering, and messaging and warning using Tribal resources 	Wildland Fire
	Hungry Valley Fire Department Hazardous Material Response Plan	Includes strategies and actions to reduce the risk of and respond to hazardous materials incidents	 Developed in partnership with the Truckee Meadows Fire Protection District Continued plan implementation 	Hazardous Materials Incidents
	RSIC Threat and Hazard Identification and Risk Assessment	Defines hazard risks and potential impacts for the community and community response capabilities	 Continued plan implementation 	All
Policies	Site Plan Review Requirements	Requirements are project specific	 Continued policy implementation 	All
Programs	Stormwater Management Program	Provides guidelines and requirements for managing stormwater runoff from Tribal properties and new development	 Continued improvement of drainage ditches Program identifies future priorities for improvements 	Flooding Severe Weather

 Table 4-4
 Legal and Regulatory Resources Integrated with Hazard Mitigation

4.4 National Flood Insurance Program Participation



C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3))

The RSIC does not participate in the National Flood Insurance Program.

4.5 Integration of Mitigation into Existing Planning Mechanisms

Integration of the principles of mitigation into the Tribe's daily operations and ongoing planning activities is a priority of the Tribe's mitigation program. These activities will support:

- Raising awareness of the importance of hazard mitigation for the whole community;
- Facilitating an understanding that hazard mitigation is not just an "emergency services" function and building ownership of mitigation activities across the organization;
- Reduction in duplication or contradiction across Tribal plans; and
- Maximization of planning resources through linked or integrated planning efforts.

The Tribe is encouraged to consider integration actions into planning mechanisms, including:

- Budget decision-making;
- Building and zoning ordinances and decision-making;
- Emergency planning mechanisms; and
- Economic developing planning and decision-making.

4.5.1 Existing Plans



C6. Does the Plan describe a process by which the tribal government will incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate? (Requirement $\S201.6(c)(4)(iii)$)

The following existing plans provide ongoing opportunity for integration of hazard mitigation. The Tribe will work with plan owners and stakeholders when these plans are updated to consider hazard mitigation data and principles and ensure plans align with the HMP.

The Tribe's **Master Plan** guides future land use and development on Tribal properties in Reno and in the Hungry Valley reservation. The Master Plan currently requires engineering studies to be completed for new housing developments to ensure that adequate drainage is provided and water runoff does not affect homes. It is anticipated that future updates of the Master Plan will reflect mitigation strategies and actions recommended in the current HMP.

The **Capital Improvement Plan (CIP)** describes and provides budget and schedule information for the Tribe's planned capital improvement projects. The Capital Improvement Plan includes projects that would mitigate hazard risks as these projects are identified and funding is allocated. For example, the current Capital Improvement Plan includes a planned project to complete an engineering study for storm water drainage for the new parking lot at the Tribal Court, Police Department, and Human

4. Capability Assessment

Services Department facilities. The Tribe will integrate hazard mitigation strategies into the capital improvement planning process by taking hazard risks and vulnerabilities into consideration when siting and designing capital projects, updating the CIP to include high priority infrastructure projects identified in the HMP, and developing new infrastructure projects to address emerging hazards during the 5-year hazard mitigation planning period.

The **Economic Development Plan** describes economic development strategies and projects for the Tribe. The plan currently does not include hazard mitigation strategies. The next update of the Economic Development Plan could incorporate hazard mitigation principles by requiring review of proposed development sites to identify hazard risks and development of mitigation measures as needed.

The Tribe's **Emergency Operations Plan** provides an all-hazard approach to responding to emergencies and disasters in the Tribal planning area. The plan integrates concepts from all phases of emergency management, including mitigation and prevention, preparedness, response, and recovery. The plan currently does not include hazard mitigation strategies. The next plan update could include hazard mitigation strategies such as:

- Exercising activation of the Tribal Emergency Operations Center (Mitigation action MH-8);
- Procedures for reviewing, updating, and exercising community evacuation plans (Mitigation action WF-16);
- Encouraging non-structural mitigation of earthquake hazards (Mitigation action EQ-13); and
- Measures to prepare for an active shooter incident (Mitigation action CA-1).

The **Hungry Valley Wildfire Community Protection Plan** includes strategies and planned projects to decrease the Hungry Valley reservation's vulnerability to wildland fire. The plan identifies strategies for establishing fuel breaks around the Hungry Valley community.

The Tribe's **Hungry Valley Fire Department Hazardous Materials Plan** includes strategies and actions to reduce the risk of and respond to hazardous materials incidents. The plan includes strategies for community outreach and education to reduce the risk of incidents.

5. MITIGATION STRATEGY



5.1 Review of 2015 Hazard Mitigation Actions

As part of the mitigation strategy update, all mitigation actions identified in the 2015 plan were evaluated to determine what the status of the action was and whether any ongoing or incomplete actions should be included as actions in the 2020 plan update. The MPT worked through each previous action during MPT Meeting #4 to document steps taken to fulfill the action.

See Appendix A for an overview of the status of all actions from the 2015 plan update.

