NEVADA CITY CALIFORNIA

# CITY OF NEVADA CITY
# CLIMATE ADAPTATION AND PUBLIC SAFETY ELEMENT 2023-28

## Chapter 6 of the Nevada City General Plan


***Adopted on _____***
***City Council Resolution _____***

RPC 2(b)(i)(2)

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RPC 2(b)(i)(2)

## TABLE OF CONTENTS

# Section 1 INTRODUCTION

The Climate Adaptation and Public Safety Element Update (CAPSE) serves as the City's Safety and Noise elements, which are required elements of general plans subject to the requirements of Government Code 65302(g)(h). Under California state law, a safety element promotes protection for the community from unreasonable risks related to slope instability, seismic activity, subsidence, liquefaction, known geologic hazards, flooding, wildland and urban fires, tsunami, seiche, dam failure, and climate change. The Noise Exposure section of this document serves as the Noise Element to address noise related safety issues in accordance with California Government Code Section 65302(f).

The City is also focusing on climate change adaptation in this document because California state law requires that safety elements include a vulnerability assessment that identifies the risks posed by climate change and a series of adaptation goals, policies, and implementation measures designed to protect the community (Senate Bill [SB] 379, 2015). The City is also including climate adaptation due to the unprecedented disruptions that climate change is anticipated to cause through and beyond General Plan buildout. Due to decades of rapidly increasing global greenhouse gas (GHG) emissions and insufficient climate action at all levels of government and industry, atmospheric GHG concentrations have reached a level that guarantees substantial and unavoidable impacts for the foreseeable future. California's recent historic heat, wildfires, droughts, floods, mudslides, and public safety power shutoffs represent the types of climate change impacts that will be experienced with increasing frequency and severity. These impacts threaten to make all the significant issues currently faced by the City (e.g., economic recovery, the housing crisis, homelessness, equity, sustainable water supply, etc.) more critical, challenging, and expensive. By centering climate change consideration in General Plan goals, policies, and programs now, the community can have sufficient capacity to thrive in the face of a rapidly changing future.

## 1.1 Brief Overview of Nevada City – Growth, Philosophy, and Public Safety

Founded in 1850 and incorporated April 19, 1856, Nevada City was a gold-mining community consisting mainly of tar-paper shacks and tents. Its population was approximately 3,500. 150 years later, the tar-paper shacks and tents are gone, replaced by a mix of humble "miner's shacks," modest cottages, elegant Victorian houses, and impressive brick buildings occupied by a population of just over 3,000. The City sits approximately 60 miles northeast of Sacramento and 84 miles southwest of Reno in the foothills of the Sierra Nevada Mountains. At approximately 2,500 feet in elevation above sea level, it is surrounded by forest covered hills and is protected by ridge tops and surrounded by forest. The Climate Adaptation and Safety Element Update covers the City's approximate 4,200-acre General Plan Area including its 1,400 acres of incorporated boundaries.

The population is economically and philosophically diverse and the residents of Nevada City work vigorously to protect the unique blend of housing, businesses and citizens that comprise the high quality-of-life of their community. The City's focus continues to maintain a strong sense of



RPC 2(b)(i)(2)

community and to retain its historic character; This coupled with recognition of it geographic, topographic and infrastructure constraints have limited the City's ability to grow at a faster pace than other surrounding communities, such as Grass Valley and Auburn.

As Nevada City struggles with the challenges of maintaining a viable "living" community with a mix of businesses, residential housing, philosophies, and cultural and economic diversity, it also faces its responsibility of protecting residents and businesses from hazardous conditions that have the potential to cause loss of life, injury, property damage, and economic loss. Due to the City's size and limited resources, Nevada City will continue to rely on its partner agencies, such as Nevada County and the Nevada County Consolidated Fire District to help address public safety needs to achieve the goals of this CAPSE.

# Section 2 PURPOSE AND ORGANIZATION OF SAFETY ELEMENT

The CAPSE is one of several elements of the General Plan which was originally adopted in 1986. The only substantive update to the General Plan has been the periodic updates to the Housing Element (as mandated by State Law). Nevada City's Housing Element was most recently updated in 2019 for the 2019 to 2027 6$^{th}$ State Housing Cycle. Recognizing that a more complete General Plan may eventually be needed to align with the more recent Housing Element and this CAPSE Update, this document reflects the Housing Element format. Also, some aspects of this CAPSE Update carry over some organization and formatting from the Nevada County Safety Element, adopted in 2020, to improve continuity between the two documents. For example, policies and programs in this Plan are cross referenced by category identification in the same manner as the County's Safety Element. These are as follows:

A. Climate Change, Resiliency and Adaptive Capacity (CC)
B. Emergency Preparedness and Evacuation (EP)
C. Fire Hazards and Protection (FP)
D. Flood Hazards (FH)
E. Geologic Hazards/Seismic Activity (GH)
F. Public Safety Services and Facilities (SF)
G. Hazardous Materials and Mining Hazards (HM)
H. Severe Weather (SW)
I. Noise Exposure (NE)
J. Other Considerations (OC), such as power shutouts, water quality, and environmental justice

Section 5 this Plan consists of a list of goals, objectives, policies, and programs that are cross referenced (by category) to these categories.

## 2.1 Terms and Definitions

Terms and definitions of some of the more complicated words used in this document are referenced in Appendix F of this Element.

## 2.2 Data and Methodology

To understand the context of local safety needs in Nevada City, a review and analysis of the community's population, economic, environmental, public services and capacity characteristic was performed. The primary data source for the CAPSE is from the 2017 Nevada County Local Hazard Mitigation Plan (LHMP). The LHMP includes Annex-B which is specific to Nevada City. Annex B of the LHMP is included as Appendix B of this Element. Additional data sources are referenced in Appendix G References of this Element. Due to the use of multiple data sources, there are slight variations in numbers. However, these variations do not significantly affect the analysis and discussion of overall hazard concerns, safety trends and changes. In all cases, the most recent available data has been used.

## 2.3 Regulatory Compliance

The CAPSE has been developed in compliance with California laws and regulations, consistent with other plans prepared or adopted by the City, including the Nevada County 2017 LHMP, and required elements of the City's adopted General Plan.

Key California laws informing preparation of the Climate Adaptation and Safety Element, including recent legislation related to planning for climate change adaptation and environmental justice, include Senate Bill (SB) 379 (Climate Change and Resilience), SB 99 (Emergency Evacuation Routes), SB 1000 (Environmental Justice), Assembly Bill 747 (Emergency Evacuation Routes), the Alquist-Priolo Earthquake Faulting Zone Act, the National Flood Insurance Program, Government Code Section 65302(g) (Authority for and Scope of General Plans – Safety Element), and Government Code Section 65302 (f) (Authority for and Scope of General Plans – Noise Element).

## 2.4 Relationship to Other Documents

The CAPSE is an important guide for considering future direction the City takes to address future public safety outcomes. Therefore, it is imperative that the Element be evaluated for consistency with larger picture plans, such as the City's General Plan and the 2017 Nevada County LHMP. This Element provides some background into the characteristics of the City and how this Element considers these macro level community plans.

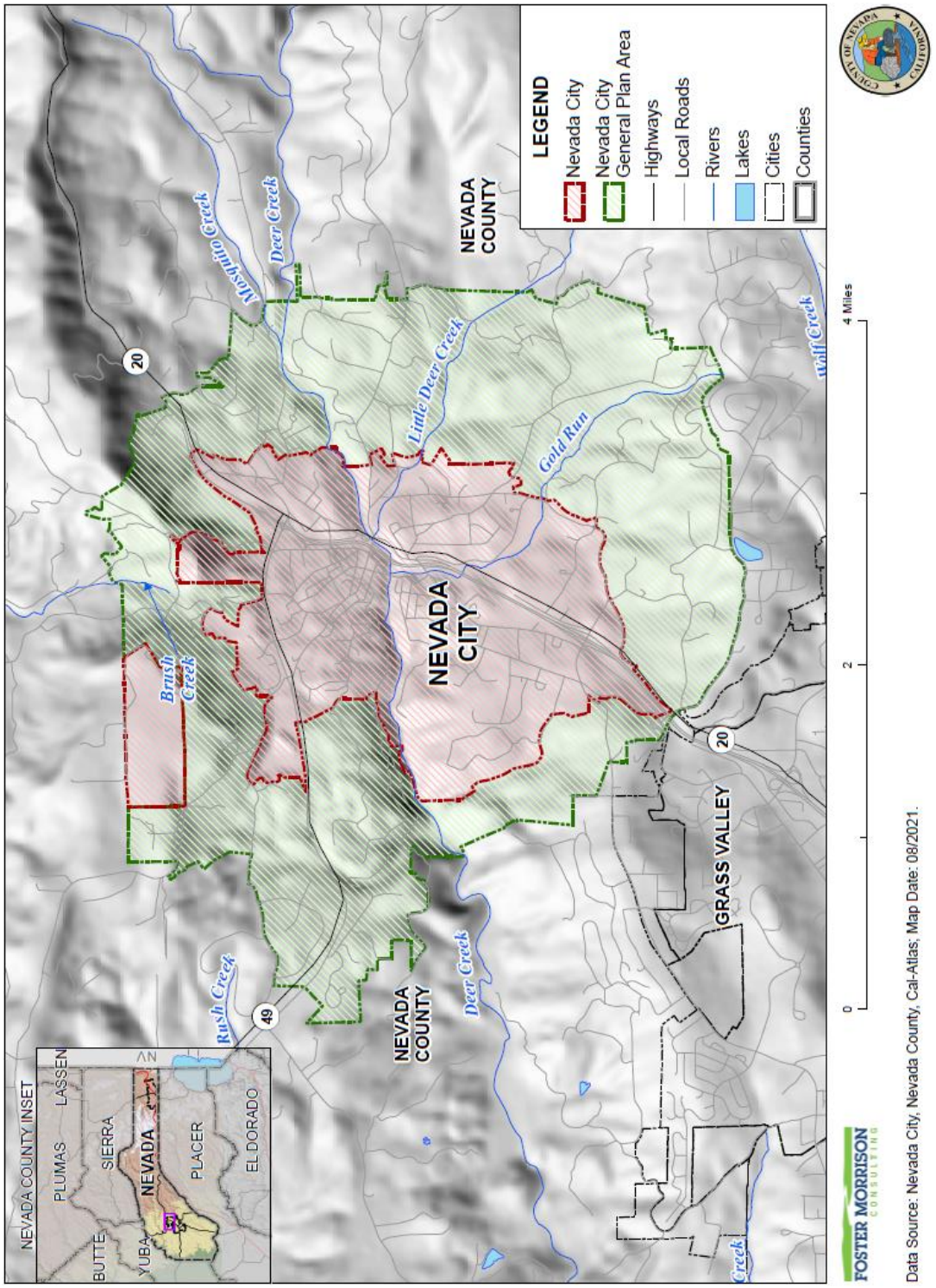
### Nevada City General Plan

The California Government Code requires internal consistency among the various elements of a general plan. Section 65300.5 of the Government Code states that the general plan and the parts and elements thereof shall comprise an integrated and internally consistent and compatible statement of goals. The CAPSE comprises two of seven State mandated elements consisting of the General Plan – Safety Element and Noise Element. Relative to the status and consistency with these other elements, the CAPSE was designed to integrate and be consistent with all elements of the current Nevada City General Plan as follows:

*Section 1 Introduction*: consists of an introduction and summary of the General Plan. The CAPSE has been formatted and organized to fit in with the current General Plan Introduction, and until the entire General Plan is comprehensively updated, this Section does not require amendment.

*Mapping:* Upon incorporation in 1856, the City was 640 acres or 1 square mile. By 1986, when the City adopted its current General Plan, the City had annexed an additional 552 acres. The City now has a total incorporated area of 1,376 acres or 2.15 square miles. In 2008, the City adopted clarifying updates to the General Plan Land Use Map that includes a much larger area outside the City's jurisdictional boundaries containing both its incorporated boundaries and areas surrounding it consisting of 4,200 acres herein referenced as the City's General Plan Area. Areas within this General Plan Boundary, but located outside the City's jurisdictional boundaries, are considered to have geographic, economic, social, and land use influence on the City and should be looked at carefully as they impact the City in many ways beyond potential need for future City service. In many ways, the City's planning opportunities and constraints have not changed since they were identified when the City originally adopted its General Plan in 1986 (see Figure 1).

***Figure 1 Nevada City Jurisdictional and General Plan Boundaries***






RPC 2(b)(i)(2)

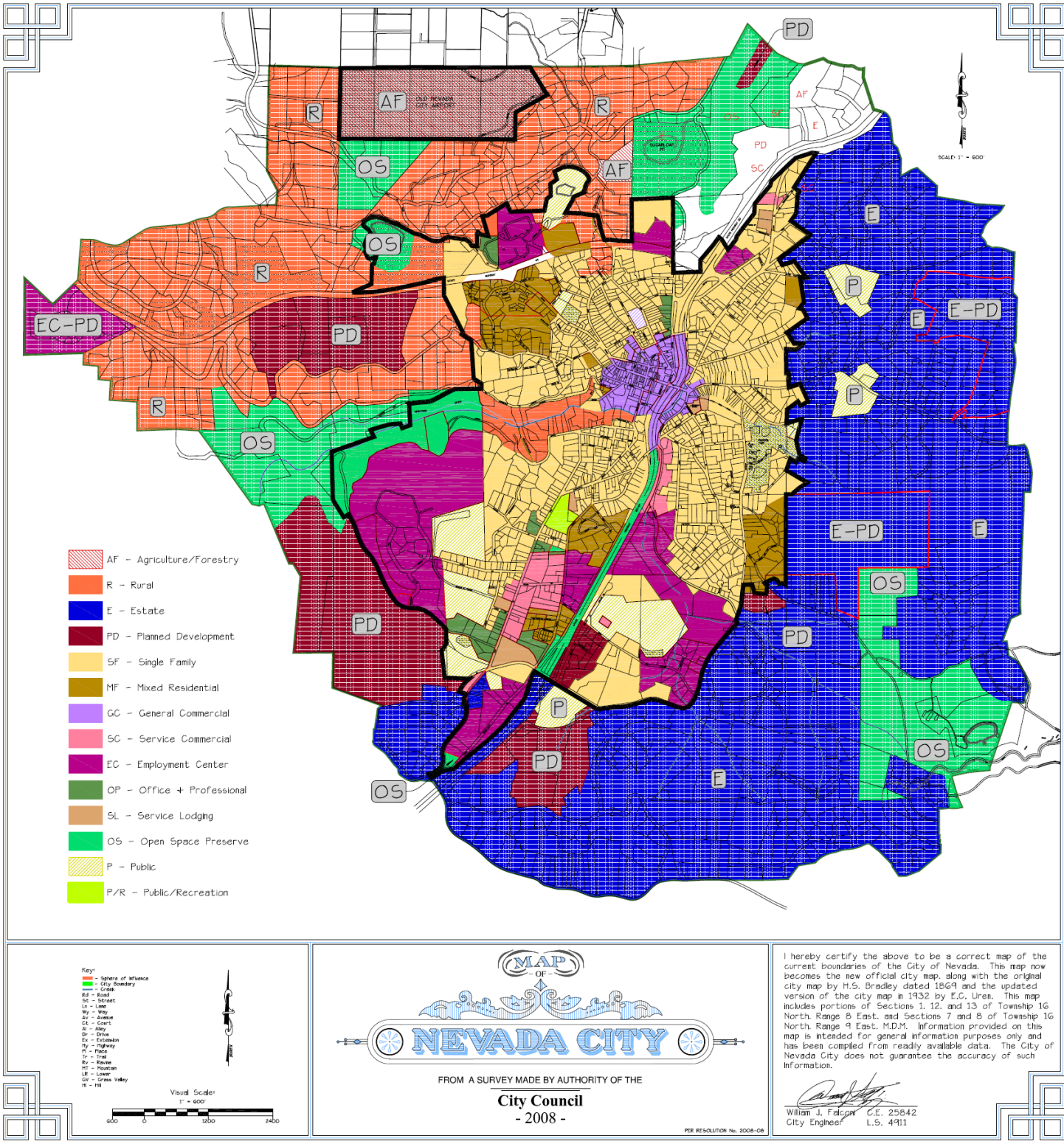
*Section 2 Land Use and Economic Development*: designates the general distribution and location of land uses within the City and within a larger general plan area where the City can extend potential services to and accommodate future development. In accordance with Government Code Section 65302 (d), the Land Use and Economic Development Element describes how land uses are dispersed across the City landscape. This directly affects the layout of roads, utility infrastructure, location of essential public facilities, population centers, and areas to be protected in open space. This in turn affects how public safety is addressed by the City. Adopted in 1986, with some minor amendments made in 2014, to respond to updating the Housing Element, the Housing Element served the City well in maintaining a balance of growth, economic development and need to retain its small-town character. As noted in the mapping discussion above, the General Plan Land Use Map is the central part of the Land Use and Economic Development Element, which presents a land use plan for the City's entire 4,200-acre General Plan Area (see Figure 2). Until the entire General Plan is comprehensively updated the Land Use and Economic Development Element does not require amendment as a result of updating the CAPSE.

*Sphere of Influence Considerations:* The City's 2008 General Plan Boundaries consisted of the City's Sphere of Influence (SOI) which defined by the Nevada County Local Agency Formation Commission (LAFCO) as areas for planning future land uses by the City. However, LAFCO, in 2020, reduced the City's SOI, but such reduction was not approved by the City. For the purposes of the current General Plan Land Use Map and this Element, the City will continue to recognize its 2008 General Plan Boundaries to apply to the General Plan.

*Section 3 City Resources:* consistent California Government Code Section 65302 (d)-Conservation; addresses the conservation, development, and use of natural resources, including water, forests, soils, rivers, and mineral deposits. California Government Code Section 65560-Open Space; addresses long–range preservation and conservation of open–space lands, including open space for the preservation of natural resources, the managed production of resources, agriculture, outdoor recreation, and public health and safety. No changes are proposed in the City Resources Element, which was adopted in 1986.

*Section 4 Housing*: consistent with California Government Code Section 65581, assesses current and projected housing needs for all economic segments of the community. The Housing Element was adopted in 1986 and updated periodically, with the most recent update in 2019 for the 6$^{th}$ Statewide Housing Cycle for the period of 2019 to 2027. No changes are proposed in the Housing Element for this CAPSE update.

## *Figure 2 Nevada City General Plan Land Use Map*






RPC 2(b)(i)(2)

*Section 5 Circulation*: consistent with California Government Code Section 65302 (b), correlates with the Land Use Element and identifies the general location and extent of existing and proposed circulation systems, such as roadways, trails, and other public utilities and facilities. Adopted in 1986. No changes are proposed for the Circulation Element. However, based on many goals and policies presented in this CAPSE, especially related to evacuation needs, the Circulation Element should be updated soon. A new program in this Element has been created to encourage update to this Circulation Element.

*Section 6 Public Safety:* consistent with California Government Code Section 65302 (g)-Public Safety; addresses protection of the community from risks associated with seismic, geologic, flood, and wildfire hazards, as well as from other hazard concerns such as drought. Also, in accordance with California Government Code Section 65302 (f), this CAPSE Update addresses public safety needs relating to climate change in compliance with SB 379. Furthermore, this Element includes an updated Noise Element which identifies and appraises noise problems within the City and forms the basis for future land use distributions. The previous Noise Element section of the Public Safety Element was adopted in 1986. The updated Noise Element, Appendix A to this Element, has been updated to comply with all relevant state regulations. This Noise Element also has been updated to meet new State safety laws.

*The General Plan Background Report* is a compilation of various technical reports that describe existing conditions to support analysis, conclusions, goals, objectives, policies, and programs in the General Plan. It is periodically updated by City staff and is used as an ongoing data source of changing conditions, such as updated or new infrastructure and capacity constraints/expansions, and environmental changes like climate change. Where new information is developed, such as wildland fire hazard risks or flood hazard maps, the Background Report can be updated, and the General Plan can remain current and vital without the need for further amendments.

### Nevada City Climate Change Vulnerability Assessment

Consistent with SB 379, the Climate Change Vulnerability Assessment was prepared as a companion document to this Element (refer to Appendix A of this Element). It provides a climate change vulnerability assessment which evaluates the potential impacts of climate change on community assets and populations. Understanding the City's vulnerabilities to climate change provides a foundation to define future adaptation strategies for this CAPSE Update and other related planning efforts. The analysis and many goals, policies, and programs of this assessment have been integrated into this CAPSE. Adoption of this Element will include the City's approval of the Climate Change Vulnerability Assessment.

Nevada Yuba-Placer Unit (NEU) Fire Management Plan

The Nevada-Yuba-Placer Unit (NEU) Fire Management Plan (2022) implements, in part, the State Fire Plan and provides methodology, analysis and procedures for validating fire fuel hazards and risks to design and implement fire mitigating activities. The NEU Fire Management Plan provides background information, fuels and fire data, proposed projects, and individual Battalion reports

outlining mitigating activities commonly carried out each year. The NEU Fire Management Plan is CAL FIRE's local road map to create and maintain defensible landscapes to protect those assets vital to the state and particularly within the Nevada, Yuba, and Placer County areas. Priorities of the Plan are to reduce the risks to citizens and emergency responders from wildland fire and develop a "land stewardship" ethic in the residents of the NEU. Goals of the Plan are:

1. Demonstrate methods that individuals and the community can use to properly manage their lands to improve forest resiliency and reduce the ignitability of structures in the Wildland Urban Interface.

2. Raise citizen and stakeholder awareness of fire risks and enlist their help and participation in risk reduction.

3. Assist local government in developing standards, policies, and plans, which will result in local, and landscape level fuel modifications.

4. Implement local and landscape level projects and program

### Nevada County Local Hazard Mitigation Plan and Annex B-Nevada City

The Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) for the Nevada County that includes the CAPSE planning area was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities. The LHMP is currently being updated by Nevada County (including all three cities – Nevada City, Grass Valley, and Truckee). The LHMP is incorporated by reference into the CAPSE. This plan and the most recent version of the plan can be found electronically at:

https://www.nevadacountyca.gov/3453/Ready-Nevada-County

### Nevada County General Plan and Related Safety and Noise Elements

Nevada County adopted a comprehensive update to its General Plan in 1995. Subsequent amendments have been made to various elements, most relevant to the City's CAPSE being the 2016 Noise Element and the 2020 Safety Element. This Nevada City CAPSE (Element) has been organized and formatted to be consistent with the County's Safety Element. Consequently, discussion of safety issues, from evacuation to hazardous materials, have been segregated for ease of reference and to create a collaborative set of goals, policies, and programs that can be more easily understood going between the County and City's General Plans. This approach also recognizes the importance Nevada County plays in assisting the City with implementing and achieving safety goals and objectives.