5.2 2020-2025 Mitigation Implementation Plan



C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by [the Reno-Sparks Indian Colony]? (Requirement §201.6(c)(3)(iii))

The mitigation implementation plan lays the groundwork for how the mitigation plan will be incorporated into existing planning mechanisms and how the mitigation actions will be prioritized, implemented, and administered by the Tribe. The implementation plan includes both short-term strategies that focus on planning and assessment activities, and long-term strategies that will result in ongoing capability or structural projects to reduce vulnerability to hazards.

See Appendix A of the Basic Plan for Mitigation Action Worksheet instructions and completed Mitigation Action Worksheets for each action listed in Table 5-1.

 Table 5-1
 2020-2025 Mitigation Implementation Plan

Action No.	Mitigation Action	Action Status	Type of Action	Goals Supported (Objectives)	Lead Department	Supporting Departments	Timeline	Hazards Addressed	Anticipated Cost	Funding Available?	Funding Source	STAPLEE Score	Mitigation Effectiveness Score	TOTAL SCORE
MH-6	Adopt current International Building Code (2018). (Reno- Sparks Indian Colony [RSIC])	Existing (2015 action)	Plans and Regulations	4 (4.1), 5 (5.2), 6 (6.2)	RSIC Planning Department	RSIC Tribal Council	Ongoing	All Hazards	No/Minimal Cost	Yes	Existing Budget	18	4	22
MH-7	Install audible community warning system (sirens). (RSIC)	New	Preparedness and Response	3 (3.1)	RSIC Emergency Manager	RSIC Tribal Council	Immediate	All Hazards	\$50,000	No	Existing Budget Grant	16	4	20
MH-8	Implement and activate a Tribal Emergency Operations Center (EOC). Provide emergency generators for the designated EOC and alternate facilities. (RSIC)	Existing (2015 action)	Preparedness and Response	3 (3.2)	RSIC Emergency Manager	 RSIC Tribal Council RSIC Public Works 	< 1 year	All Hazards	\$1 million	No	Existing Budget Grant	19	6	25
MH-9	Implement and/or utilize Community Emergency Response Teams, as well as the Citizens Homeland Security Council, to shift burden from sworn officers, where appropriate. (All Partners)	Existing (2015 action)	Preparedness and Response	2 (2.1), 6 (6.3)	 All Jurisdictions – Emergency Managers Police Departments 	-	Immediate	All Hazards	Minimal, administrative staff already budgeted for	Yes	Existing Budget	18	4	22
MH-10	Improve electric and broadband service (by installing fiber optic cable from Spanish Springs) to the RSIC's Hungry Valley reservation to support emergency communications. (RSIC)	New	 Infrastructure/Capital Project Preparedness and Response 	3 (3.1), 4 (4.1)	RSIC Emergency Manager	 RSIC Tribal Council NV Energy Broadband providers 	1 – 3 years	All Hazards	\$1,000/1,000 linear feet	No	Hazard Mitigation Grant Program, Existing Budget	20	4	24
WF-13	Adopt 2018 wildland fire code County-wide. (All Partners)	New	Plans and Regulations	5 (5.2), 6 (6.2)	Regional Fire Protection Districts	-	Immediate	Wildland Fire	No/minimal cost	Yes	Existing Budget	20	2	22
WF-16	Review and update (as needed) evacuation plans for communities in wildland fire- prone areas and hold evacu- ation drills at least once every two years. (All Partners)	Existing (2015 action)	 Plans and Regulations Preparedness and Response 	5 (5.3), 6 (6.3)	Regional Fire Protection Districts	Washoe County Emergency Management and Homeland Security	Immediate	Wildland Fire	\$10,000/plan. \$50,000/year	Yes	Existing Budget	19	6	25
WF-17	Create a fuels mitigation and management program to create and incentivize defensible space in housing developments by increasing community space between homes and managing/encouraging management of fuels. (RSIC)	Existing (2015 action)	 Education and Awareness Preparedness and Response 	5 (5.3), 6 (6.3)	RSIC Emergency Manager	 RSIC Planning Department RSIC Public Works Department RSIC Housing Department 	< 1 year	Wildland Fire	\$1,000,000	No	Grant Existing Budget	16	2	18
FL-9	Complete drainage ditch improvements. (Washoe County, City of Reno, City of Sparks, RSIC, PLPT)	Existing (2015 action)	Infrastructure/Capital Project	5 (5.5)	All Jurisdictions – Public Works	-	1 – 3 years	Flooding	Unknown	No	Grant Existing Budget	19	8	27
FL-14	Complete improvements to address undersized drainage ditches and systems County- wide. (Washoe County, City of Reno, City of Sparks, RSIC, PLPT)	Existing (2015 action)	Infrastructure/Capital Improvement	5 (5.5)	All Jurisdictions – • Public Works • Engineering	-	3 – 5 years	Flooding	\$20/linear foot of drainage ditch	No	Grant Existing Budget	17	8	25