## Other Related Documents

This CAPSE incorporates information, technical analyses, and policies from the following documents where appropriate to support this Element.

### *Nevada City Municipal Code*

This Element is aligned with a number of chapters of the City's Municipal Code that relate to the CAPSE, such as Title 8, Health and Safety, Noise Control, Title 13, Public Services, Floodplain Management and Water and Sewer Services, Title 15, Buildings and Construction, Fire Safety and Construction Standards, Title 16, Subdivisions, Title 17 Zoning, and Title 18, Environment. These regulations, among other things, address constructing safe structures/buildings, construction in floodplains, abatement of dangerous structures, vegetation management, noise control, and water and wastewater treatment.

### *Nevada City Disaster Plan and Nevada County Emergency Operations Plan*

These plans prepared in 2011 outline a coordinated effort between the City, Nevada County, and other agencies to address incidents, including natural and human-made disasters to help minimize potential property damage and human injury by reducing the exposure of people and property. These plans outline a method of incident management called the Incident Command System (ICS) that includes a coordinated (multi-department and or multi-agency) response to incidents beyond the scope of normal city and county operations to protect the health and safety of people and property.

### *Nevada County Wildfire Evacuation Preparedness Action Plan*

Prepared in 2019, this Plan is intended to reduce the loss of life during a wildfire by improving evacuation routes and early warning systems, creating more defensible space around private properties and driveways, building a network of maintained fuel breaks, engaging residents in emergency preparedness and fire-safe stewardship, and enhancing critical infrastructure.

### *READY Nevada County Wildfire Evacuation Preparedness Action and Extreme Climate Event Mobility and Adaptation Plans*

READY Nevada County consists of a multi-jurisdictional plan by the Nevada County Office of Emergency Services to create safer evacuation routes, improve early warning systems and emergency communications, improve defensible space around homes and neighborhoods, provide a coordinated approach to wildfire response, and enhance critical infrastructure needed to respond to wildfires such as water storage, fire hydrants, communication systems, and green waste facilities. These plans evaluate climate change and provide recommended strategies to address and improve evacuation and transportation services. Many strategies in these plans have been taken into consideration in this Element's analysis, policies and programs.



RPC 2(b)(i)(2)

## 2.5 City Safety Services

City government safety services consist of the Fire, Police, Engineering/Public Works, and Parks and Recreation Departments. The following discusses the current status of each department, composition, and safety services offered at the time this Element was prepared.

*City Fire Department:* Emergency services are provided to Nevada City responding to structure fires, emergency medical incidents, rescues, hazardous materials incidents, automobile fires, and wildland fires. In 2018 the Nevada City Fire Department and the Grass Valley Fire Department entered into a Shared Administration pilot program. With the success of that program, the two agencies merged in 2020 with Nevada City contracting for services through Grass Valley. Nevada City maintains one Fire Division Chief position and Grass Valley provides staffing of three Fire Captains, and three Firefighters, at the Nevada City Fire Station 5 with a minimum staffing of two personnel 24-hours per day. The Grass Valley Battalion Chief (shift supervisor) also responds from the Nevada City Fire Station. The Fire Department responds to approximately 1,000 calls for service a year.


*Police Services:* The Nevada City Police Department engages with the public in responding to calls for police service. The Department provide a variety of essential services such as conducting criminal investigations, traffic/parking enforcement, building code enforcement, ABC license compliance, evidence management, special event coordination, quality of life outreach and enforcement, coordinate/track Peace Officer Standard Training required training, recruitment and retention of reserve officers, interns and volunteers, and coordinates Neighborhood Watch activities. The Department currently has 10 employees, including the Chief of Police, 2 sergeants (who also function as detectives), 6 patrol officers, and 1 record clerk. The Department provides public safety and emergency protection.

*Public Works/Engineering Services:* The Nevada City Public Works Department/Engineering Department is responsible for planning, designing, constructing, operating, and maintaining the City's infrastructure, such as public roads, transportation systems, bridges, water, and wastewater systems. The City Engineer manages both engineering and public works programs and is supported by a Public Works Superintendent, with a supporting staff.

*Parks and Recreation Department:* The Nevada City Parks and Recreation Department plans and maintains public parks and recreation services in the City. These services also involve ensuring



RPC 2(b)(i)(2)

park and recreation facilities are safe to the public. The Parks and Recreation Department is managed by the Parks and Recreation Manager, who coordinates with the City Manager and City Engineer in implementing programs and maintaining facilities.

## 2.6 Emergency Planning and Regional Partners

### Disaster Mitigation Act

In the event of a major disaster, it is in the interest of the federal government to ensure that the City and local governments have made efforts toward minimizing the effects of disasters. The Disaster Mitigation Act of 2000 (DMA) requires that each state develop a hazard mitigation plan in order to receive future disaster mitigation funding following a disaster. The DMA requires the development of LHMPs for local governments to be eligible for pre- and post-disaster mitigation funding. The purpose of these requirements is to encourage state and local government to engage in systematic and nationally uniform planning efforts that will result in locally tailored programs and projects that help minimize loss of life, destruction of property, damage to the environment, and the total cost of disasters before they occur. The key here is to ensure that there is a collaborative foundation set up to provide effective coordination between partner agencies. The DMA (Government Code Section 8685.9 provides that Local agencies, like the City, adopt a hazard mitigation plan and incorporate it into the Safety Element. Furthermore, Government Code Section 65302.6 allows the City to be eligible for consideration for state funding to cover the local match (6.25%) for public assistance costs for recovery activities after hazard events as long as the hazard mitigation plan is incorporated into the CAPSE. Policy OC-1 incorporates the City's Local Hazard Mitigation Plan into the CAPSE (Safety Element) as it is periodically reviewed and updated.

Due to its small size and limited resources, the City depends on its regional partners to address public safety needs. With a population of roughly three percent of the County's, the City is limited in its ability to address more regional safety issues, such as wildfire, flood, and evacuation capacity. The City's ability to adapt to climate change, for example, requires effective coordination with neighboring jurisdictions, such as Nevada County and Grass Valley and supporting districts and agencies. Also, the City's ability to address larger public safety emergencies requires support and resources provided by state and federal agencies. The following agencies are referenced and included as regional partners in successfully managing public safety needs:



RPC 2(b)(i)(2)

### Federal Emergency Management Agency (FEMA)

FEMA coordinates the federal government's role in preparing for, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made. FEMA serves as the federal government's leadership role during major emergencies and disasters including responding, directing, and coordinating federal resources and mutual aid assets across all regions to support all its communities. FEMA also reviews and approves the Local Agency Hazard Mitigation Plan.

> The City has access to funding to offset the costs the City incurs for disaster mitigation. Government Code Section 8685.9 (AB 2140) requires that the City adopt a LHMP and then incorporate it into the Safety Element. This also helps the City to maximize the cost recovery potential following a disaster.

FEMA's hazard mitigation assistance grants provide funding for eligible mitigation measures that reduce disaster losses. FEMA administers four hazard mitigation assistance grant programs relevant to the City:

1. Hazard Mitigation Grant Program—Assists in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration.
2. Flood Mitigation Assistance Program—Provides funds for planning and projects to reduce or eliminate the risk of flood damage to buildings that are insured annually under the National Flood Insurance Program
3. Building Resilient Infrastructure & Communities—Support for states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards
4. Pre-Disaster Mitigation

### California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE is responsible for the stewardship of over 31 million acres of California's privately-owned wildlands, preventing wildfires in the (SRA), and provides emergency services to counties and local jurisdictions as contracted. CAL FIRE has adapted to the evolving regimes of destructive wildfires and has significantly increased its efforts in fire prevention. CAL FIRE's Fire Prevention Program consists of multiple activities including wildland pre-fire engineering, vegetation management, fire planning, education, and law enforcement. Typical fire prevention projects include brush clearance, prescribed fire, defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, and fire-related law enforcement activities.

In accordance with California Government Code 65302 CAL FIRE the CAL FIRE Land Use Planning Program assists agencies and the California Board of Forestry with review of Safety Elements when the agencies are located within state responsibility areas and lands classified as very high fire hazard severity zones. This review includes evaluation of information needed to disclose severity zones, what agencies are involved in emergency services, and goals, policies, objectives, and programs relating to minimizing wildfire hazards associated with new land uses. Many of the Safety Element's goals, policies, and programs involve cooperative efforts between

responsible agencies for fire protection. In accordance with this law, the City has collaborated with CAL FIRE and the Board of Forrestry.to address risks of fire within the

### California Geological Survey of the Department of Conservation (CGS)

CGS mission is to provide products and services about the State's geology, seismology, and mineral resources (including their hazards) which affect the health, safety, and business interests of the people of California. The programs operated by CGS include responsibility for providing technical information, advice and production of maps that reflect landslide hazards, seismic hazards (earthquake faults), geological, mineral resources and hazards, and tsunamis. The CGS provides local lead agencies with comments on geological issues associated with the review of various types of environmental documents including local General Plans. These comments are used by local agencies to make land use decisions.

In accordance with California Government Code 65302 CAL FIRE and the California Board of Forestry is required to review and approve the Safety Element due to the City's location within state responsibility areas and lands classified as very high fire hazard severity zones. This review includes evaluation of information needed to disclose severity zones, what agencies are involved in emergency services, and goals, policies, objectives, and programs relating to minimizing wildfire hazards associated with new land uses. Many of the Safety Element's goals, policies, and programs involve cooperative efforts between responsible agencies for fire protection. In accordance with California Government Code Section 65302 (f) (3), the CAPSE was reviewed to address risks of fire within the City (for land classified as very high fire hazard

### California Governor's Office of Emergency Services (Cal OES)

Cal OES is *t*he State agency responsible for overseeing and coordinating emergency preparedness, response, recovery and homeland security activities. Cal OES serves as the State's leadership hub during all major emergencies and disasters including responding, directing, and coordinating state and federal resources and mutual aid assets across all regions to support all its communities. Cal OES also reviews and approves the Local Agency Hazard Mitigation Plan.

### The Governor's Office of Planning and Research (OPR)

The primary responsibility of the OPR is working with local jurisdictions on topics related to land use planning and community development, climate risk and resilience, and high road economic development. OPR is designated in statute as the State's comprehensive planning agency that provides oversight on local General Plan preparation. In addition to containing the vision of the community, California law also requires General Plans to address public safety as one of the seven mandatory elements. The law requires safety elements to address evacuation routes, military installations, seismic and geologic hazards, peak load water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic.

### California Department of Transportation (CalTrans)

CalTrans provides planning, maintenance, and operation of two main highways, 49 and 20, that transect Nevada City. This agency provides critical services to the City in terms of several bridges and highway access along these highways.

### California Highway Patrol (CHP)

The CHP provides statewide traffic and emergency services to the City. The local CHP office is located in nearby Grass Valley which serves Nevada City and the Sierra Foothills, an area of approximately 85,000 residents. The CHP coordinates with both the City's Police and Fire Departments for public safety services.

#### Nevada County Sheriff Department

The Nevada County Sheriff's Department (NCSD) provides law enforcement to all the unincorporated areas of Nevada County, including areas within the General Plan area that are outside the City's jurisdictional boundaries. Sheriff's services include patrol, dispatch, investigations, search and rescue, boat patrol, correctional facilities, coroner, and court security services.

The NCSD has four divisions including the Administrative Support Division, the Corrections Division, Finance Units, and Operations Division. The Administrative Support division provides support services in units including, civil, communications/dispatch, evidence, personnel/training, and records. The Corrections Division manages the operations and services within the County Jail, and the Finance Unit oversees contract management, grant funding, budget development and reports, and public administration.

### Nevada County Office of Emergency Services (County OES)

Nevada County OES is responsible for coordinating with County departments, municipalities, key stakeholders, and special districts to prepare for, respond to, and recover from all disasters. County OES designs and conducts simulated disaster response exercises, evaluates emergency staff training, creates evacuation strategies, and maintains the County Emergency Operations Center (EOC). County OES also educates the community on preparedness, facilitates stakeholder collaboration, and seeks additional funding through grants and strategic partnerships. County OES manages the Nevada County government's response to and recovery from a disaster, as well as providing support to any city, town, or special district (in Nevada County) responding to and recovering from a disaster. These services are relevant for all natural and climate related hazards, as well as man-made hazards. County OES is currently taking the lead in updating the LHMP and Evacuation Capacity Analysis for the entire County, including Nevada City.



RPC 2(b)(i)(2)

### Grass Valley Fire Department (GVFD)

GVFD is a neighboring municipal fire agency that provides emergency response services for more than 12,000 permanent residents (a daytime population of 20,000) and responds to more than 4,500 calls for service per year. GVFD provides contract staffing for the Nevada City Fire Department. Through mutual aid arrangements GVFD provides service to the areas surrounding Nevada City and Grass Valley.

### Nevada County Consolidated Fire District (NCCFD)

NCCFD is a consolidated agency consisting of five separate fire districts in western Nevada County working as one full-service emergency response agency with full-time paid staff. The NCCFD covers 143 square miles of residential, commercial, industrial, and rural areas, broken into 5 service areas and 4 fully staffed stations and a repair shop. Through automatic aid arrangements NCCFD provides "closest resource" response assistance to Grass Valley, Nevada City, and nearby State Responsibility Areas (SRAs).

### Nevada County Department of Public Works, Road Maintenance Division

Nevada County Public Works, Road Maintenance Division maintains 562 miles of public roadways along with numerous bridges and drainage facilities throughout the County, including signs, vegetation management, and storm response. The Road Maintenance Division is responsible for protecting, repairing, and maintaining Nevada County's road system infrastructure, which includes (but is not limited to) snow removal, storm damage response, vegetation management, drainage and shoulder maintenance, bridge maintenance and surface preservation. While Nevada City owns and maintains some roads within the City footprint, the County maintains numerous roads within the City's SOI, as well as evacuation routes and arterials connecting the City to the regional transportation network. These services are relevant to public safety concerns associated with increased temperatures, increased wildfire risk, and severe weather hazards including those related to variable precipitation.

### Nevada County Transportation Commission (NCTC)

NCTC coordinates development and maintenance of the region's transportation system, including administration of regional, state, and federal funding for projects related to roadways, bridges, public transportation services, railways, airports, and bicycle/pedestrian facilities.

### Nevada Irrigation District (NID)

NID is a local water purveyor that provides water (30%) to Nevada City. This is in addition to the water that the City (70%) provides directly from Little Deer Creek. The NID provides an essential buffer to water scarcity for Nevada City. Additionally, NID provides ecosystem management services, and maintains water shortage contingency and urban water management plans that contribute to the resilience of the local watersheds.

### Nevada County Fire Safe Council (NCFSC)

NCFSC consists of a non-profit, local volunteer organization dedicated to making Nevada County safer from catastrophic wildfire through fire safety projects and education. The NCFSC has numerous programs that help residents in wildfire prevention, preparation, and resilience work on their property. Programs include Low-Cost Defensible Space Clearing Services, a Chipping Program, an Access & Functional Needs (AFN) Defensible Space Clearing program, Defensible Space Advisory Visits (DSAV), and an Address Signs programs. In addition to these, the NCFSC contributes expertise to local planning efforts, participates in special programs, and hosts fire mitigation challenges such as the Scotch Broom Removal Challenge.

> The City has access to funding to offset the costs the City incurs for disaster mitigation. Government Code Section 8685.9 (AB 2140) requires that the City adopt a LHMP and then incorporate it into the Safety Element. This also helps the City to maximize the cost recovery potential following a disaster.

### Nevada County Coalition of Firewise Communities (FWC)

Firewise communities are an all-volunteer organization (no staff, no dues, and no budget) which works with, but is not part of, the Fire Safe Council of Nevada County. Collectively, Firewise Community group consists of representatives and residents of about 100 Firewise Communities (FWC) located in Nevada County, which includes more than 60 National Fire Protection Association (NFPA) certified FWCs with the remaining communities in the process of being certified. Each FWC works within their neighborhood to share ideas and information, promote safe practices, and to amplify the county-wide effort to educate residents on wildfire preparedness. Coalition members also act as advocates for better fire-safe practices and policies.

### Additional Nevada County Coordinating Agencies

Nevada City coordinates with additional Nevada County entities for purposes of funding, planning, and programming which benefits Nevada City. Additional details regarding the roles and responsibilities of Nevada County, local jurisdictions and agencies, state, and federal assistance in the event of an emergency wherein the County leads the coordinated response effort can be found in the Nevada Operational Area Emergency Operations Plan.

Nevada County is the most common source of assistance for, and partner in, coordinated planning efforts with Nevada City. The County provides health and welfare programs, law enforcement services and jail operation, public transportation services, emergency planning and services, and maintenance of county roads. Descriptions of the organizations and coordination efforts are included below. Table 1 lists planning documents, programs, and resources, that compliment those of Nevada City and contribute to the adaptive capacity of the City and surrounding areas.



RPC 2(b)(i)(2)

### *Table 1 Coordinated Planning Documents and Agreements*

| Document | Most Recent Revision | Climate Change Impact | Update Cycle | Responsible Entity |
|---|---|---|---|---|
| Nevada County Safety Element Update | 2019 | Multi-hazard | 5 years | Nevada County Planning Department |
| Ready Nevada County Extreme Climate Event Mobility and Adaptation Plan | In Progress (2022) | Multi-hazard | | Nevada County Transportation Commission |
| Nevada County Local Hazard Mitigation Plan (2017-2022) Currently being updated. | 2017 | Multi-hazard | 5 Years | Nevada County OES |
| Nevada County and Nevada Operational Area Emergency Operations Plan (EOP) aka "Disaster Plan" | 2011 | Multi-hazard | 3 Years | Nevada County OES |
| Nevada County Contingency Plan for Excessive Heat Emergencies. | 2017 | Extreme Heat | Reviewed Annually | Nevada County OES |
| Nevada County Community Wildfire Protection Plan | 2016 | Wildfire | | Nevada County OES |
| Nevada County Wildfire Preparedness Action Plan | 2019 | Wildfire | | Nevada County OES |
| Nevada County Wildfire Evacuation Preparedness Action Plan | 2020 | Wildfire | | Nevada County OES |
| Nevada Irrigation District (NID) Drought Contingency Plan and Urban Water Management Plan | 2021 | Drought | 5 Years | Nevada Irrigation District |
| Automatic Aid Agreement | 2018 | Wildfire | | CAL FIRE,<br>Nevada County Consolidated Fire District,<br>Nevada City Fire Department,<br>Grass Valley Fire Department |
| Nevada County Joint Operational Area and Joint Operations Agreement | 2014 | Wildfire | | NCCFD, NCFD, Grass Valley Fire Department |
| Nevada County Consolidated Fire District (NCCFD) Strategic Fire Plan (2016-2021) | 2016 | Wildfire | 5 Years | NCCFD |

## Agency Collaboration

A key to the success of managing public safety is collaborative programs between various federal, state, and local agencies. For example, to improve stewardship of California's forests, the State of California and the U.S. Forest Service launched a joint state-federal initiative in 2020 to reduce wildfire risks, restore watersheds, protect habitat and biological diversity, and help the state meet its climate objectives. The Agreement for Shared Stewardship of California's Forest and



RPC 2(b)(i)(2)

Rangelands includes a commitment by the federal government to match California's goal of reducing wildfire risks on 500,000 acres of forest land per year. That means these agencies share in this effort to reduce wildfire risk on one million acres of forest land in California. From this resource, the City can work with Nevada County Office of Emergency Services, Nevada County Consolidated Fire District, Nevada County Fire District, the State's Office of Emergency Services, CAL FIRE, and many of the City's related Fire Safe Councils to ensure effective wildfire mitigation improvements to forests within and around the City.

# Section 3 PUBLIC PARTICIPATION AND PLAN ADOPTION

Public input was received through workshops conducted on July 29 and September 2, 2022, with the City Planning Commission and City Council. A public presentation to the City's Fire Safety Committee was also held on September 15, 2021, which included a number of Firewise neighborhood groups. Letters were sent to various public agencies and outreach conducted through newsletters on the City's website. In addition, a public noise workshop was held at Pioneer Park on March 16, 2022, to both conduct noise tests at the Park and to provide opportunities for the public to offer comments and ask questions. To expand public outreach and understand public preferences, an on-line public safety survey was conducted between August 1 and November 1, 2021. The survey and results have been included in Appendix E of this Element. Comments and responses received from this process were used to help identify and address public safety concerns that are addressed in this Element. Special outreach meetings were held with various interest groups and agencies including the Nevada City Fire Safety Committee, Nevada County OES, the Nevada County Transportation Commission, various Firewise neighborhood groups, and Sierra Fund. Letters were sent to interested public agencies to obtain input regarding public safety issues and concerns. The draft Climate Adaptation and Safety Element Update was made available at City Hall and was posted on the City's website for review and comments and public agencies were notified and requested input on this Element. Details of this public participation process are provided in Appendix E of this Element.

## 3.1 Technical Steering Committee

A technical steering committee was assembled by City staff to help drive the CAPSE Update. A number of meetings were held throughout the project. The Committee was composed of various County and City staff and public interests and provided direction through the process of developing this Element (see Appendix E Public Participation of this Element for more details).

## 3.2 City Planning Commission Approval

During a noticed public hearing, the Planning Commission, on _____, 2023, approved General Plan Amendment 2022-01 consisting of the CAPSE.



RPC 2(b)(i)(2)

## 3.3 Nevada City Council Adoption

During a noticed public hearing, the City Council, on _____, 2023, adopted the CAPSE by adoption of Resolution 20___-__.

# Section 4 EXISTING/PROJECTED CONDITIONS AND HAZARD PROFILES

## 4.1 Community Character

For thousands of years, Nevada City environs were inhabited by Paleo-Indians including the Southern Maidu, otherwise known as Nisenan. Nevada City, founded in 1850 and incorporated on April 19, 1856, is the county seat of Nevada County. Nevada City started as a gold-mining community over 150 years ago and is now characterized as a modern City but still with modest cottages, elegant Victorian houses and impressive classic brick buildings. At 2,500 feet above sea level, Nevada City is surrounded by forest. The City's incorporated boundaries include a total area of 1,376 acres. The City's General Plan Area boundaries, which include the City's incorporated area is expanded beyond, consisting of approximately 4,172 acres (see Figure 1). The General Plan Area boundary is intended to allow the City to look at the potential impacts on the City from future development, potential annexation, and other changes outside the City's jurisdictional boundaries.

Owing to its exposed location on the western slopes of the Sierra Nevada, Nevada City receives moderate to heavy rainfall for California at 59 inches, though its climate is otherwise fairly typical for the State. Although exceedingly heavy snow falls on the nearby mountains, it very rarely falls in the City. During a typical year, there are 31 days with temperatures of 90 degrees Fahrenheit or higher and, conversely, 75 freezing nights, and 60 days where the temperature fails to reach 50 degrees Fahrenheit.

Urbanization within the City primarily consists of residential, commercial, industrial, and other uses typical of small cities. The majority of land uses and housing outside the City generally consists of low density and rural residential, open space, undeveloped land, agricultural uses and intermittently located commercial and industrial uses.

### Climate Change on the Community

Due to climate change influence in the coming decades Nevada County and Nevada City will experience more fires, floods, droughts, and extreme heat than ever before. Through the development of this Element, the community has called for proactive measures that build resilience amid increasing climate hazards (see Climate Change Vulnerability Assessment, Appendix A of this Element). This Element outlines the existing hazard conditions and other public safety issues in Nevada City, including geologic and seismic hazards, flood hazards, fire hazards (urban and wildland), public safety, emergency management, hazardous materials, severe weather, winter hazards, extreme heat, drought, and climate change vulnerability. It provides details pertaining to probable locations where each hazard or issue is likely to occur (per



RPC 2(b)(i)(2)

availability of data), past notable events in and around the City, agencies responsible for providing protection from these public safety issues, and other background information required by the State. This Element evaluates safety concerns, measures the City is taking to address these concerns, and measures it needs to take to create greater sustainability to climate change. Section 5 of this Plan presents goals and cross-cutting policies and programs that are discussed in this section intended to broadly improve our community's ability to endure and recover from a range of safety disturbances.

## 4.2 Safety Category Profiles

There is a wide range of community safety factors addressed in this CAPSE. Each is profiled in the following sections that are located within the City's jurisdictional boundaries, and to the extent information is available, within the entire General Plan Boundary of Nevada City. Each hazard section is evaluated based on impacts it can have on the City and overall general plan planning area. The profiles also look at the magnitude/severity, previous occurrences of hazard events, and the likelihood of future occurrences. The anticipated frequencies of hazard events are based on past records of these hazards. Climate change and other factors may alter these frequencies in the future, including making some hazard events occur more often. Climate change factors are summarized in Section 4.2 A below, integrated into other sections of this Element and addressed in more detail related to climate change influences within Appendix A Climate Change Vulnerability Assessment of this Element.

### A. Climate Change, Resiliency, and Adaptive Capacity (CC)

The impacts of climate change pose an immediate and growing threat to California's economy, environmental and public health. As with all other parts of the State, the City will continue to experience effects of climate change in different ways that can further impact public safety. Senate Bill 379 requires the Safety Element to include a set of goals, policies, and objectives based on a vulnerability assessment identifying the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts. A complete vulnerability assessment was conducted for this Climate Adaptation and Safety Element Update in 2021 (see Appendix A of this Element). Additional risks to public safety from climate change are identified in the following points:

#### *Higher Temperatures*

Climate change is expected to:

- Continue to increase across the Sierra Nevada region in the coming decades. The average warming projected to increase average annual temperatures by over four degrees for the region from 63.8°F currently to 67.9°F in the next 20 years.
- Increase the occurrence of extreme heat events which can particularly impact vulnerable populations. Extreme heat events are defined as days in which the daily maximum temperature exceeds 96.2 degrees Fahrenheit.



RPC 2(b)(i)(2)

- Intensify the duration of extreme heat events and heat waves, which are likely to increase the risk of mortality and morbidity due to heat-related illness and exacerbation of existing chronic health conditions. Those most at risk and vulnerable are elderly individuals with chronic health issues, such as heart and lung disease, diabetes, and mental illnesses, infants, the socially or economically disadvantaged, the homeless, and those who work outdoors.
- Increase risks to vulnerable populations increase when critical infrastructure is not designed, operated, and/or maintained to function effectively or can be damaged by extreme heat events.
- Melt the Sierra snowpack and drive the snowline higher, resulting in less snowpack water storage for water supply later in the season.
- Reduce snowpack, and earlier snowmelt which can increase wildfire and wildfire intensity potential through increased plant moisture stress (grasses drying sooner, tree and shrub water content decreased.)
- Increase insect populations, which affect forest health and reduce forest resilience to wildfires. For example, several species of pine bark beetles have gone from one hatch per year to three or four hatches per year due to milder temperatures and shorter winter-snow season.

### *More Intensive Wildfires*

Climate change is expected to:

- Result in increased wildfire intensity and extent will increase public safety risks, property damage, fire suppression and emergency response costs to government, air quality impacts from smoke, watershed and water quality impacts, vegetation conversions, and habitat fragmentation.

### *More Severe Weather and Storms*

Climate change:

- May result in increased precipitation intensities with larger storms or wet periods, producing little net change in precipitation totals but more extreme conditions throughout. The amount of precipitation from the largest storms is projected to increase by 5-30 percent compared to historical norms.
- Is expected to intensify rainfall events, periodically with larger than historical runoff, that will lead to more frequent and /or more extensive flooding. Flooding projections for 100- and 500-year (1% and 0.2% annual chance flood) events reflect higher frequencies.
- Is thought to increase potential losses or damages to the City's infrastructure, roads, bridges, government buildings, and the many buildings located in the historic downtown due to uncontained spread of wildland fire, severe weather events, or storm flooding. Given the age and nature of historic buildings, structural losses or damages may represent permanent or irrecoverable harm to the downtown.

- May increase risk of landslides and mudslides in sloped areas including those occurring after wildfires during large storm events. Landslides and mudslides are often triggered by large, intense winter storms, which can oversaturate the ground and cause fast-moving debris flows, especially in areas previously affected by wildfires due to lack of vegetation.

The Climate Vulnerability Assessment provides a detailed assessment of some of the steps the City has taken to reduce safety risks from climate change, such as coordinating with other agencies and fire safe organizations to address potential disasters and avoid risk, and the preparation and implementation of the Drought Action, Water Shortage Contingency and Energy Action plans. Solutions to reduce risk from climate change are emphasized in the assessment by using adaptive capacity strategies. Adaptive capacity is the ability to cope with climate change. Types of adaptive capacity include adjustments in behavior, resources, and technologies. The City has already taken several steps to increase the community's adaptive capacity, which include encouraging water preservation and conservation, promoting renewable energy and energy conservation, coordinating with regional fire districts, and implementing wildfire mitigation activities within the City. The City has also conducted fire break maintenance and fire clearing projects, such as on Sugarloaf Mountain, Indian Trails Subdivision, and land near the Little Deer Creek Trail. Strategies and programs recommended in this assessment have been included in the Goals, Objectives, Policies, and Programs in this Plan. Some of these include:

- Enhance adaptive capacity strategies to address increased temperature, air quality reductions especially due to wildfire smoke, intermittent storm flooding, drought, and wildfire.
- Improve the City's disaster planning efforts to integrate other hazards of concern such as increased temperature, air quality reductions especially due to wildfire smoke, and intermittent storm flooding.
- Develop a Vegetation Management Plan to guide the actions of the City departments responsible for open space and park management applicable to climate hazards.
- Continue and enhance the City's coordination with existing stakeholders to improve climate resilience including improved communication programs between Fire Districts and Firewise Communities.
- Advocate and support wildfire mitigation activities and secure resources, such as from the County and CAL FIREe that reduce wildfire risks such as conducting prescribed burns, fuel load reductions, and fire break maintenance.

Discussions on climate adaptation, adaptive capacity, and resiliency are noted throughout this section of this Element, as they relate to wildfire, flooding, emergency preparedness, evacuation, flooding, severe weather, public safety services and facilities, hazardous materials, and geologic hazards. A climate vulnerability assessment is noted at the end of each section hazard section of this document.

### Climate Change and Water Supply

The City is dependent of water supplies from Deer Creek and Little Dear Creek which comes from the Sierra snowpack. Water delivery from these sources could be impacted by changing climate temperatures and precipitation characteristics from climate change. The City's water delivery systems are managed by both the City and the Nevada Irrigation District (NID). A more detailed discussion of the City's water supply and delivery system is presented in Section C, but this discussion focusses on how climate change may impact the City's water sources.

The City's 2015 Drought Action Plan includes measures that need to be taken in the event of a drought. This is independent from NID, but NID also has drought event measures that can apply to the City. NID undertook an analysis of climate change impacts on future water supplies. The analysis included projecting future hydrologic conditions and their potential effect on the District's water supplies, specifically watershed runoff. The 2020 Urban Water Management Plan concludes that local climate change impacts will likely affect future supplies. However, the report states that the magnitude of such impacts are not yet fully understood, and the District is in the process of further evaluating this. Much of this evaluation and need to create a sustainable water supply is outside the City's control, but the City sees this as an opportunity to address climate change and future water supply needs collaboratively with NID and other stakeholders. This CAPSE includes policies to address the City's future water supply needs through collaborative efforts with NID and other policies and programs linking the City's Drought Action Plan to assure measures are taken to address water supply sustainability during a drought.

### *Reducing Carbon Footprint*

As way to encourage reduced global warming caused by vehicular emissions, the City promotes the use and electric vehicles and equipment. The City adopted regulations to streamline the review and permitting process for electric vehicle charging stations in 2017. The City recently installed six EV charging stations in the Commercial Street Public Parking Lot . To further promote the use of electrical vehicles the City should consider installing additional charging stations within other public parking lots, along high use public streets, and employee parking. The CAPSE includes policies/programs to replace or add new vehicles/equipment with electrical systems where practical. The City actively promotes alternative transportation modes, such as improving and expanding bicycle facilities and pedestrian trails.

## B. Emergency Preparedness and Evacuation (EP)

This section discusses the community's ability to prepare for, respond to, recover from, and plan for a major disaster focused on emergency planning, preparedness and evacuation.

### Ready Nevada County

Evacuations normally occur due to hazard incidents or disasters that cause large numbers of people to flee the area in all types of vehicles or other modes over all roads regardless of size or legal restrictions. Evacuations are often marked by a sense of panic among the evacuees as stress



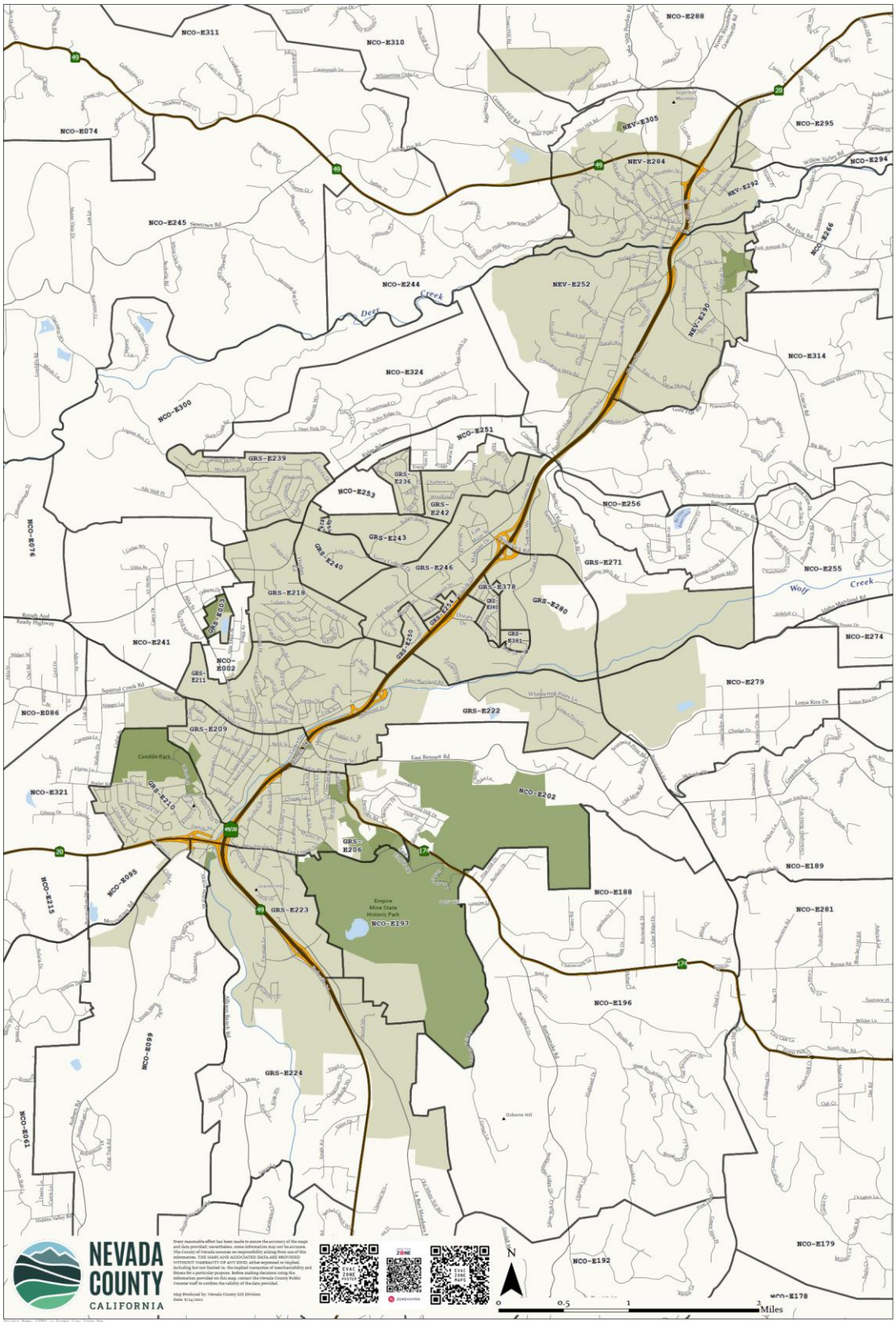
RPC 2(b)(i)(2)

and fear levels are high. Individuals, groups, and families (including pets) evacuate as quickly as possible, and usually only after finding themselves away from their residence do they consider food, water, clothing, medical care, shelter, or Right-of-Entry (ROE) form (to allow for recovery activities to occur on private property).

Ready Nevada County is a multifaceted, stakeholder effort coordinated by the Nevada County OES to raise awareness and mobilize the community to prevent and prepare for wildfire and other hazards and disaster events. This effort helps the community prepare for wildfire and other hazard related events through increased planning, strategic partnerships, improved communication, and ongoing public engagement. As a central part to Ready Nevada County, the CodeRed System breaks Nevada City up into several Evacuation Zones; NEV E-252, 284, 290, 292, and 304 as shown on Figure 3. The zones are bisected by Highways 20 and 49 and Dear Creek. (more detailed information can be found at https://nevadacountyca.gov/679/Emergency-Services-Maps). Since evacuations are typically planned regionally, this map shows how the zones relate to all areas of Nevada County including neighboring Grass Valley to the south of Nevada City. This system is used by Nevada City, Nevada County (and other counties and cities in California), as a mass notification system. The CodeRed service agreement includes high-speed notification technology allowing Nevada County to more effectively communicate time sensitive messages and includes the following provisions:

- Access to a web-based alert notification system
- Ability to access and activate the service via phone, email, text alerts
- Integration and geocoding of supplied 911 database

### *Figure 3 Nevada City Evacuation Zones*






RPC 2(b)(i)(2)

During an evacuation the responsible jurisdictional law enforcement agency, under the direction of the incident commander is responsible for directing and facilitating the continued movement of evacuees. Fire departments and fire protection districts may be requested to assist law enforcement with traffic control. The Nevada County OES coordinates with the American Red Cross and the Nevada County Department of Social Services to establish temporary shelters, if requested to do so by the Incident Commander.

Evacuation routes during an incident are developed in real time and are dependent on the type of incident, the urgency of the impending threat, and the direction of threat. The public may be notified using door-to-door notification methods; local media via radio, television, Internet; and/or activation of the emergency alert notification system. Routes designated in the City's Circulation Element, this CAPSE, and the Nevada County General Plan as interstates, freeways, highways, and other principal arterial routes are considered primary evacuation routes. Such routes provide the highest levels of capacity and contiguity and serve as the primary means of egress during an evacuation from the City and ingress for emergency personnel. Evacuation out of town is limited to State Route 20 and 49 described in more detail as follows:

1. State Route 20 (SR 20) connects the City of Grass Valley with Yuba County to the west of Grass Valley and continues north of Nevada City, connecting to I-80. The highway portion between SR 20 to the west of Grass Valley and SR 20 north to Nevada City is signed as shared SR 49/20 and is a principal arterial. This shared route is named the "Golden Center Freeway" between Route 49 of Grass Valley and SR 20 of Nevada City.
2. State Route 49 (SR 49) runs north/south and is a principal arterial for Nevada County, connecting the cities of Grass Valley and Nevada City with I-80 in Auburn (Placer County) to the south. SR 20 and SR 49 also serve as an emergency detour route for I-80. SR 49 is the lifeline for much of Nevada County's freight and lumber traffic and also provides access to recreational and tourist attractions. To the west of Nevada City, this route continues in a northerly direction to the Nevada/Yuba County line.

In 2022, Nevada County created an evacuation pre-planning tool that simulates detailed models for evacuations, traffic times, and road congestion scenarios for disasters such as wildfires and flooding. This application allows users to create a real-time visualization for predictive forecasting for evacuations. Emergency service personnel, such as the Nevada County Office of Emergency Services, model evacuation capacities and plan for needed infrastructure/facilities and target fire fuel removal along evacuation routes. This tool is also available to the public so residents can run evacuation simulations themselves via the Ready Nevada County Website at: https://www.nevadacountyca.gov/2792/Preparedness-Toolkit

### Climate Adaptation and Evacuation

***In 2019, the State adopted SB 99 that requires review and update of the Safety Element to include information to identify residential developments in hazard areas that do not have at***

***least two emergency evacuation routes. As shown on Figure 4 the City has over 40 neighborhoods that have only one route for egress/ingress.***

Figure 5 and Figure 6, provide a higher resolution of these neighborhoods. This is intended to assist the City with identifying opportunities to improve connectivity and evacuation capacity generally.

Assembly Bill AB 747, also adopted in 2019, requires that the Safety Element be reviewed and updated to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. This type of analysis requires detailed traffic analysis that identifies constraints and improves evacuation. The Nevada County OES received funding from CAL FIRE to conduct an Evacuation Study that will include Nevada City. The requirements under both SB-99 and AB-747 will be addressed as part of this study expected to be completed in 2024.

### Climate Change and Emergency Services, Facilities, and Evacuation: Severe Weather

Climate change is expected to cause an increase in intense storms, higher temperatures, and other weather hazards that can impact emergency services, facilities and evacuations. For example, flooding can reduce the ability for residents to evacuate due to road wash outs. More detailed information on this is found in the Climate Change and Resiliency and Adaptive Capacity Section A.

***Figure 4 Nevada City Neighborhoods with Only a Single Route for Egress-Ingress***

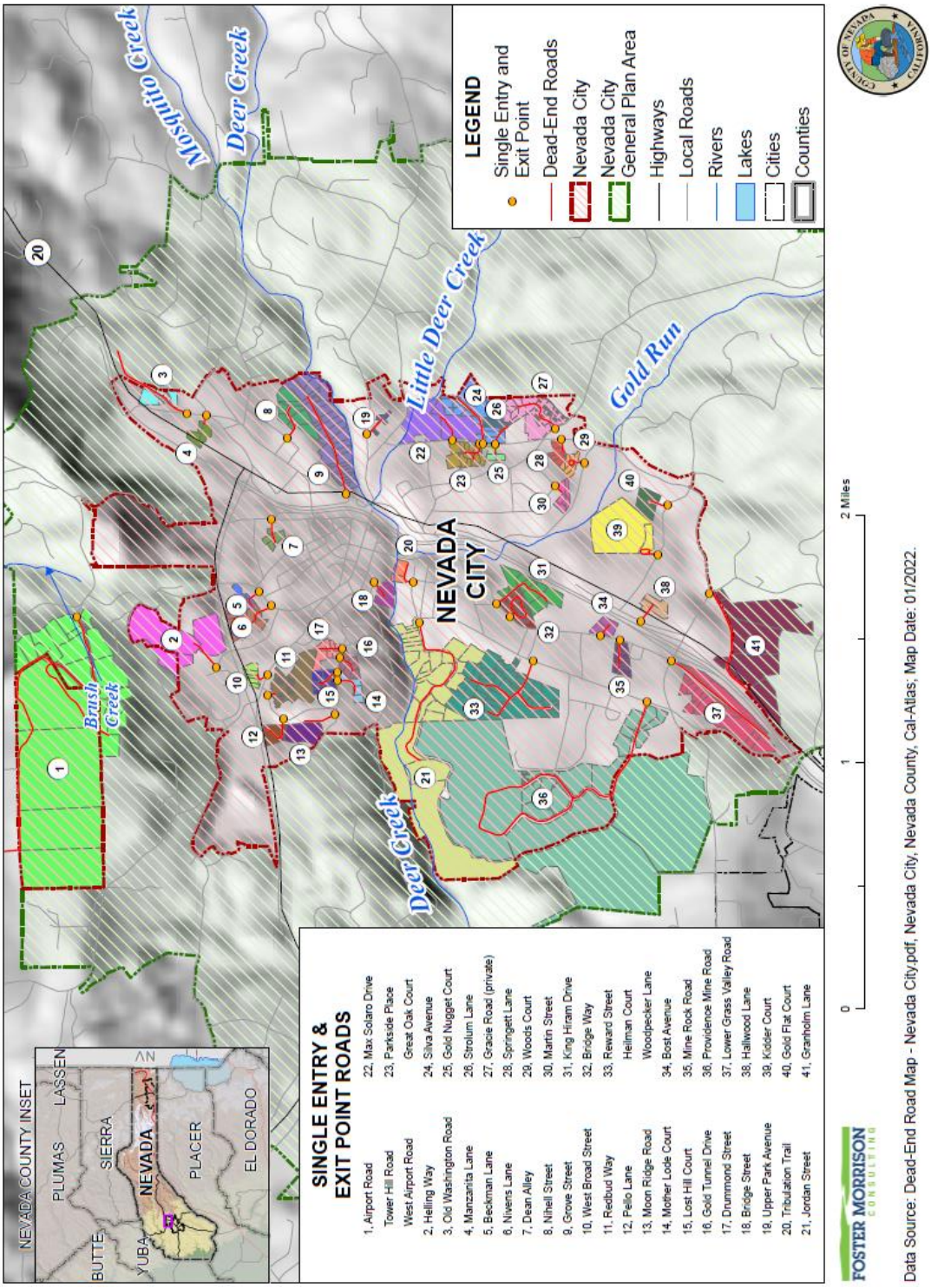





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*Figure 5 North Nevada City Single Route for Egress-Ingress Areas*