5. Mitigation Strategy

 Table 5-1
 2020-2025 Mitigation Implementation Plan

Action No.	Mitigation Action	Action Status	Type of Action	Goals Supported (Objectives)	Lead Department	Supporting Departments	Timeline	Hazards Addressed	Anticipated Cost	Funding Available?	Funding Source	STAPLEE Score	Mitigation Effectiveness Score	TOTAL SCORE
FL-16	Replace/improve culvert near the Eagle Canyon Smoke Shop on Eagle Canyon Road to increase capacity and address recurring flooding. (RSIC)	New	Infrastructure/Capital Project	5 (5.5)	RSIC Public Works	 RSIC Emergency Manager RSIC Tribal Council 	1 – 3 years	Flooding	\$200,000	No	Grant Existing Budget	19	8	27
EQ-9	Complete seismic strength evaluations of critical facilities in all jurisdictions, including schools, community colleges, public infrastructure, and other critical facilities, to identify vulnerabilities for mitigation to meet current seismic stand- ards. Mothball or demolish life- threatening buildings, particu- larly unreinforced masonry buildings. (Washoe County, City of Reno, City of Sparks, RSIC, PLPT)	Existing (2015 action)	 Infrastructure/Capital Project Preparedness and Response 	5 (5.9)	All Jurisdictions – • Public Works • Engineering • School Districts	-	1 – 3 years	Earthquake	Unknown	Anticipated	Grant Existing Budget	15	10	25
EQ-10	Assess, repair, and/or replace infrastructure that may fail during earthquakes (e.g., Keystone Ave. Bridge). (Washoe County, City of Reno, City of Sparks, RSIC, PLPT)	Existing (2015 action)	Infrastructure/Capital Project	1 (1.2), 5 (5.9)	All Jurisdictions – • Public Works • Engineering	-	1 – 3 years	Earthquake	Unknown	No	Grant Existing Budget	16	10	26
EQ-12	Improve evacuation routes out of the Hungry Valley reserva- tion (Winnemucca Ranch and Chickity roads) to ensure they are passable in all weather conditions. (RSIC)	New	Infrastructure/Capital Project	1 (1.1)	RSIC Public Works	-	1 – 3 years	Earthquake	\$1,000,000	Anticipated	Grant Existing Budget	18	8	26
EQ-13	Continue to provide straps and related tools to encourage non- structural mitigation of earth- quake hazards and provide assistance to help property owners install these improvements. (RSIC)	New	Preparedness and Response	5 (5.9), 6 (6.3)	RSIC Emergency Manager	RSIC Housing Department	Immediate	Earthquake	\$50/tool kit	Yes	Existing Budget	19	10	29
EE-5	Install back-up generators for critical infrastructure and facilities along with other measures to improve reliability (e.g., alarms, meters, remote controls, and switchgear upgrades). (All Partners)	Existing (2015 action)	Preparedness and Response	3 (3.3), 4 (4.1)	All Jurisdictions – Emergency Management	Public Works	3 – 5 years	Energy Emergency	\$100,000 per design and installation	No	Grant	18	8	26
CA-1	Implement measures to prepare for a potential active shooter incident, including new security measures, training and exercises, improved partnerships with law enforcement agencies, and policy changes (ex. prohibiting open carry). (All Partners)	New	 Infrastructure/Capital Project Education and Awareness Preparedness and Response 	5 (5.10)	 Law Enforcement Agencies Facility Managers 	 Local Elected Officials Federal Agencies 	1 – 3 years	Criminal Acts and Terrorism	\$50,000/year. \$120,000/officer	Anticipated	Existing Budget Grant	16	6	22

5. Mitigation Strategy

 Table 5-1
 2020-2025 Mitigation Implementation Plan

Action No.	Mitigation Action	Action Status	Type of Action	Goals Supported (Objectives)	Lead Department	Supporting Departments	Timeline	Hazards Addressed	Anticipated Cost	Funding Available?	Funding Source	STAPLEE Score	Mitigation Effectiveness Score	TOTAL SCORE
DT-2	Implement current TMWA Conservation Plan including encouraging transition to less water-intensive landscaping on both public and private properties. (All Partners)	Existing (2015 action)	Education and Awareness	6 (6.3)	All Jurisdictions – • Water Utilities • Planning Departments	All Jurisdictions – Emergency Management	< 1 year	Drought	\$50,000/year	No	Grant Existing Budget	17	4	21
DT-3	Identify alternate water supplies for Tribal properties and housing in Hungry Valley, potentially including a tie-in to the County's water system in Lemmon Valley and new water tanks. (RSIC)	New	Infrastructure/Capital Project	4 (4.1)	RSIC Public Works	RSIC Tribal Council	1 – 3 years	Drought	\$25,000 (identifying alternative water supplies). \$1,000,00 (tie-in and install new water tanks)	No	Grant Existing Budget	17	6	23

1

5. Mitigation Strategy

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ACRONYMS AND ABBREVIATIONS

FEMA	Federal Emergency Management Agency
НМР	Hazard Mitigation Plan
I-580	Interstate 580
MMI	Modified Mercalli Intensity
MPT	Mitigation Planning Team
PG&E	Pacific Gas and Electric Company
RFP	request for proposals
RSIC	Reno-Sparks Indian Colony
RV	recreational vehicle