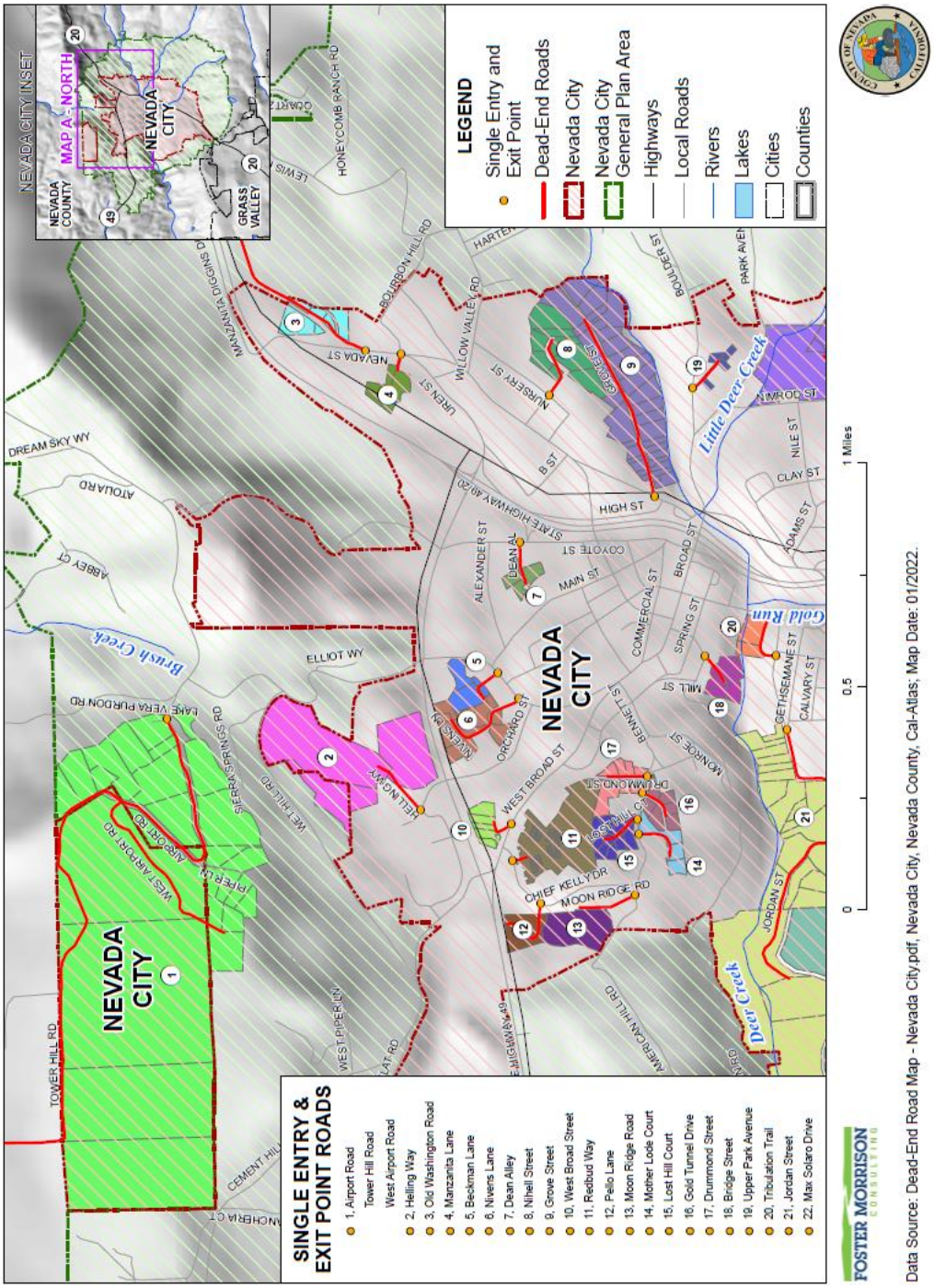




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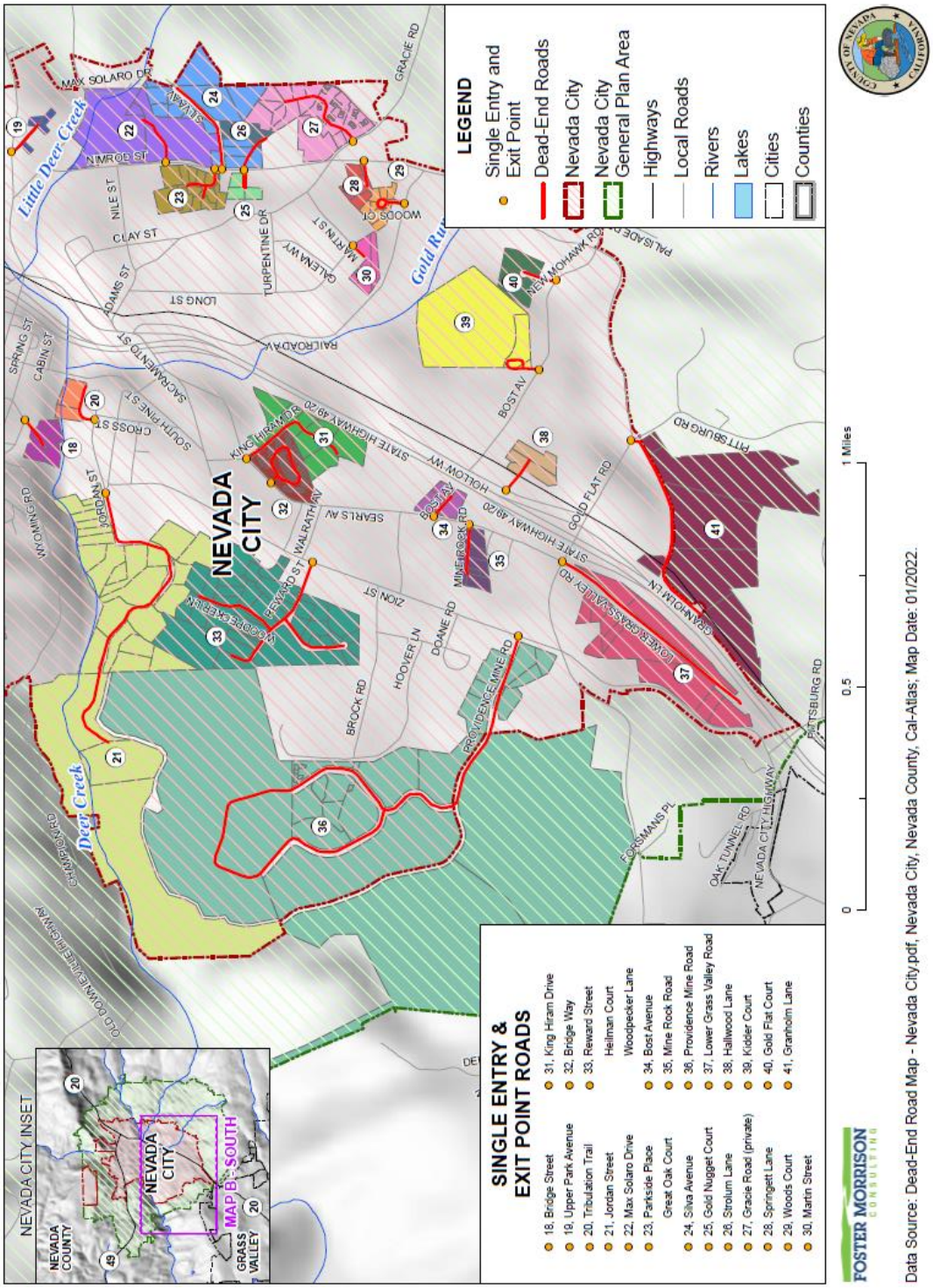
***Figure 6 South Nevada City Single Route for Egress-Ingress Areas***



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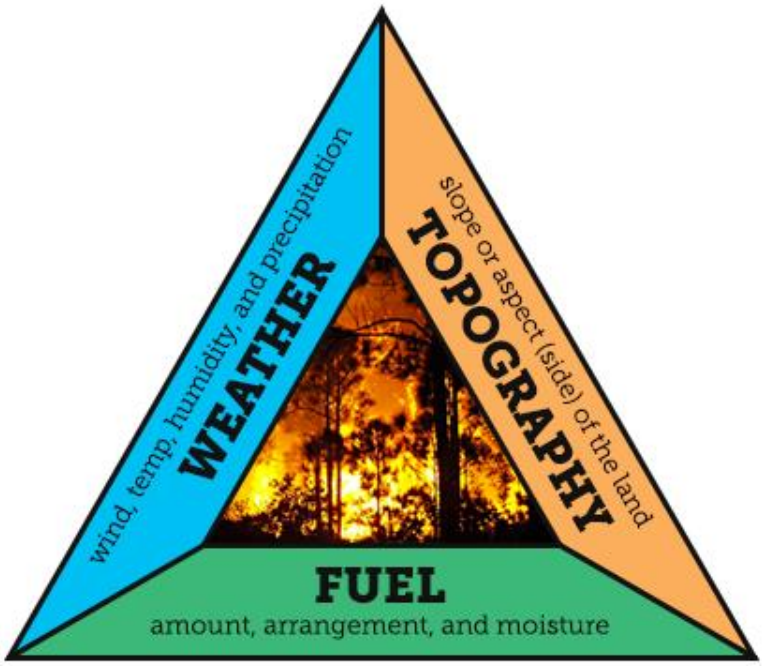
## C. Fire and Protection (FP)

Three types of fires are of concern to Nevada City: (1) wildfires, (2) wildland-urban interface fires, and (3) structural fires.

### *Wildfires*

Wildfire is defined as an uncontrolled fire spreading through vegetative fuels that poses a threat to life and/or property. Wildfires can be ignited by natural events, such as lightning strikes, or can be caused by damaged infrastructure (e.g., downed power lines) or human activities (e.g., campfires, arson). Wildfires can move quickly, casting embers into downwind areas and spreading to developed areas, putting human lives and properties at risk. Three factors that contribute significantly to wildfire behavior are topography, fuel, and weather (see Figure 7).

***Figure 7 Wildfire Behavior Triangle***




Topography—An area's terrain and slope affect its susceptibility to wildfire spread. Both fire intensity and the rate of spread increase as slope increases because heat from a fire tends to rise through convection. For this reason, wildfires tend to spread more slowly downhill. The arrangement of vegetation on a hillside can also contribute to increased or decreased fire activity on slopes.

Fuel—The type, condition, and volume of fuel material are key factors that influence wildfire behavior. Fuel sources are diverse and can include dead vegetative matter, live trees, brush, and

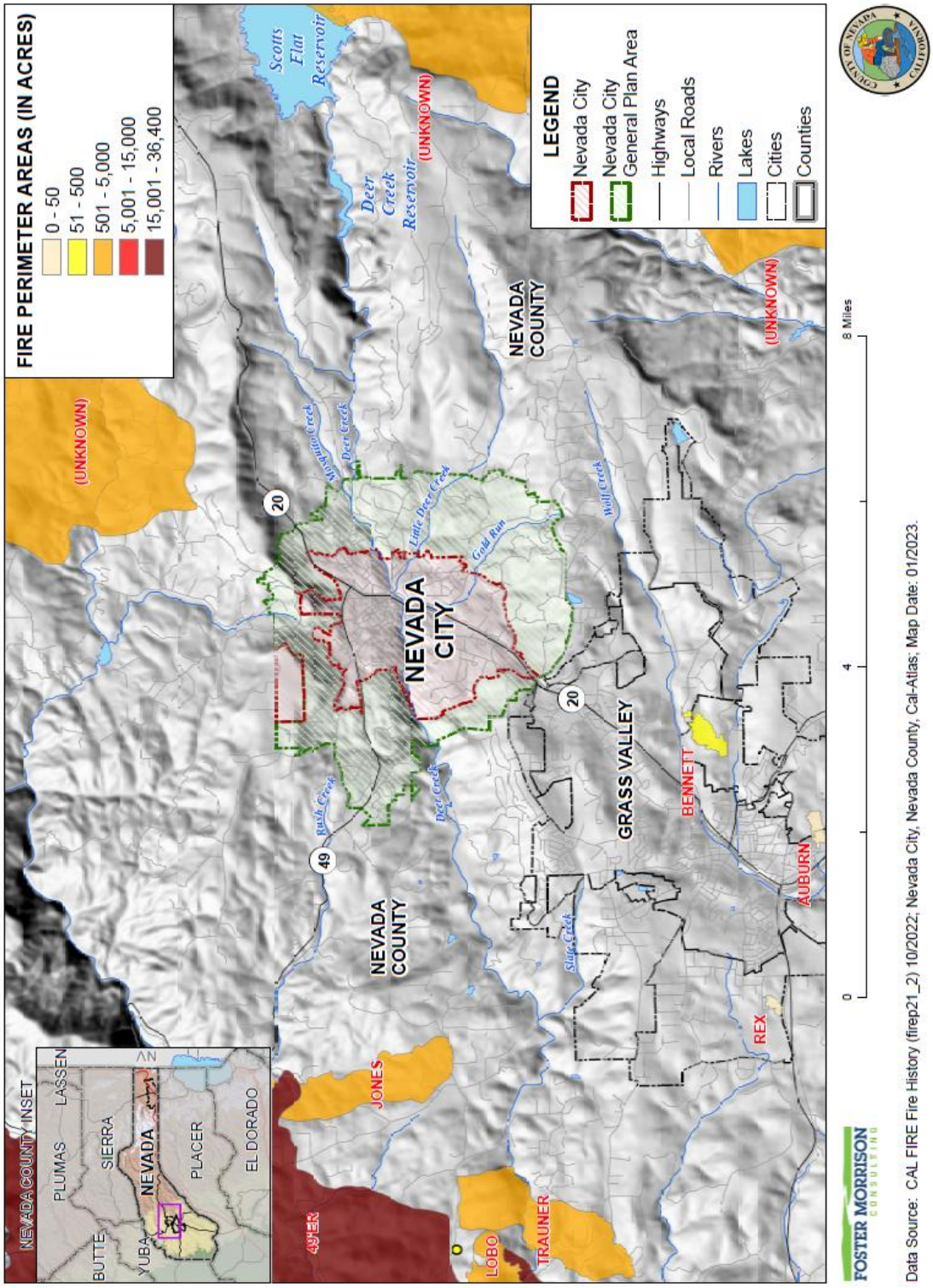
cured grasses. Buildings and other structures, such as homes, can also be sources of fuel. Certain types of vegetation are more susceptible to burning or will burn with greater intensity, and dead, dry plant matter tends to burn more easily than living plant matter. Thus, fire risk is increased significantly during periods of prolonged drought. The density of vegetation increases the amount of combustible material available, also called the fuel load.

Weather—Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out fuels that feed wildfires, creating a situation where fuel will ignite more readily and burn more intensely. Thus, during periods of drought, the threat of wildfire increases. Wind is one of the most treacherous weather factors. The greater a wind, the faster a fire will spread and the more intense it will be. Winds can be significant at times in Nevada County and the City. North winds in Nevada County are especially conducive to hot, dry conditions, which can lead to "red flag" days indicating extreme fire danger. In addition to wind speed, wind shifts can occur suddenly due to temperature changes or the interaction of wind with topographical features such as slopes or steep hillsides. Lightning also ignites wildfires, often in difficult to reach terrain for firefighters.

### History of Wildfires

Nevada County has a long history of wildfire and fire management, having experienced a total of 170 fires larger than 300 acres between 1900 and 2010. During the period covered by the Nevada County LHMP fire perimeters map, 1950-2010, the three urban population centers in the county, including Nevada City, did not receive direct wildland fire damage, though all three cities (Nevada City, Grass Valley, and Truckee) have had significant fire damage prior to 1880. When CAL FIRE responds to a major emergency incident, such as an extended day wildfire of 10 acres or greater, the incident is logged in the CAL FIRE Incident Database. According to the CAL FIRE Incident Database there were 20 wildfire incidents recorded for Nevada County between 2011 and August of 2021, that burned a total of 17,524 acres. Of those, 6 fires burned more than 300 acres in a single incident, with the average area burned being 2,805 acres. Recent large fires include the Jones Fire that burned 705 acres in Nevada County northwest of Nevada City in August of 2020, and the River Fire that burned 2,619 acres in Nevada and Placer Counties in August of 2021. Figure 8 show a history of wildfires around Nevada City.

***Figure 8 Wildfire History***






RPC 2(b)(i)(2)

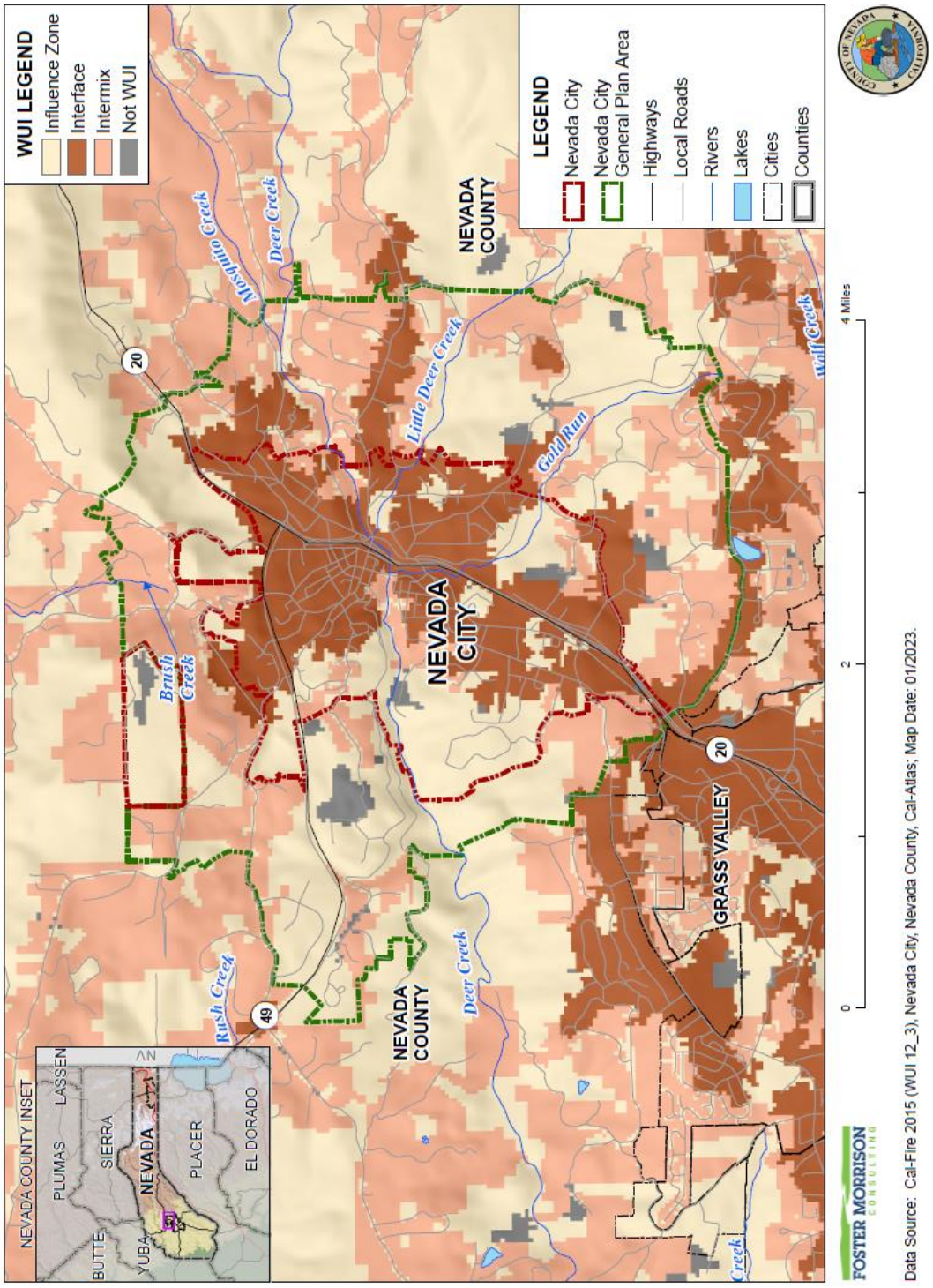
### Wildland-Urban Interface Fires

The greatest risk for loss of life, property, and structures is associated with fires along the wildland-urban interface (WUI). WUI is a term describing development that is interspersed or adjacent to landscapes that support wildland fire. Nevada City is surrounded by natural wooded areas and open space. Figure 9 (from CAL FIRE) shows the WUI where dense housing development is located next to vegetation that can burn in a wildfire. This map also shows areas that are interspersed with development that is dominated by wildland vegetation subject to wildfire. The General Plan area, including the City, is almost entirely located within a wildland-urban interface zone. Users should consult the most recent available mapping, available from CAL FIRE's Fire and Resource Assessment Program (FRAP) at https://frap.fire.ca.gov/. Future updates to this Safety Element will incorporate new mapping data as it becomes available. In the WUI, efforts to prevent ignitions and limit wildfire loss hinge on hardening structures and creating defensible space through a multi-faceted approach, which includes engineering, enforcement, education, emergency response, and economic incentive. Multiple strategies in the WUI help to limit the spread of fire and reduce the risk to people and property.



RPC 2(b)(i)(2)

***Figure 9 Wildland-Urban Interface Zones (most current Map on the CAL FIRE website shall apply here).***





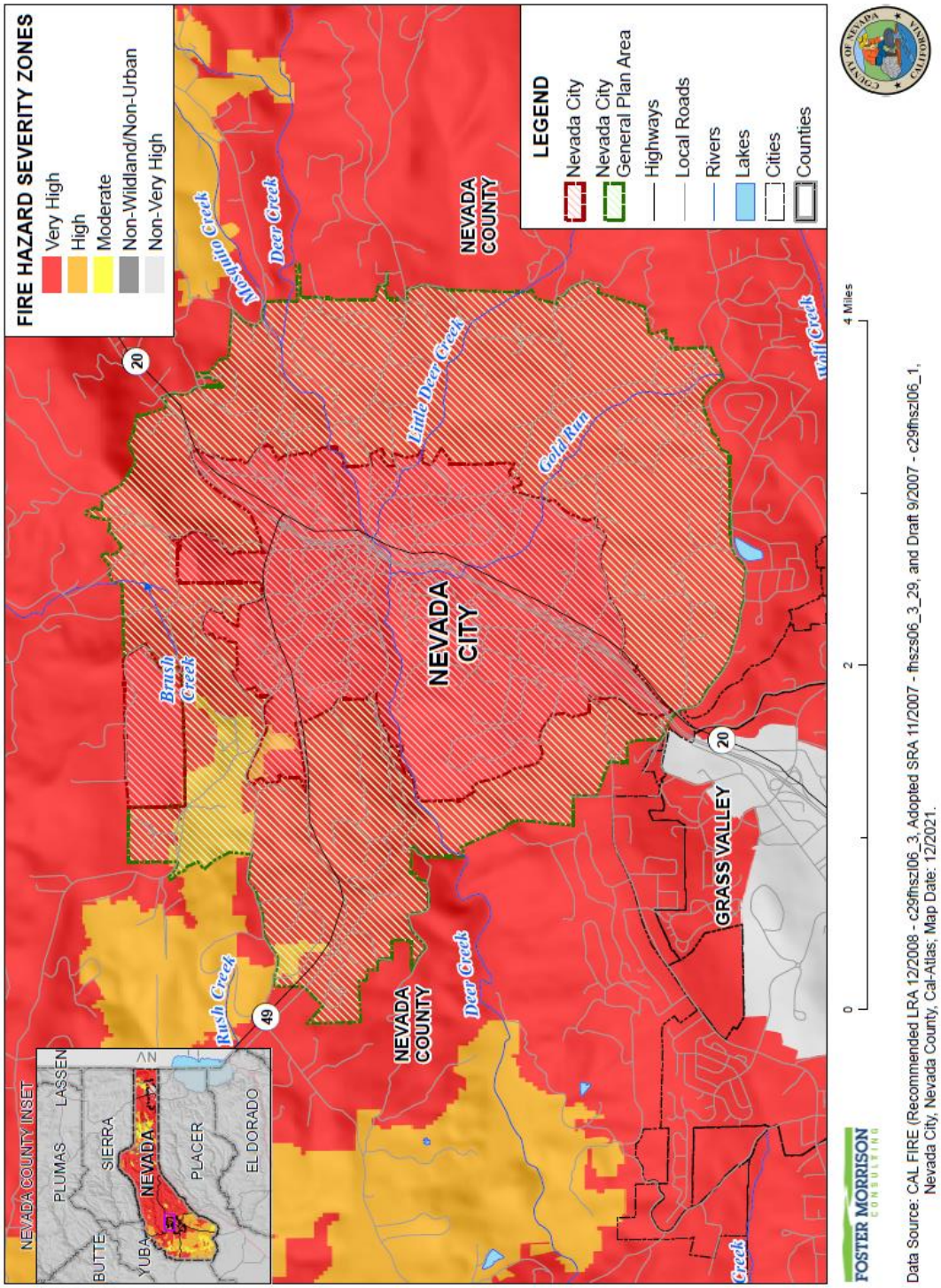

RPC 2(b)(i)(2)

### Wildfire Hazard Severity Zones

As part of the Fire and Resource Assessment Program (FRAP), CAL FIRE was mandated to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), then define the application of various mitigation strategies to reduce risk associated with wildland fire hazards(see Appendix F, definition of hazard versus risk). Risk is the chance associated with the hazard. Fire hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The entire City most of the General Plan area is located within a Very High Fire Hazard Severity Zone and most of the areas surrounding the City are also in this zone (refer to Figure 10). One of the biggest safety concerns of the City is the large amount of fuel load located within the unincorporated lands surrounding the City. Wildfires can start in these areas and can spread to the City and can potentially become a catastrophic fire. During wildfire season, this becomes a major challenge to address when wind, temperature and humidity can combine to enlarge fires very quickly. Also, many roadways in the City are single-lane, some private that are not City-maintained which result in restrictive access with constrained evacuation capacity.

***Figure 10 Fire Hazard Severity Zones (most current Map on the CAL FIRE website shall apply here).***






RPC 2(b)(i)(2)

### Structural Fires

Structural fires occur in developed environments, destroying buildings and other human-made structures. Structural fires are often caused by faulty wiring or mechanical equipment, and combustible construction materials, but can be caused by a variety of sources, including human carelessness. The absence of fire alarms and fire sprinkler systems often exacerbate the damage associated with a structural fire. Structural fires are caused largely from human accidents, although deliberate fires (arson) may be a cause of some events. Older buildings that lack modern fire safety features may face greater risk of damage from fires. To minimize fire damage and loss, the City's Building fire codes, based on California Code of Regulation Title 24, sets standards for building and construction. It requires the provision of adequate water supply for firefighting, fire-resistant construction, defensible space, and minimum street widths, among other things.

### Wildfire Smoke

While at risk from the impacts of wildfires, the City and its residents are also susceptible to impacts of smoke from the surrounding region. Due to wind patterns, wildfires in northern California in general can greatly reduce air quality in the City and cause public health impacts as well as impacts to tourism and normal community functions. Community public health factors that can increase the impacts of wildfire smoke include the prevalence of asthma in children and adults; chronic obstructive pulmonary disease; hypertension; diabetes; obesity; percent of population 65 years of age and older; and indicators of socioeconomic status including poverty, income, and unemployment. Exposure to wildfire smoke, particularly exposure to vulnerable populations, can result in worsening of respiratory symptoms, increased rates of cardiorespiratory emergency visits, hospitalizations, and even death. Wildfire smoke can also have impacts on the labor market and the economy in general, with air quality affecting the ability of outdoor workers to perform their work and impact industries that operate in the open air (e.g., wineries, recreation activities, sporting events). This Element includes policies/programs to support community programs that educate the public and provide weather shelters for vulnerable populations including use of shelters during major smoke events.

### Future Land Use

Figure 2, General Plan Land Use Map, illustrates the land use planning within the General Plan Areas including the City. Planned and existing uses were established over the 100 plus years since the City was incorporated in1856. The Land Use Map also shows future land use within these areas as shown on Figure 9 and Figure 10, located in both wildland-urban interface areas and the Very High Fire Hazard Severity Zone. Most of the areas within the City's 1,400-acre jurisdictional boundaries are built out. However, surrounding areas included in the 4,200-acre General Plan Area have some potential for development. Future development in these other areas is under the land use jurisdiction of Nevada County. However, some may be annexed to the City in the future depending on the need to extend City services. For the most part, these

other areas are identified both by Nevada County and the City's General Plans for lower density residential and open space.

Before approving a tentative subdivision map or parcel map within the State Responsibility Area or a Very High Fire Hazard Severity Zone, the City must make certain findings that the proposed subdivision is consistent with fire safety and defensible space according to Public Resources Code Sections 4290 and 4291. After approval the City must notify the State Board of Forestry of the action. A specific program has been developed to establish this City process.

There are several other goals, policies, and programs in this CAPSE to reduce fire danger for existing and proposed development within the City's jurisdictional boundaries that would also apply to any areas annexed within the General Plan Area. The CAPSE includes a policy to coordinate with NCCFD, the Nevada County Consolidated Fire District, and the Nevada County LAFCO during review of development proposals and/or annexations to ensure that new development and the associated uses be constructed in accordance with the City's fire regulations which are also in compliance with State regulations, and located where fire and emergency services have sufficient capacity to meet project needs (or require that they be upgraded to provide necessary capacity as part of the proposed development activities). Due to mutual aid arrangements between Nevada City, NCCFD and Grass Valley Fire Department, annexation does not affect fire safety service.

### Climate Change and Wildfires

As previously discussed in Section 4.2 A, the effects of climate change, including increased temperatures, and changes to precipitation patterns, will exacerbate many of the factors that contribute to wildfire risk, such as available fuels. While the impact of climate change on wind speeds is still uncertain, it is important to recognize this potential effect and how it may also contribute to wildfire risk in the future.

Increased variability in precipitation may lead to wetter winters and increased vegetative growth in the spring, and longer and hotter summers will lead to the drying of vegetative growth and ultimately result in a greater amount of readily burned fuel for fires. This has already been seen across the State in recent years, with the area burned by wildfires increasing in parallel with rising air temperatures. These factors, combined with the increasing frequency and severity of intense wind conditions, will cause fires to spread rapidly and irregularly, making it difficult to predict fires' paths and effectively deploy fire suppression forces.

Relative humidity is also an important fire-related weather factor; as humidity levels drop, the dry air causes vegetation moisture levels to decrease, which consequently increases the likelihood that plant material will ignite and burn. With an increase in hotter and drier landscapes, humidity levels may continue to drop and result in higher fuel loads, increasing the risk of wildfire.

### *Severe Weather Factors*

Severe winter storms can also impact the City and simultaneously increase the danger of wildfire by leaving dead or dying vegetation. This dead vegetation can serve as fuel for wildfires and can require clean up to avoid increased wildfire exposure. For example, in December 2021, a storm downed hundreds of trees and knocked out power to homes across Nevada County, leaving an overabundance of vegetation in its wake. This may be viewed as further need to address severe climate change impacts from wildfires.

### *Fire Season*

Generally, the fire season extends from early spring through late fall of each year during the hotter, dryer months. This has been changing in recent years making the fire season almost a year around occurrence. Fire conditions arise from a combination of high temperatures, low-moisture content in the air and plant matter, an accumulation of vegetation, and high winds. The extreme fire behavior observed over the last 20 years is a product of these three elements and the exponential influences of climate change. In addition to this formula, the fire management constraints, which include increasing population growth within the WUI (i.e., increased development adjacent to forests and other highly flammable vegetated landscapes), that creates the potential for increased human ignitions, can lead to large scale, extremely impactful wildfires. As previously noted in the Climate Change section of this report regarding the Wildfire Behavior Triangle, a number of factors contribute to the high wildfire hazard risks in the City and County (see Figure 7).

## Water Supply and Fire Flow Capacity

Water supply and distribution is essential for fire protection and public safety. An assured supply of water and distribution/delivery capacity needs to be considered, particularly in all areas of the City due to its location in a Very High Fire Severity Zone.

### *Nevada City Water Service Area*

The City is the water service provider for approximately 70 percent of the City's jurisdictional boundaries consisting of the original 1856 640-acre City boundary and other portions within current City limits that have lower elevations (see Figure 11). The City's water treatment facility is located southeast of the City at 11297 Banner Mountain Trail. This facility treats water from Little Dear Creek and delivers water through a gravity flow system. The City currently supplies about 900 acre-feet (AF) of water per year (AFY) for all classes of customers, with 600 AF per year coming from Little Deer Creek and the needed balance coming from the NID. The Nevada City portion includes 1,350 connections with a water treatment plant capacity of 2.0 million gallons/day (mgd). Since current maximum daily demand is approximately 1.5 mgd there is currently sufficient water supply for the City's service area.

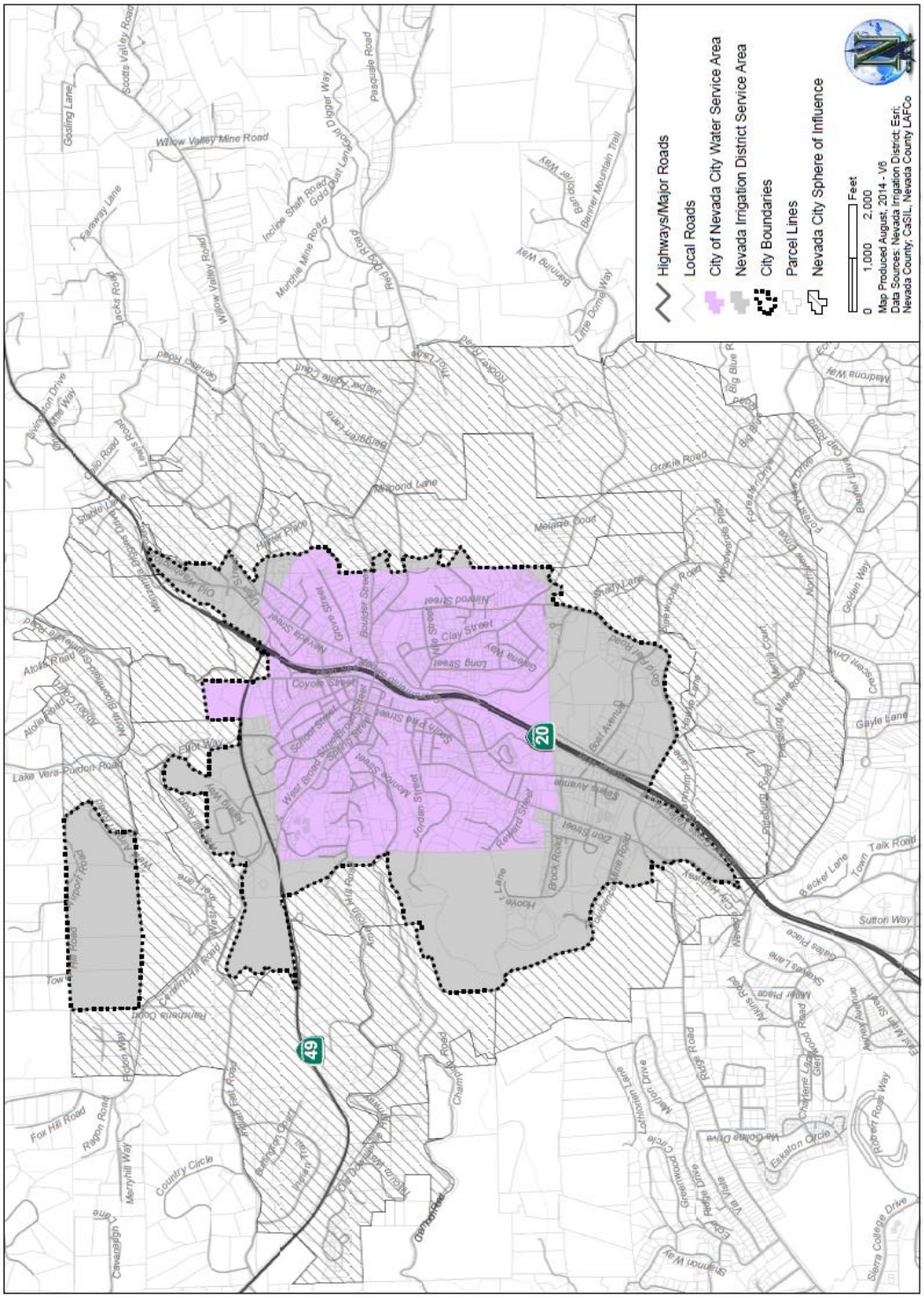
*Nevada Irrigation Water Service and Area*

The remainder of the incorporated City areas, comprising approximately 30 percent of the City's boundaries are served by the NID for treated water. Also, all areas outside the City's jurisdictional boundaries within the City's Planning Area either are being serviced by NID or would be if public water service can be practically extended. Due to higher elevations in many areas outside the City's water service area, NID can serve since they provide and maintain pressure zones with equipment that the City does not have. The City also purchases raw water from NID during late summer months to provide additional water supplies during peak demand to ensure the City water supply. This has been the arrangement since before NID was a District. The City historically purchased raw water from various canal districts that preceded NID.



RPC 2(b)(i)(2)

***Figure 11 Water Service Boundaries***



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### *Source of Water Supply*

NID's primary source of supply is local surface water derived principally from the Yuba River, Bear River, and Deer Creek watersheds of which approximately 450,000 AFY is stored and/or delivered. NID supplies water to the City through an ongoing agreement. NID provides treated water for its service territory in and around Nevada City from the Elizabeth George water treatment plant southeast of Nevada City on Banner Mountain Road. The Elizabeth George water treatment plant has a capacity of 10 mgd and a usage commitment of 7.6 mgd. NID service boundaries, including the areas served in the City and City planning area, have a current capacity of 24 mgd. For the period 2014 through 2020, annual deliveries to the City averaged approximately 3 mgd to the City. Additional water supplies for future growth in the City are dependent on future allocations from NID and may be impacted by any conservation measures taken by the City.

The NID 2020 Urban Water Management Plan indicates that there is adequate water supply for its entire region based on future land use projections to 2050. This projection assumes Nevada City has a projected demand of 500 AFY, which should satisfy Nevada City's water supply needs through 2050. The General Plan Housing Element growth projections to 2027 indicate an aggressive growth rate of12 percent population increase (400 people) between 2019 and 2027. Much of this is due to some of the more recent housing developments that have been approved and are being constructed. The excess supply of water assumed in NID's plan exceeds this anticipated growth demand. It is noted that the NID 2020 Urban Management Plan includes accounting for future droughts, that may include required conservation measures, with priority given to urban users, such as the City.

### *Fire Flow*

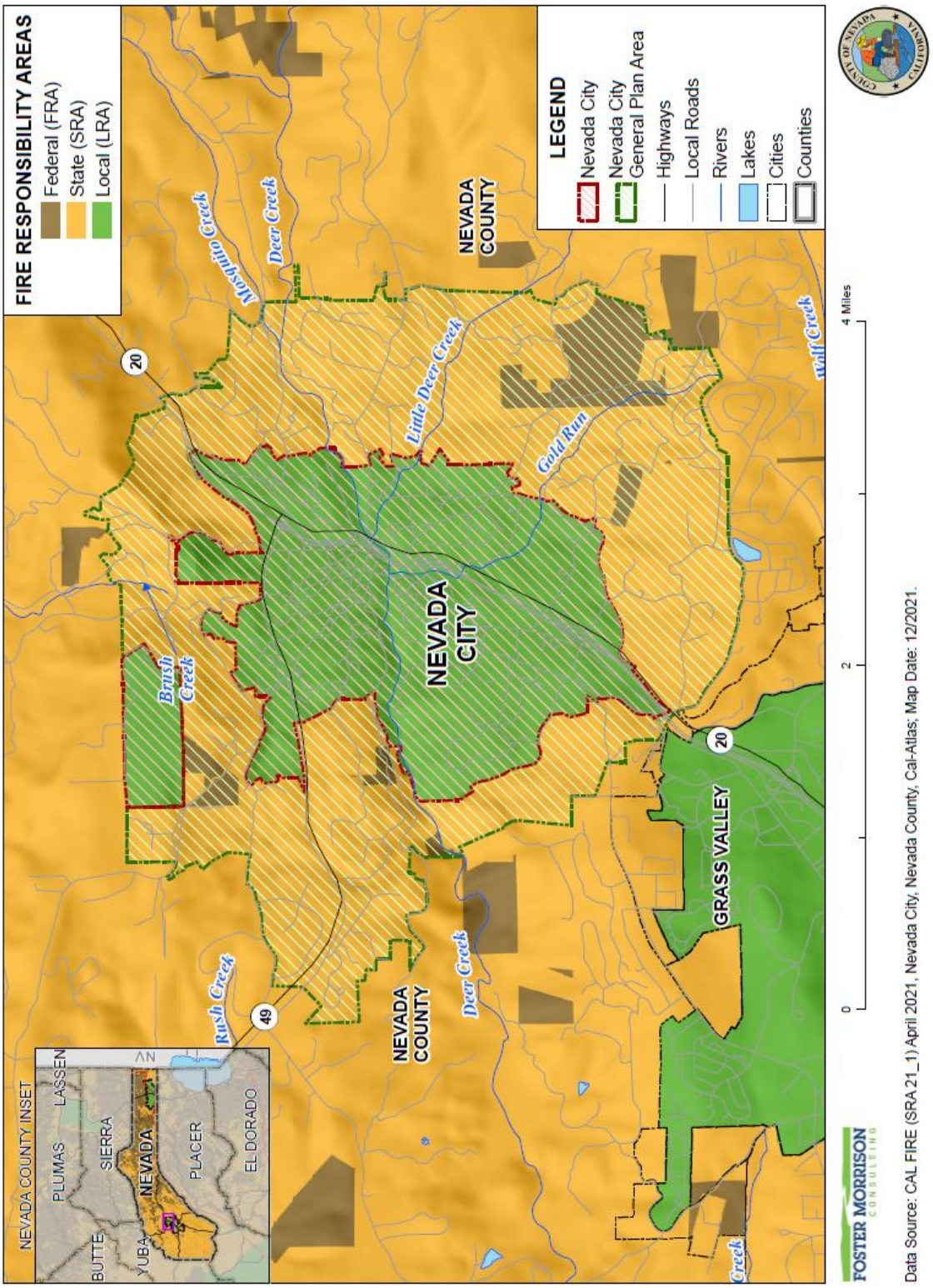
All areas within the City have adequate fire flow to all lines within the City. However, upper elevations of the City have some limited fire flow because of reduced pressures. The City and NID have formal agreements for two interties to augment the system to insure adequate fire flow throughout the City. These interties have been employed in emergency situations and have proven adequate for demands of up to 1,000,000 gallons in 12 hours.

The City has approximately 20 miles of water mains, of which 4.8 miles are over 140 years old. The Nevada County LHMP indicates that these aging lines can reduce capacity for fire flow due to corrosion and carbuncles. Main replacement is considered a high priority in the LHMP. This Element includes policies and programs to prioritize their replacement.

## Fire Responsibility Areas and Mutual Aid

From a broad perspective, Nevada County is served by numerous agencies, including CAL FIRE, United States Forest Service, and various local fire departments and districts (see Figure 12). The Nevada City Fire Department serves the entire City jurisdictional boundaries. Areas within the City's General Plan Area, outside City limits, are served by NCCFD and Grass Valley Fire Department.

*Figure 12 Fire Responsibility Areas (most current Map on the CAL FIRE website shall apply here).*






RPC 2(b)(i)(2)

In 2018 CAL FIRE, NCCFD, Nevada City Fire Department, Grass Valley Fire Department, entered into an automatic and mutual aid agreement. All participating agencies agreed to provide closest-response service, so that the appropriate apparatus with the shortest response time would respond to emergencies without having to being requested by the agency with jurisdiction over that area. This allows for the fastest possible response times, and an increase in aid for SRAs that surround the cities. By providing for faster response and additional resources to help control fires across jurisdictions and in SRAs, the agreement decreases risk across all jurisdictions and helps reduce risk that wildland fire spreads to the WUI and threatens structures within Nevada City and the General Plan Area as well as surrounding communities and territories. These agencies are working on updating this agreement, but the same mutual aid arrangement will be retained.

### Fire Protection Plans, Programs, and Resources

The following plans, regulations, and programs assist the City with fire hazard reductions.

### The Nevada County Local Hazard Mitigation Plan (LHMP)

The 2017 Nevada County LHMP (including Nevada City-Annex B) was adopted in 2017 by Nevada City to meet the requirements of the DMA (see Appendix B of this Element). The LHMP enables the City to be eligible for future pre- and post- disaster mitigation funding. The LHMP assesses the threat of natural and select man-made hazards that pose a risk to people and property and identifies a mitigation strategy that through implementation can reduce the potential for harm to people and property from future disaster and hazard events. The LHMP identifies a list of potential hazards, with each hazard evaluated for severity, vulnerability, and exposure, and determines the potential vulnerability and likely impacts to affected jurisdictions. The hazards included in the LHMP are: Agricultural Hazards (severe weather, insect pests), Avalanche, Climate Change, Dam Failure, Drought and Water Shortage, Earthquake, Flood, Hazardous Materials Transportation, Landslide/Mud Flow, Levee Failure, Severe Weather (extreme cold, extreme heat, extreme storms), Subsidence, Volcano, and Wildfire (smoke, tree mortality, and conflagration). The LHMP is anticipated to be updated in 2023 and approved in 2024. Since the CAPSE has been updated using, primarily, the 2017 LHMP, some changes to the LHMP may result in having to revisit the CAPSE for fine-tuning City programs.

### The 2011 Nevada County Operational Area Emergency Operations Plan

The County's Emergency Operations Plan (EOP) delineates responsibilities of First Responders and other response support organizations for natural disasters and manmade incidents in or affecting Nevada County, including the City as part of the operational area. It also includes an emergency operation plan for the City in Chapter 8. Community Emergency Preparedness Guides, which are specific to individual communities in Nevada County, provide the basic information for residents to be prepared for potential disaster. The City's EOP (in Chapter 8 of the County EOP) similarly provides guidance to various City personnel/departments as to emergency responses to disasters. Both plans work together to provide a coordinated effort



RPC 2(b)(i)(2)

between the City and the County to respond to disasters. Both County and City EOPs are becoming older and are in need of update.

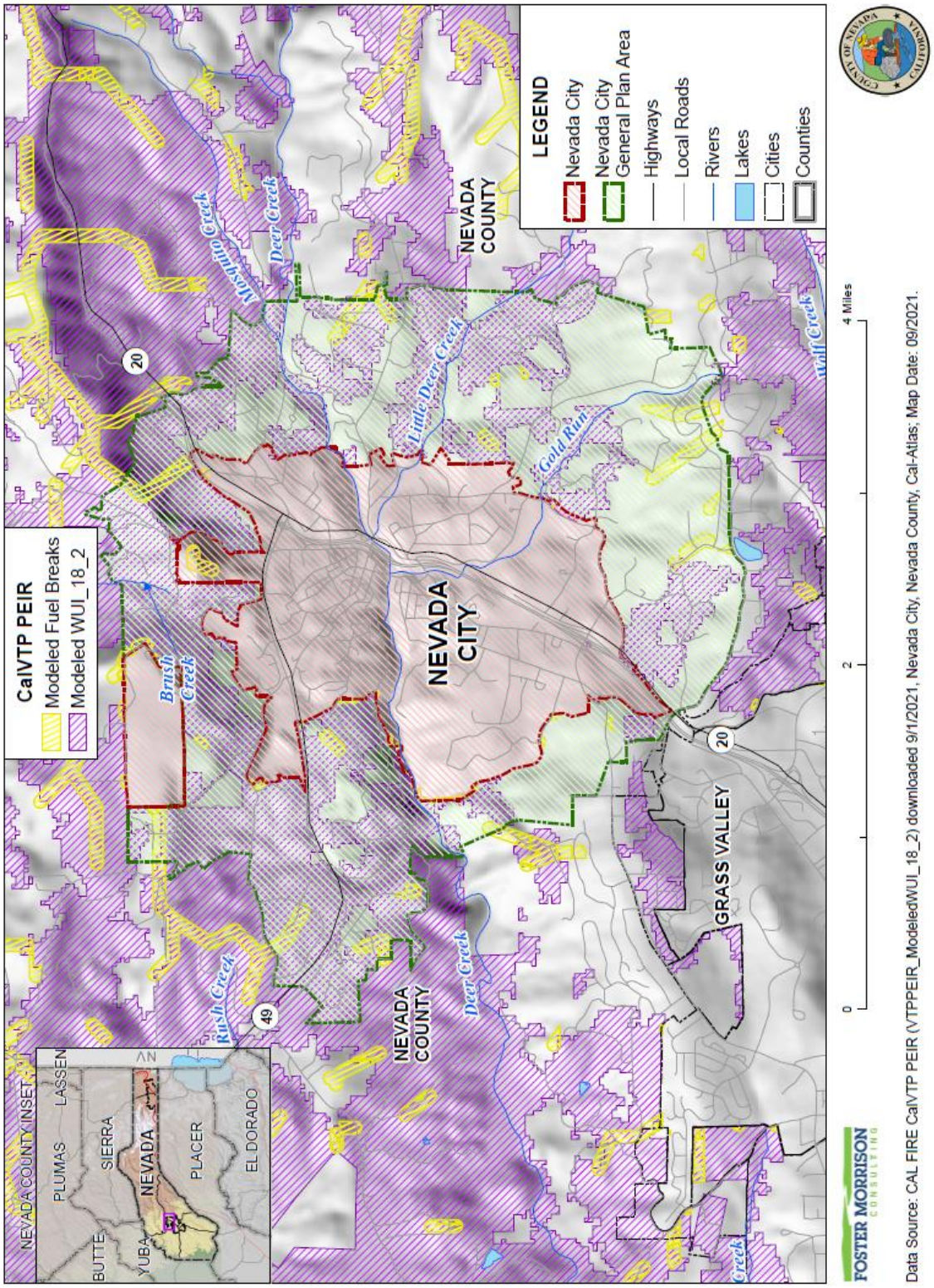
### Nevada City Disaster Plan

The 2011 Disaster Plan reflected the resource availability of the City. An update of this Disaster Plan is needed to address recent changes in the City's organization structure with emphasis on wildfire and other hazard emergency response, more reliance on other agencies/resources, such as the Nevada County OES, to support City resources, and to consolidate some of the City personnel responsibilities in the Plan.

### The California Vegetation Treatment Program (CalVTP)

The California Vegetation Treatment Program, developed by the Board of Forestry and Fire Protection, is a critical component of the State's multi-faceted strategy to address California's wildfire crisis. The CalVTP includes the use of prescribed burning, mechanical treatments, manual treatments, herbicides, and prescribed herbivory as tools to reduce hazardous vegetation around communities in the WUI, to construct fuel breaks, and to restore healthy ecological fire regimes. As shown on Figure 13, there are a number of fuel breaks modeled in and around Nevada City that will be critical to preventing wildfire spread. Since this program included required California Environmental Quality Act review through an Environmental Impact Report, fuel breaks as modeled in this program can be conducted without further environmental review as long as specific mitigation measures are followed.

***Figure 13 CalVTP Fuel breaks***






RPC 2(b)(i)(2)

### Fire Protection Regulations

Most of the City's General Plan Area, and the entire City, is located within a Very High Fire Hazard Severity Zone. As a result, more restrictive fire protection regulations have been established. Nevada City conforms with the most recent California Building Standards through Chapter 8.10 of the Municipal Code concerning Vegetation Management, Defensible Space, Burning and Fireworks regulations. These regulations apply to all buildings or structures in a mountainous area; forest-covered, brush-covered, or grass-covered lands; or any land that is covered with flammable material in all areas of the City.

Chapter 15.04 specifically adopted the 2022 edition of the California Building Standards (CBS). These regulations are also intended to encourage a greater degree of uniformity between the local fire department and other fire protection districts and departments in the imposition of fire safety regulations on new construction and existing buildings, while respecting the autonomy of the local fire protection districts and departments. Chapter 15.08 includes the following amendments to the 2022 CBS:

- Section 15.16.010, Fire Chief designating zones within Very High Fire Hazard Severity Zones.
- Section 15.08.040, prohibits open burning.
- Section 15.08.045, requires auxiliary power generators to have an emergency disconnect switch.

The City also adopted a comprehensive amendment to Chapter 8.10 of the Code addressing vegetation management, defensible space, and prohibition to outdoor burning and fireworks. This new set of regulations also retains a separate requirement to install sprinkler systems for all new and remodeled residential and commercial development. The new Chapters 8.10 and 15 of the Code require all new projects and construction to comply with the California Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations) for SRAs and/or VHFHSZs. regarding fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards. Under these new regulations new structures built in the City must also comply with fire safety building regulations. Other related requirements in these new regulations will include provisions that require the use of home hardening building materials and establish design standards to improve the ability of a building to survive a wildfire.

#### *Land and Resource Management Plan and the Sierra Nevada Forest Plan*

The Land and Resource Management Plan and the Sierra Nevada Forest Plan Amendment guide fire planning for the Tahoe National Forest. The Sierra Nevada Forest Plan Amendment provides guidance for minimizing wildfires on Federal and tribal lands. California addresses wildfire issues through the California Fire Plan and its local version, the Nevada-Yuba-Placer Unit Fire Plan. These documents focus on reducing fire hazards by addressing pre-fire fuels management for

strategic fire suppression. Roads, water storage, buildings, evacuation planning, and other factors associated with private property development are not included in these documents.

### *2016 Nevada County Community Wildfire Protection Plan*

The Nevada County Fire Safe Council has developed a Community Wildfire Protection Plan (CWPP) based on the requirements of the Healthy Forest Restoration Act of 2003, which identifies measures that protect and restore forestland. The CWPP coordinates with the LHMP on wildfire issues. As of the writing of this Element, the Nevada County OES is preparing an updated CWPP which should be completed in early 2024. As defined by the Healthy Forest Restoration Act (HFRA), this CWPP is developed collaboratively with the Fire Safe Council, the County's Firewise Communities and other stakeholders to Identify and prioritize fuel reduction projects and include measures to reduce the ignitability of structures.

### *Circulation and Maintenance*

Roads are critical infrastructure support for suppressing wildfires. They serve as ingress and egress routes to and from wildfires, staging areas, safety zones, coordinating locations, anchor points for fire suppression activities, and evacuation routes. Most initial incident command posts are established at roadside locations to coordinate with incoming fire equipment.

Vegetative management along roadsides is a critical component to reducing fire risk. The width of roads and clearance around roads is a primary factor affecting firefighting operations. Private roads, which network between residences and public roads, provide another avenue for firefighting operations and evacuation. The Nevada County road system consists of 2,360 miles of public and private roads. Nevada City has approximately 30 miles of these roads. The quality and conditions of these roads are variable. Many private roads do not meet the minimum fire safety standards because they pre-date the current code. The County and the City provide for vegetative management of all the public roads inside and adjoining the City.

### *Air Attacks Fire Fighting*

Nevada County is home to an additional distinct emergency resource located at the Nevada County Airport in Grass Valley—the Interagency Wildfire Air Attack Base. This is one of only thirteen (13) Wildfire Air Attack Bases in California, and it is one of three Interagency Wildfire Air Attack Bases in the State (the other two are in Redding and Porterville). The air attack base is operated and staffed by CAL FIRE (Nevada-Yuba-Placer Unit) Air Attack, and the U.S. Forest Service (Tahoe National Forest) Air Attack. The strategic location of this air base assists CAL FIRE in achieving its goal of twenty-minute response times anywhere in California, and is located close to Nevada City, which typically received a faster response time.

The White Cloud Helitack base and the Washington Ridge Conservation Camp are two more wildfire-fighting resources established in Nevada County. The Helitack base has a dedicated crew and the helicopter has water drop capabilities. Washington Ridge Conservation Camp maintains

fire-fighting hand crews for year-round resources providing fuel reduction assistance within Nevada County communities when they are not fighting wildfires.

### *Fire Safe Council*

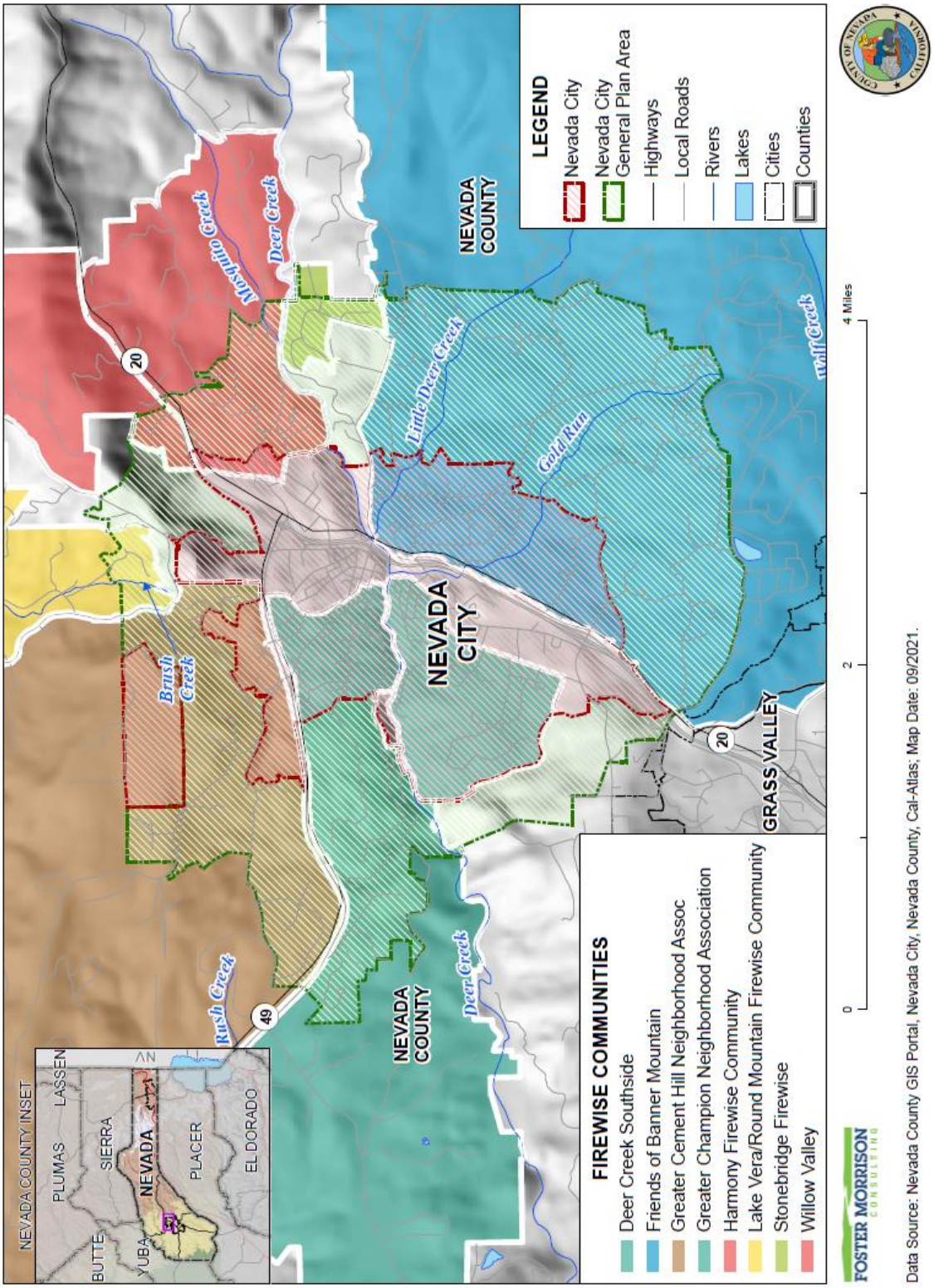
The Fire Safe Council of Nevada County is a public benefit, non-profit 501(c)(3) corporation formed in 1998 by citizens concerned about the very high potential for catastrophic wildfires. The mission of the Fire Safe Council is to work to reduce the risk of life and property loss from wildfire. The organization actively seeks public and private funding to provide a wide range of landowner assistance programs, services, and community fuels reduction projects in order to reduce the fire danger for all Nevada County residents. The Fire Safe Council utilizes national and local public education programs to increase public awareness of the high potential for catastrophic wildfire in our communities and adjacent forestland. The Fire Safe Council specifically provides Firewise education and programs to enhance emergency preparedness for catastrophic wildfire; to promote, develop and retain formal Firewise Communities; to network with other Fire Safe Councils, Firewise Communities, government agencies and foundations for the benefit of citizens of Nevada County.

### *Firewise Communities*

Firewise USA is a program administered by the NFPA and provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. The Firewise USA program is a part of California's efforts to ensure communities are prepared against wildfire, and CAL FIRE Office of the State Fire Marshal's new Community Wildfire Preparedness & Mitigation Division works to assist local communities in receiving this designation. These groups have shown their commitment to making their communities safe. A recognized Firewise Community requires communities to coordinate with the Nevada County Fire Safe Council to obtain a risk assessment every 5 years, maintain a three-year community action plan, invest annually in Firewise projects, and have their application documents reviewed and approved by CAL FIRE. Each community maintains a website and coordinates periodic meetings and activities to address fire safety. Working hand and hand with CAL FIRE and local fire districts can significantly reduce the risk of wildfires and spreading. As of January 1, 2022, there were over 65 recognized Firewise Communities in Nevada County, including 8 located within the City's Planning Area (see Figure 14):

- Deer Creek Southside
- Friends of Banner Mountain
- Greater Cement Hill Neighborhood Association
- Greater Champion Hill Neighborhood Association
- Harmony Firewise Community
- Lake Vera/Round Mountain Firewise Community
- Stonebridge and Willow Valley

***Figure 14 Firewise Communities in the Nevada City Area***






RPC 2(b)(i)(2)

*Ready Nevada County*

Ready Nevada County is an interactive program used by residents and businesses to provide readiness in the event of an emergency, such as a wildfire. It is accessed on the internet and provides mapping of neighborhoods for evacuation preparedness, includes Code-Red (as discussed in the Evacuation section of this document) and provides a coordination tool to agencies, such as the Nevada County OES to provide public awareness and mobilize the community to prevent and prepare for wildfire.

*City Fire Safety Advisory Committee*

The City established an advisory committee consisting of two Council Members, the Fire Division Chief as a staff liaison, and five City Council appointment community members. The committee scope is, "To promote public fire safety and community involvement to protect Nevada City residents, business owners, visitors, and structures from wildfire." The Committee meets regularly once a month and is administered and funded by the City. The Committee has helped recommend fire safety programs; created an essential public outreach tool to provide direction; updates and monitors public information programs, such as the City's wildfire website page; and offers recommendations to the City Council on creative and effective programs to reduce fire hazards in the community.

*City Sliver's Program*

The City developed a Slivers program based upon recommendations of the City Fire Safety Advisory Committee. The program identifies unparcelized pieces of City owned land that are not clearly be identifiable by parcel numbers and to have these properties improved for reduced fire hazards. The program allows community members to adopt these slivers with the adopters maintaining the slivers in fire safe condition.

*City Residential Chipping Program*

The City has developed a program to provide residents with a no-cost, curb side, chipping service as an incentive to assist in their fire hazard reduction/defensible space efforts and to encourage the reduction of combustible material to small biodegradable chip piles. This program will also allows for firefighters to work more efficiently by reducing wildfire risk.

*Tree/Brush Removal Program*

Nevada City has a program that addresses maintaining approximately 400 acres of open space it owns and maintains consisting of natural forested areas. These areas have a number of trees and vegetation that poses an impact to public health and safety, such as wildfire that can spread to habitable structures. The City's Engineering and Public Works Department maintains these areas. This section of the Plan includes policies/programs to address this.

*Prescriptive Grazing Program*

In 2019, the City helped establish a prescriptive grazing program using a herd of goats to reduce underbrush. The City used this program to reduce underbrush on about 450 acres of forest land the City owns. This program was partially funded by donations from the public.

*Website and Community Outreach Programs*

The City maintains a website to provide public information on public safety programs. Multiple programs are discussed and links to related Firewise Communities and other programs (such as City Slivers and Chipping programs offered by the City, and Ready Nevada County) are presented.

*Public Safety Power Shutoffs*

In an effort to prevent fires, the electrical services provider for the City and western Nevada County—Pacific Gas and Electric Company (PG&E)—may initiate public safety power shutoff (PSPS) events. Throughout the PSPS events, emergency services in Nevada County remain functional with back-up power supplies. PSPS events pose health and safety risks to all impacted businesses and residents of the City with an elevated risk to more vulnerable communities with less resources available during and after power outages. The City has installed generator power back-up at City Hall, the water and wastewater treatment facilities, and at the Lost Hill water pressure system to provide continuity of services due to PSPS or other power outages.

## D. Flood Hazards (FH)

Nevada City is prone to flooding of various types:

- Riverine flooding, which occurs when channels (i.e., the relatively deep, narrow sections of creeks and rivers) cannot contain the flow volume moving through them, causing water to spill out into the overbank areas (i.e., the relatively wide, flat regions on one or both sides of the channel, also called “floodplains”); and
- Localized flooding, which occurs when intense rainfall overwhelms the capacity of local drainage infrastructure; causing the ponding of water; and
- Dam inundation flooding, in which impounded water is released because of dam breaching.

### *Riverine and Localized Flooding*

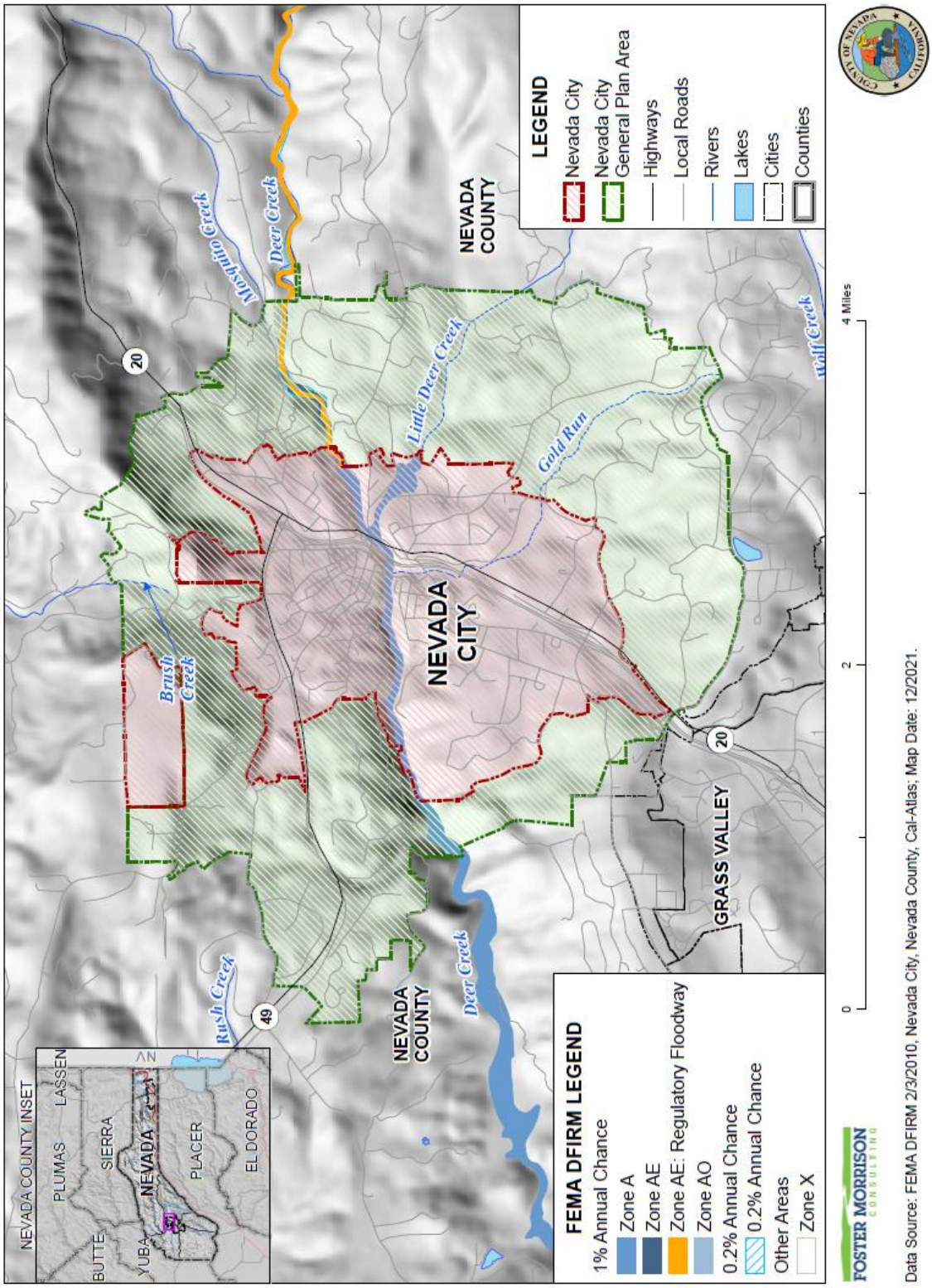
1% and 0.2% chance floodplains have been mapped for Nevada City (refer to Figure 15). The City lies outside of the 500-year floodplain, though the land surrounding Deer Creek Ravine, the area west of Scott’s Flat Reservoir through Nevada City, falls within a 1% annual chance floodplain. A small portion of the City is located inside of the 1% annual chance flood zone as defined by the FEMA. Based on a residential parcel analysis from the 2017 Nevada County LHMP, there is a total population of 41 residents of the City at risk to flooding. These properties are located next to Deer Creek.

Nevada City has reoccurring flooding at natural water courses (two creeks and five ravines) that flow through historic areas of the City. In particular, Little Deer Creek, Deer Creek, and Oregon Ravine have had flooding from storms at 10-yr or greater frequency. In addition to impacts on businesses and private properties, heavy storm flows have impacted City streets including the 'Plaza' intersection of Broad/Boulder/Sacramento/Nevada streets; and the intersection of Commercial/Main/Union streets. Per the Nevada County LHMP and Nevada City Disaster Plan, there is one commercial building at the southwest corner of Broad Street that is below grade level. This is where Deer and Little Deer creeks converge and where flooding is most pronounced near the foot of the City's commercial district. This conversion point has experienced approximately 3 feet of flood water intrusion and flooding to some commercial buildings during past severe flood events. In both 1995 and 2004, an underground culvert connecting Deer Creek and Little Deer Creek in a parking lot at the intersection of Sacramento Street and Broad Street failed.



RPC 2(b)(i)(2)

***Figure 15 FEMA Flood Zones***






RPC 2(b)(i)(2)

Flooding and other issues caused by severe weather events, primarily heavy rains and thunderstorms, can often pose a risk to the community. Primary concerns include impacts to infrastructure that provides a means of ingress and egress throughout the community. There have been several locations in the City that have been affected by localized flooding:

- Little Deer Creek and Deer Creek – flooding at the 'Plaza', located at the intersection of Broad/Boulder/Sacramento/Nevada streets.
- Flooding in Oregon Ravine through downtown and along Commercial Street. This includes intersection of Commercial/ Main/Union streets.
- Damage to Pioneer Park caused by flooding from overflow from Little Deer Creek, with resulting damage to the tennis courts, baseball diamond and horseshoe pits.
- Failure of an underground culvert that connects Deer Creek and Little Deer Creek in a parking lot at the intersection of Sacramento Street and Broad Street resulting in failure of the parking lot surface.

Regional seasonal flooding in Nevada County is generally associated with annual drainage and runoff from rainstorms. Residential flooding has occurred in the past primarily as a result of clogged drainage ditches and seasonal dry creeks. When flooding does occur, it is usually confined to a portion of the property and recedes usually within a few minutes to a few hours.

The City has adopted floodplain Management Regulations, Chapter 13.20 of the Municipal Code in 1997. It is designed to promote the public health, safety, and general welfare of its citizenry. This Plan includes requirements to reduce flood losses including:

- Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- Controlling filling, grading, dredging, and other development which may increase flood damage; and



RPC 2(b)(i)(2)

- Regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

Future development in the City within floodplains is required to comply with these regulations.

### *Dam Failure Flooding*

Dams capable of impacting Nevada City in event of failure are the Scotts Flat Lake Dam (seen to the right) and the Lower Scotts Flat Lake Dam (known as Deer Creek Diversion Dam), both located north of the City and operated by the NID. Scotts Flat Lake Dam, built in 1948, retains an approximate capacity of about 48,000 acre-feet of capacity. The Deer Creek Diversion Dam, down-stream from Scotts Flat Lake and built in 1928, retains an approximate capacity of 1,400 acre-feet. Figure 16 provides an inventory of dams located in proximity to Nevada City and includes the inundation areas of Scotts Flat and the Deer Creek Diversion Dam. The dam inundation areas are shown separately for each dam on Figure 17 and Figure 18. The larger Scotts Flat Lake poses a much greater hazard than the lower lake diversion dam due to the amount of water being stored.

According to data from the California Division of Safety of Dams (DSOD), the Scotts Flat Lake Dam is rated as an Extremely High Hazard Dam. The DSOD defines Extremely High as: expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more. Deer Creek Diversion Dam is rated as a High Hazard Dam. It is felt that dam failure inundation would most likely be the result of an earthquake. However, some dam failures are also the secondary result of other natural disasters, such as earthquakes, landslides, extreme storms, or heavy snowmelt. Other causes include equipment malfunction, structural damage, and sabotage.

As noted in the Earthquake section (4.2 B) of this report, earthquakes are rare in and around Nevada City. Scotts Flat Lake and the Deer Creek Diversion dams are not located within a historical seismic zone. The Nevada County LHMP indicates that although failures could be devastating to the City, based on past earthquake activity and events, it is unlikely that these dams will fail in the future due to an earthquake induced failure. NID, the owner of 15 dams, including the Scotts Flat Lake and the Deer Creek Diversion dams, maintains a comprehensive Dam Safety Program. A seismic safety evaluation was conducted on all of NID's dams in 2017 that found that both the Scott's Flat Lake and Deer Creek Diversion dams to be safe relative to earthquake events. NID proactively inspects upgrades and improves its dams and water supply structures as needed and in consultation with regulatory agencies. Engineers monitor dams using instruments, monthly visual inspections, and periodic dam safety reviews to prevent loss of life, personal injury, and property damage from the failure of dams. The safety of each dam is re-evaluated with advances in geotechnical, structural, and earthquake engineering and if there is evidence of seepage or ongoing ground movement.

The Federal Energy Regulatory Commission (FERC), as required by federal law, has reviewed and approved comprehensive emergency action plans (EAPs) for each of these dams. The EAP minimizes the threat to public safety and the response time to an impending or actual sudden release of water from project dams. The EAP is also designed to provide emergency notification when floodwater releases may present the potential for major flooding.

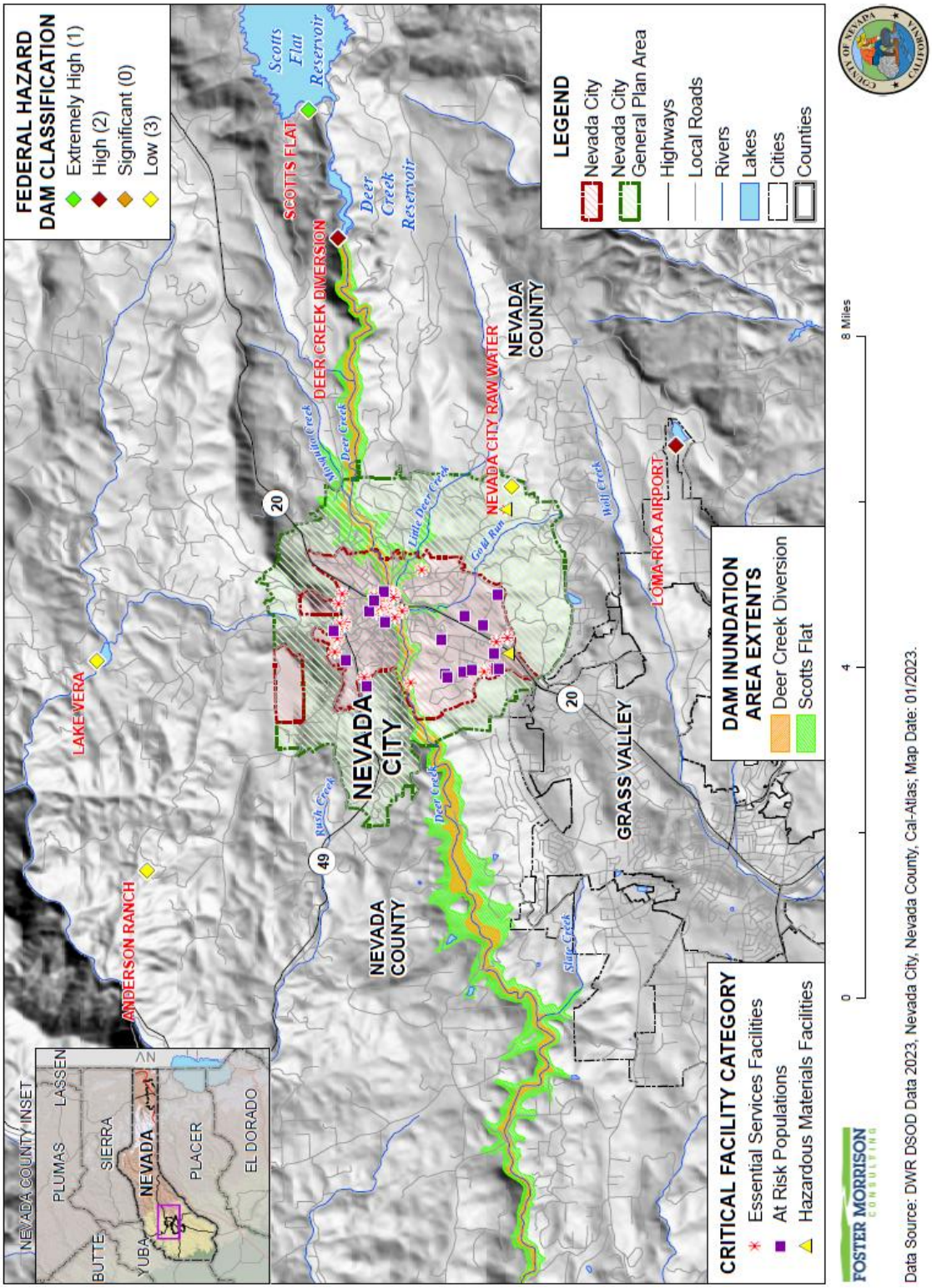
As mandated by the National Dam Inspection Act, the United States Army Corps of Engineers has the authority and responsibility for conducting inspections of all dams. The purpose of these inspections is to check the structural integrity of the dam and associated appurtenant structures, ensuring protection of human life and property. Periodic inspections disclose conditions that might disrupt operation or dam safety.

The Scotts Flat Lake and Deer Creek Diversion dams are constructed with safety features known as "spillways" that allow water to overtop the dam if the reservoir fills too quickly. Spillway overflow events, often referred to as "design failures," result in increased discharges downstream and increased flooding potential. In a dam failure scenario, the greatest threat to life and property typically occurs in those areas immediately below the dam since flood depths and discharges generally decrease as the flood wave moves downstream. The primary danger associated with dam failure is the high-velocity flooding downstream of the dam and limited warning times for evacuation. According to the 2021 NID Dam Safety Activities Report, a safety upgrade is needed to the Scotts Flatt Dam spillway chute and lower plunge pool. NID issued a contract award in January 2023, for design of plans to replace the entire spillway chute and construct vertical side walls, and a new flip bucket structure. This project scored as the highest hydro project on NID's Capital Improvement Program. This Element includes a policy to encourage NID to complete this project as soon as possible.

### *Post-Wildfire Runoff*

Post-wildfire runoff represents another risk for flooding because burned areas in the Deer Creek watershed will contribute more runoff and higher sediment loads than vegetated areas. All of the Deer Creek Watershed in the City's General Plan Area is considered by CAL FIRE to be in Very High Fire Hazard Severity Zones. A policy has been included in this CAPSE to collaborate with other stakeholders, such as Nevada County, to identify key impact areas to evaluate the implications from post-wildfire debris flow scenarios and establish a set of pre-disaster mitigation measures.

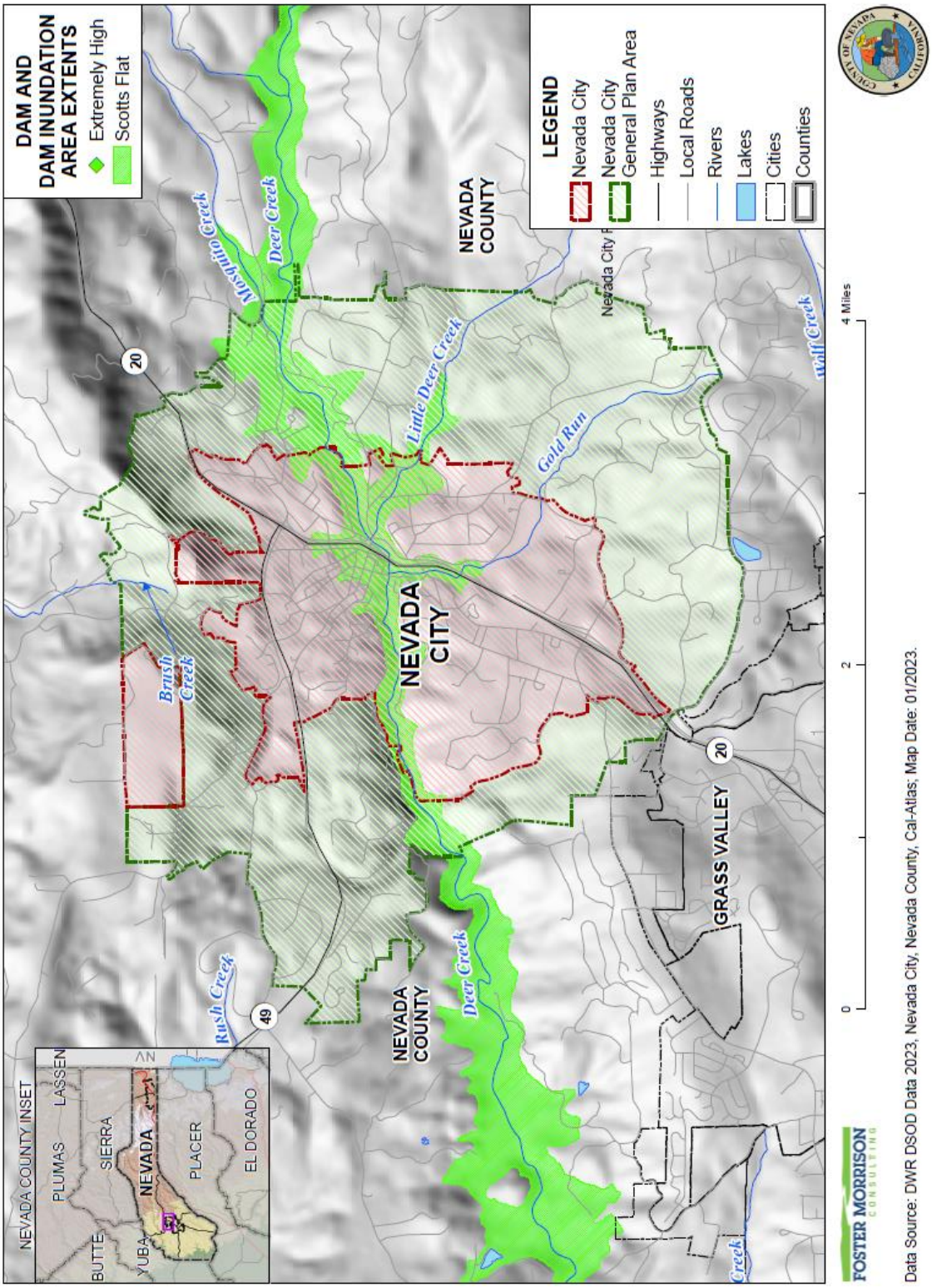
*Figure 16 Dam Inventory Map, with Scotts Flat and Deer Creek Diversion Inundation Areas*






RPC 2(b)(i)(2)

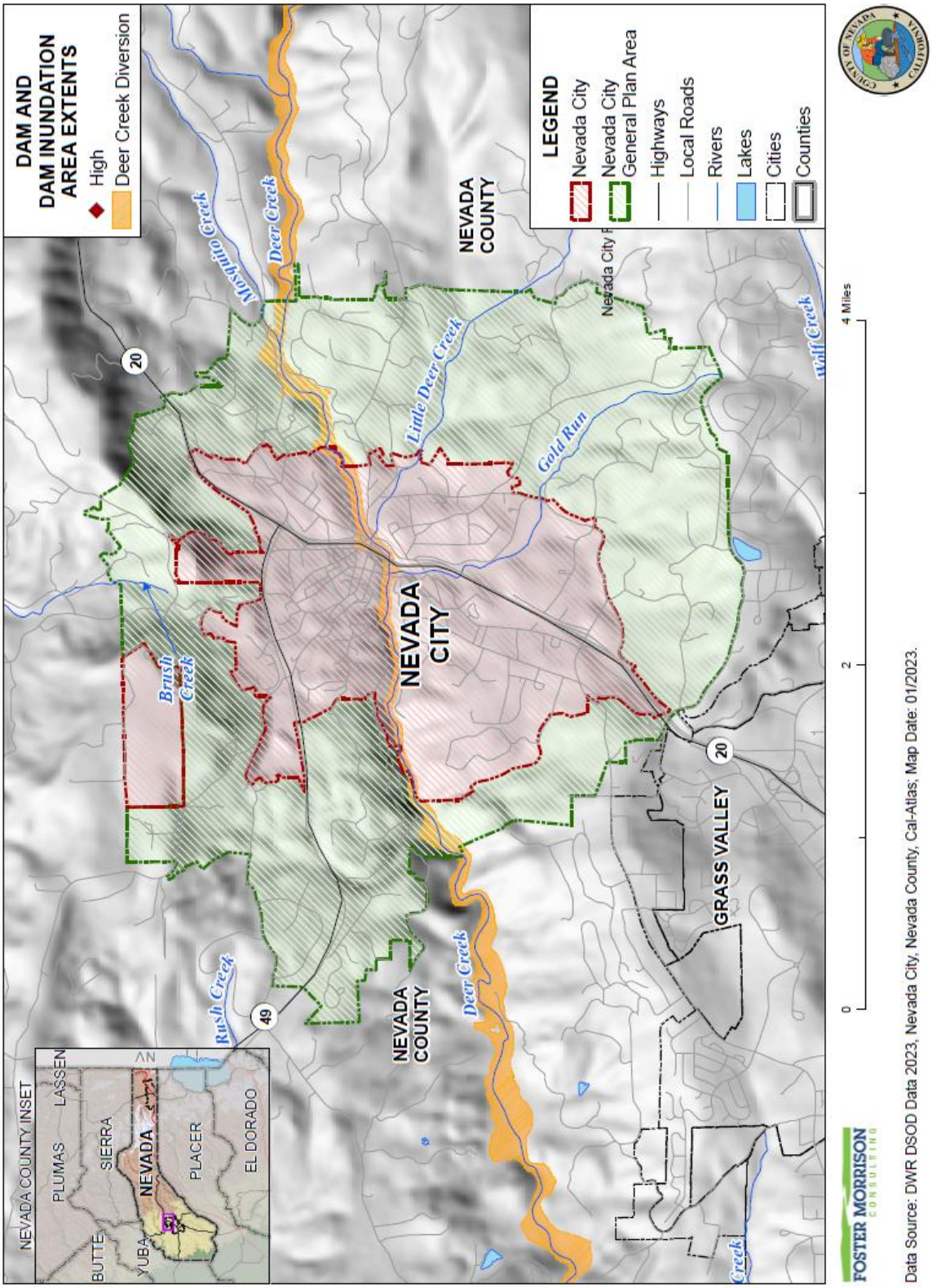
*Figure 17 Scotts Flat Lake Dam Failure Inundation Area*






RPC 2(b)(i)(2)

*Figure 18 Deer Creek Diversion Dam Failure Inundation Area*






RPC 2(b)(i)(2)

### *Climate Change and Floods*

The potential for increased flooding incidents can be caused by climate change. For example, Additional flooding, or intensity of flooding in the City, is predicted from climate change. More detailed information on this is found in the Climate Change and Resiliency and Adaptive Capacity Section A.

## E. Geologic Hazards/Seismic Activity (GH)

Geologic conditions encompass the form of the ground surface, the composition and character of soils, rocks, and water at the ground surface and below, and the long-term movement of the Earth's crust and mantle. These conditions determine the stability of the ground at a site, and how that site will respond to changes caused by people and by the natural forces of earthquakes and weather. Geologic hazards include avalanches, landslides and mudflows, earthquakes, and ground subsidence.

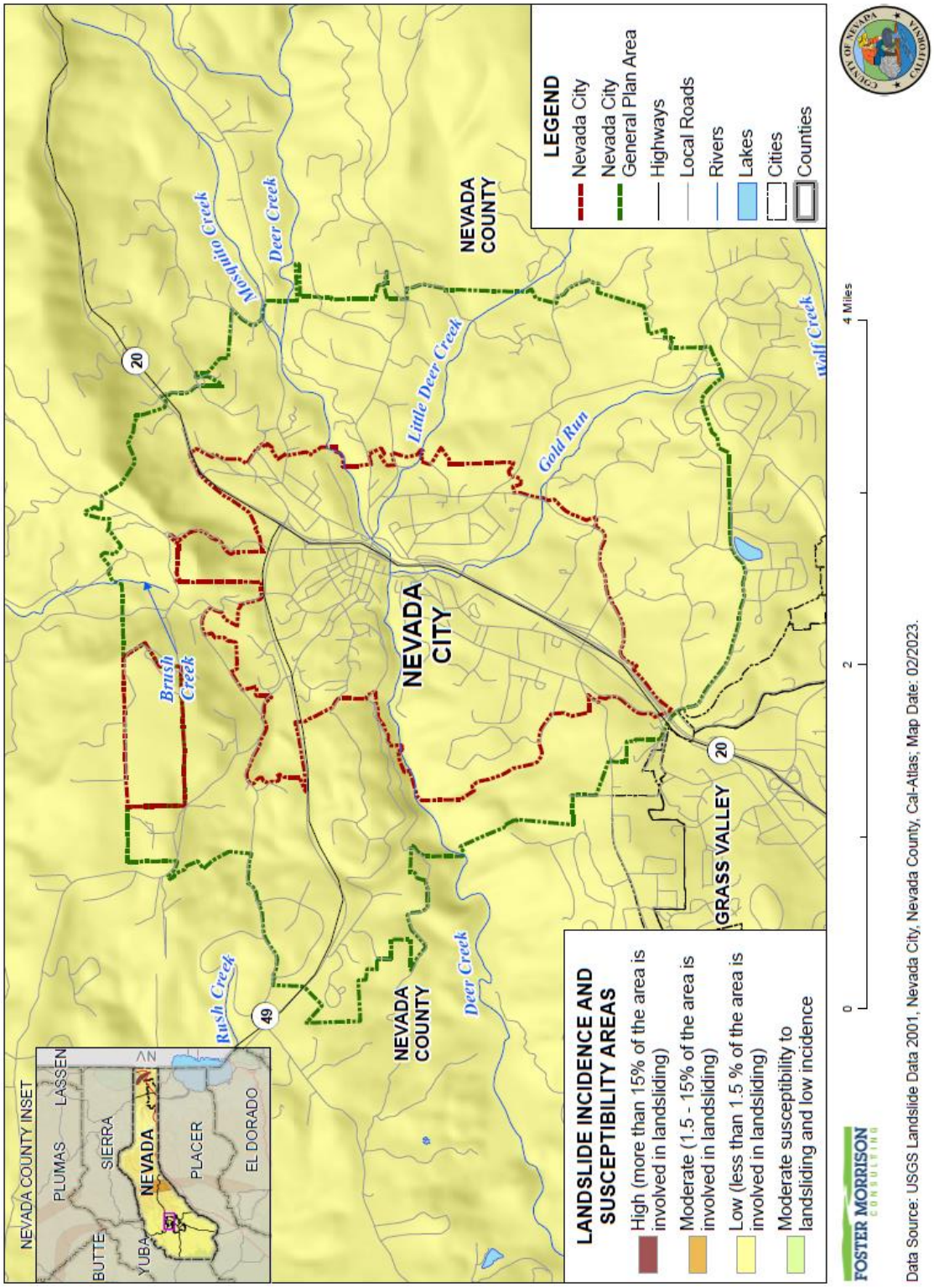
### *Avalanches*

Avalanches consist of a mass of snow, ice, and rocks falling rapidly down a mountainside. Avalanches typically occur in mountainous territory at elevations above 7,000 feet or in areas with steep slopes. Since the City is located below 7,000 feet in elevation (around 2,500) and not surrounded by steep slopes, Nevada City is not subject to any avalanche hazards.

### *Landslides and Mudflows*

Landslides consist of the movement of a mass of rock, debris, or earth down a slope. Like landslides, mudflows consist of a form of mass wasting involving fast-moving flow of debris that has become liquified by the addition of water. There have been no disaster declarations associated with landslides or mudflows in Nevada City. However, there are steep slopes in Nevada City that need to be considered for the potential of future landslide and mudflow occurrences. The United States Geological Survey (USGS) provides mapping of landslide susceptibility and incident areas. Based on this mapping, most of Nevada City is located in a Low landslide susceptibility and incident area. A number of policies and programs in this Element should further reduce potential effects from landslides and mudflows (see Figure 19).

***Figure 19 Landslide Incidence and Susceptibility Areas***






RPC 2(b)(i)(2)

### *Earthquakes*

An earthquake is a sudden and violent shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action. The frequency and strength of earthquakes depend on the number, type, and location of faults that pass through an area. The City is located in a geologically complex area. Some fault locations and characteristics have been identified, however, recent earthquakes in California have shown that not all active faults are revealed by surface features. A USGS fault map is included as Figure 20 and illustrates there are no known faults in Nevada City, but there are several known to the south, east and west of the City. Seismic conditions in Nevada City have the potential to result in significant harm to people and property. Safety precautions should be based on known factors, as well as an awareness of the limitations to current knowledge. This Plan must consider two of the direct effects of an earthquake: rupture of the ground surface along a fault, and ground shaking that result from fault movement. Other secondary hazards associated with earthquakes include landslides, collapse of pipes and structures, fires, and flooding from dam failure. Earthquakes can have the following issues related to them:

#### Surface Rupture

Surface rupture refers to the top of the ground moving unevenly along a fault: one side moves horizontally, vertically, or both with respect to the other side. It typically occurs within an area of linear traces along previous ruptures, which mark a fault zone, and often in concert with movement on adjacent or intersecting faults. Rupture of the ground surface along a fault trace typically occurs during earthquakes of about magnitude 5 or greater. Surface rupture endangers life and property when structures or lifeline facilities are located on, or cross over, a fault. As shown on Figure 20, with no known faults underlying Nevada City, the potential for surface rupture is unlikely.

#### Ground Shaking

Ground shaking refers to the vibration that occurs in response to displacement along a fault. Typically, ground shaking has a side-to-side component as well as a vertical component, with the actual movement depending on the type of fault, a site's distance from the fault, and the rock and soil conditions at the site. Shaking endangers life and property by damaging or destroying structures and lifeline facilities.

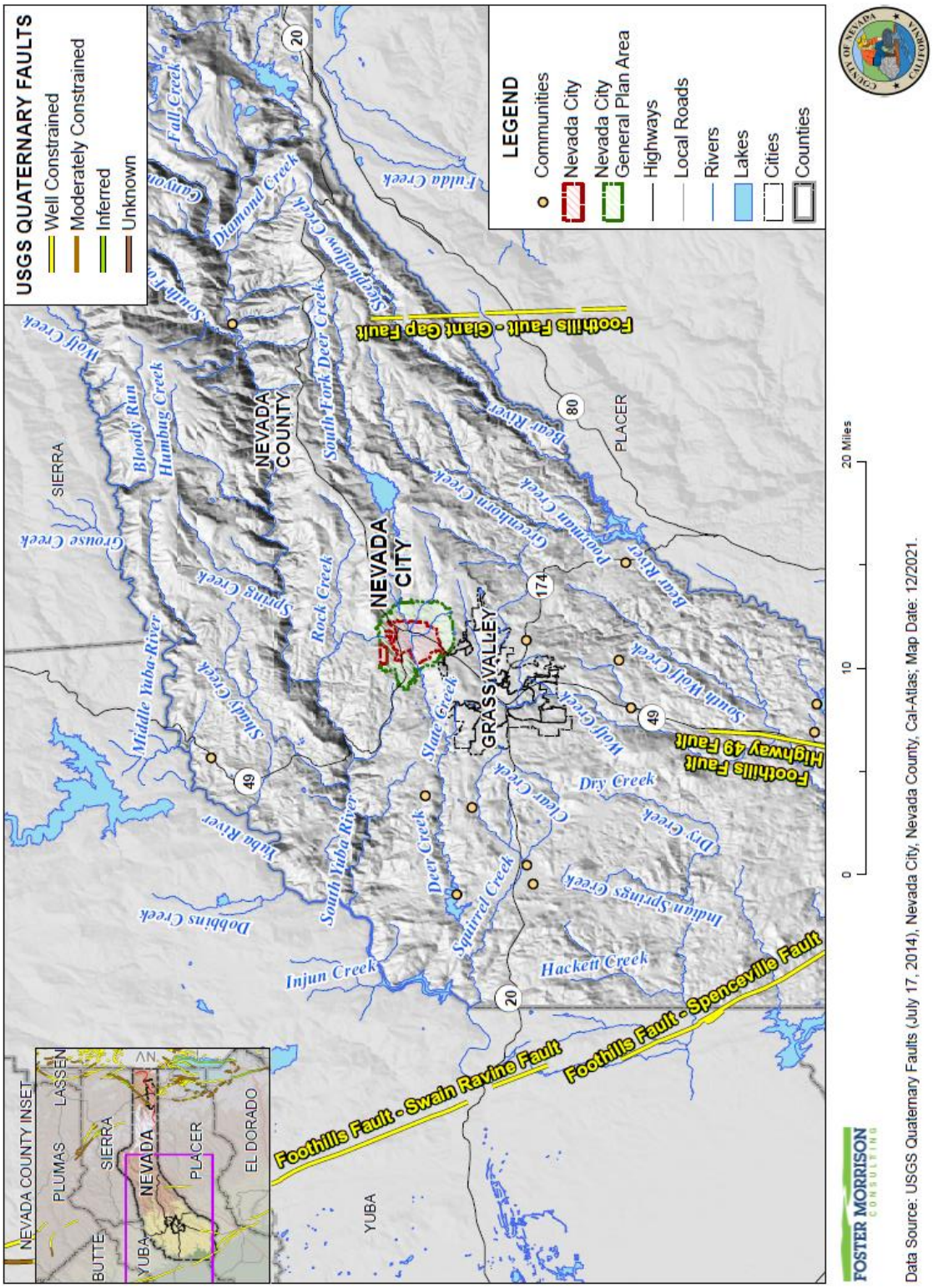
#### Settlement and Liquefaction

Settlement means the ground supporting part of a structure or facility lowers more than the rest or becomes softer, usually because ground shaking reduces the voids between soil particles (and often with groundwater rising in the process). The result can be more strain on the supporting features than they were built to withstand, leading to cracked walls or floors and broken water and sewer lines. Liquefaction is the sudden loss of the soil's supporting strength due to groundwater filling and lubricating the spaces between soil particles as a result of ground shaking. Soils with high risk for liquefaction are typically sandy and in creek floodplains or close to lakes.

In extreme cases of liquefaction, structures can tilt, break apart, or sink into the ground. The likelihood of liquefaction increases with the strength and duration of an earthquake. There are no liquefaction areas known in Nevada City.

According to the USGS, Nevada City is located in a low intensity seismic zone. Alquist-Priolo earthquake fault zones are regulatory zones surrounding the surface traces of active faults in California. The City is not located in an Alquist-Priolo zone. Although there have been numerous occurrences of low magnitude earthquakes in the vicinity of Nevada City according to the USGS, none have had major impacts on the City due to the City's geographic location in the County. However, there are a number of unreinforced masonry buildings in the City that are more vulnerable to a seismic event than other buildings. The 2017 Nevada County LHMP cites a number of unreinforced buildings, many located in the downtown, that are susceptible to low intensity. The 2017 Nevada County LHMP Annex B concludes that although the City is subject to some seismic activity, the risk factor of a significant seismic event is relatively low as compared to other places in California.

***Figure 20 Earthquake Faults***






RPC 2(b)(i)(2)

### Subsidence

Subsidence is the sinking of the ground due to the movement of underground material causing a shift or collapse. Closed depressions, sinking streams and cavern openings are commonly referred to as karst and contribute to the potential for subsidence to occur. For example, in January of 2017, a karst opened up in Grass Valley. The sinkhole that presented was seven stories deep and 80 feet in diameter when it first formed and occurred when a 7.5 foot-diameter underground culvert for Little Wolf Creek failed.

Another cause for subsidence can also be related to the drawdown of groundwater through well withdrawals/pumpage. Fine-grained sediments (clays and silts) within an aquifer system have been found to be one of the main causes. When fine-grained sediments are originally deposited, they tend to be deposited in random orientations with a lot of interstitial space to store water. However, when ground water levels decline to historically low levels, the randomly oriented sediments are rearranged into stacks with little interstitial space to store water and the results are subsidence.

A substantial portion of the Nevada City area is underlain by a deep, extensive labyrinth of abandoned mine tunnels that could potentially create subsidence. Many of the subsidence and mine areas in the City are known, but many still remain unknown and untracked. The risk of subsidence to future development can be minimized by accurate recordkeeping and tracking of previously unknown abandoned mines. However, there have been no disaster declarations related to subsidence in Nevada City. Consequently, the 2017 Nevada County LHMP Annex B indicates that subsidence from mines and other causes in the City is unlikely based on the lack of past occurrences (refer to Appendix B of this Element).

### *Climate Change and Geologic Hazards*

Severe Weather from climate change is expected to cause an increase in intense storms and other weather hazards that can increase the occurrence of geologic hazards, such as landslides and mudflows. However, these types of severe weather events are unlikely to influence the potential for future earthquake events. More detailed information on this is found in the Climate Change and Resiliency and Adaptive Capacity Section A.

## F. Public Safety Services and Facilities (SF)

### *Public Safety Services*

City government consists of approximately 32 regular full-time employees and 8 departments at the time of preparing the Climate Adaptation and Safety Element update. Key departments involved in emergency operations activities include Police, Fire, Public Works, Water and Wastewater, Administration, and Parks and Recreation. The City has many staff with specific training on the use of specialized equipment or areas of expertise that are essential in implementing mitigation actions. The City also relies on many partner agencies (e.g., local, state,

federal, private sector, and non-profits) which have capabilities to support hazard mitigation activities including:

- Nevada County – Office of Emergency Services
- Nevada County Public Works Department
- Nevada County Environmental Health Department
- Nevada County Building Department
- Nevada County Sherriff
- Nevada County Consolidated Fire District
- Sierra Nevada Memorial Hospital
- American Red Cross
- Sierra Vista Regional Medical Center
- Nevada City Unified School District
- California Highway Patrol
- PG&E
- Fire Safe Council

### *Critical Facilities*

Critical facilities and infrastructure provide essential services to the public, such as preserving the quality of life and providing essential public safety, emergency response, and disaster recovery functions. Different types of critical facilities include medical facilities, evacuation and community centers, potable water and wastewater facilities, fire stations, and local law enforcement stations. A critical facility definition was developed as part of the 2017 Nevada County LHMP:

Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event. A critical facility is classified by the following categories: (1) Essential Services Facilities: (2) At-risk Populations Facilities, (3) Hazardous Materials Facilities.

- **Essential Services Facilities** include, without limitation, public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities and equipment, and government operations. Sub-Categories:

    - Public Safety - Police stations, fire and rescue stations, emergency operations centers
    - Emergency Response - Emergency vehicle and equipment storage and essential governmental work centers for continuity of government operations.
    - Emergency Medical - Hospitals, emergency care, urgent care, ambulance services.
    - Designated Emergency Shelters and Weather Shelters.



RPC 2(b)(i)(2)

- Communications - Main hubs for telephone, main broadcasting equipment for television systems, radio and other emergency warning systems.
- Public Utility Plant Facilities - including equipment for treatment, generation, storage, pumping and distribution (hubs for water, wastewater, power and gas).
- Essential Government Operations - Public records, courts, jails, building permitting and inspection services, government administration and management, maintenance and equipment centers, and public health.
- Transportation Lifeline Systems - Airports, helipads, and critical highways, roads, bridges and other transportation infrastructure (Note: Critical highways, roads, etc. will be determined during any hazard-specific evacuation planning and are not identified in this plan).

- **At Risk Population Facilities** include, without limitation, pre-schools, public and private primary and secondary schools, before and after school care centers with 12 or more students, daycare centers with 12 or more children, group homes, and assisted living residential or congregate care facilities with 12 or more residents, churches that have capacity of 12 or more people. Some At Risk Population Facilities may become Essential Service Facilities if they are used for essential services, such as an evacuation center or weather shelter.

- **Hazardous Materials Facilities** include, without limitation, any facility that could, if adversely impacted, release of hazardous material(s) in sufficient amounts during a hazard event that would create harm to people, the environment and property.

Figure 21 and Appendix D identify the critical facilities within Nevada City based on this definition. Appendix D identifies the facilities and whether they fall within any mapped hazards areas, such as dam failure Inundation, flood zones, or fire hazard severity zone. These show 30 Essential Services Facilities, ranging from bridges to fire stations, many which are vulnerable to specific potential hazards, such as flooding or wildfire. 17 At Risk Population Facilities that have population clusters that also are currently or could provide public services to the public during an emergency event, ranging from schools to larger churches. There are also 2 Hazardous Materials Facilities. All of these facilities are potentially vulnerable to various types of hazards, such as dam failure inundation (see Figure 22), flooding (see Figure 23), landslide (see Figure 24), or wildfire exposure (see Figure 25). Also, as with most areas of the City, there is a potential risk to exposure from transport of hazardous material.

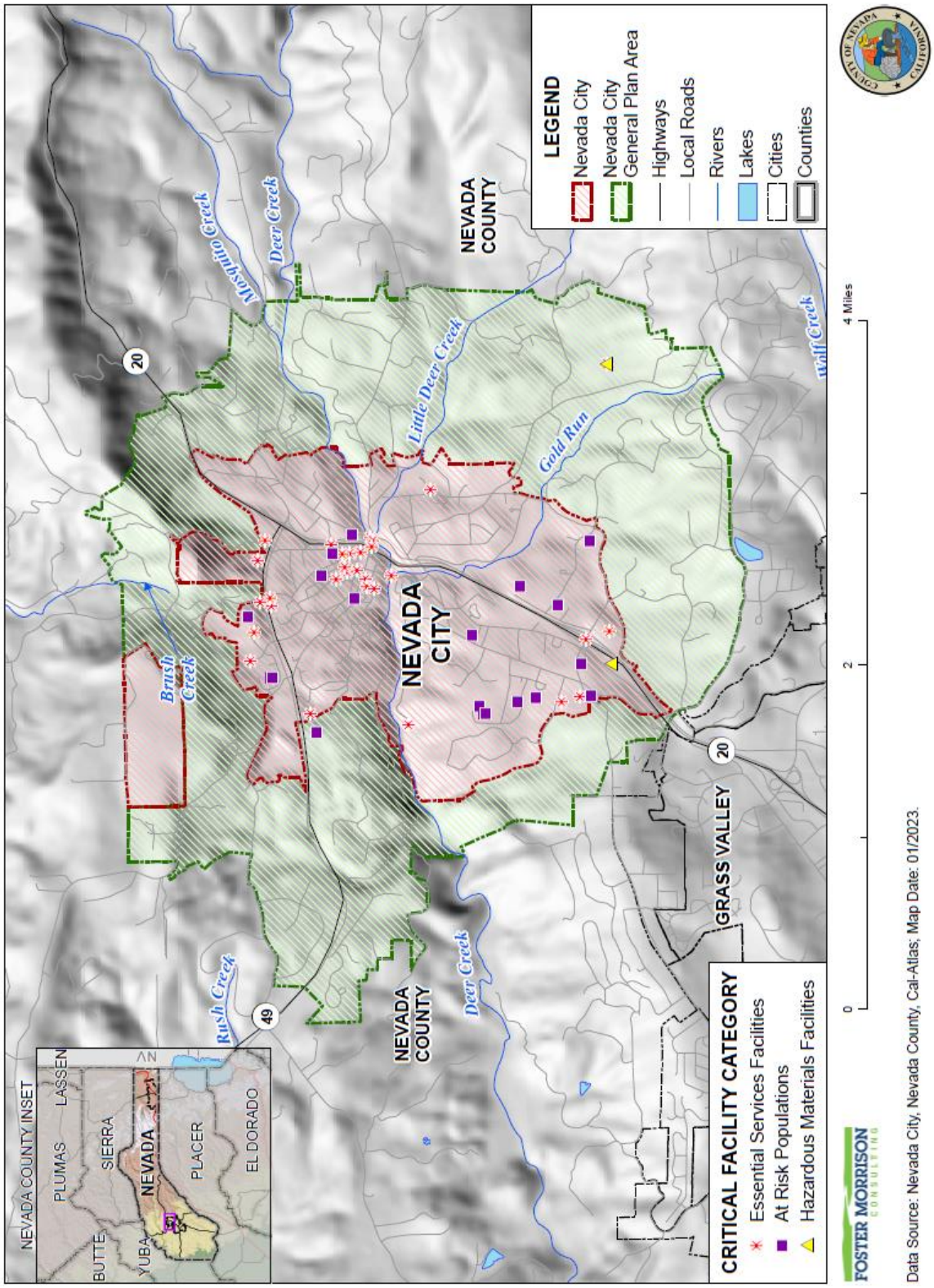
The City has the CAL FIRE Station and City Fire Station located to the south and the U.S. Forestry Fire Station located to the north providing excellent fire safety coverage for the entire City. However, there are some access limitations in certain sections of the City due to the historic development of the town in the 1800s. The City has had very limited growth over the last 30 years. Due to this limited growth and understanding that the City has excellent emergency response services, the City has not developed a clear projection of future emergency service needs.

A number of goals and policies have been established in the CAPSE to address maintaining and improving critical public safety facilities to enhance safety services. Policy SF-2, for example, includes reviewing new development and land use entitlements for increased access and surveillance for protection. Policy SF-3 supports efforts to retrofit existing facilities, such as to improve them to comply with fire safety regulations. Policy SF-4 provides for locating public safety facilities in the lowest hazard risk areas as may be feasible.



RPC 2(b)(i)(2)

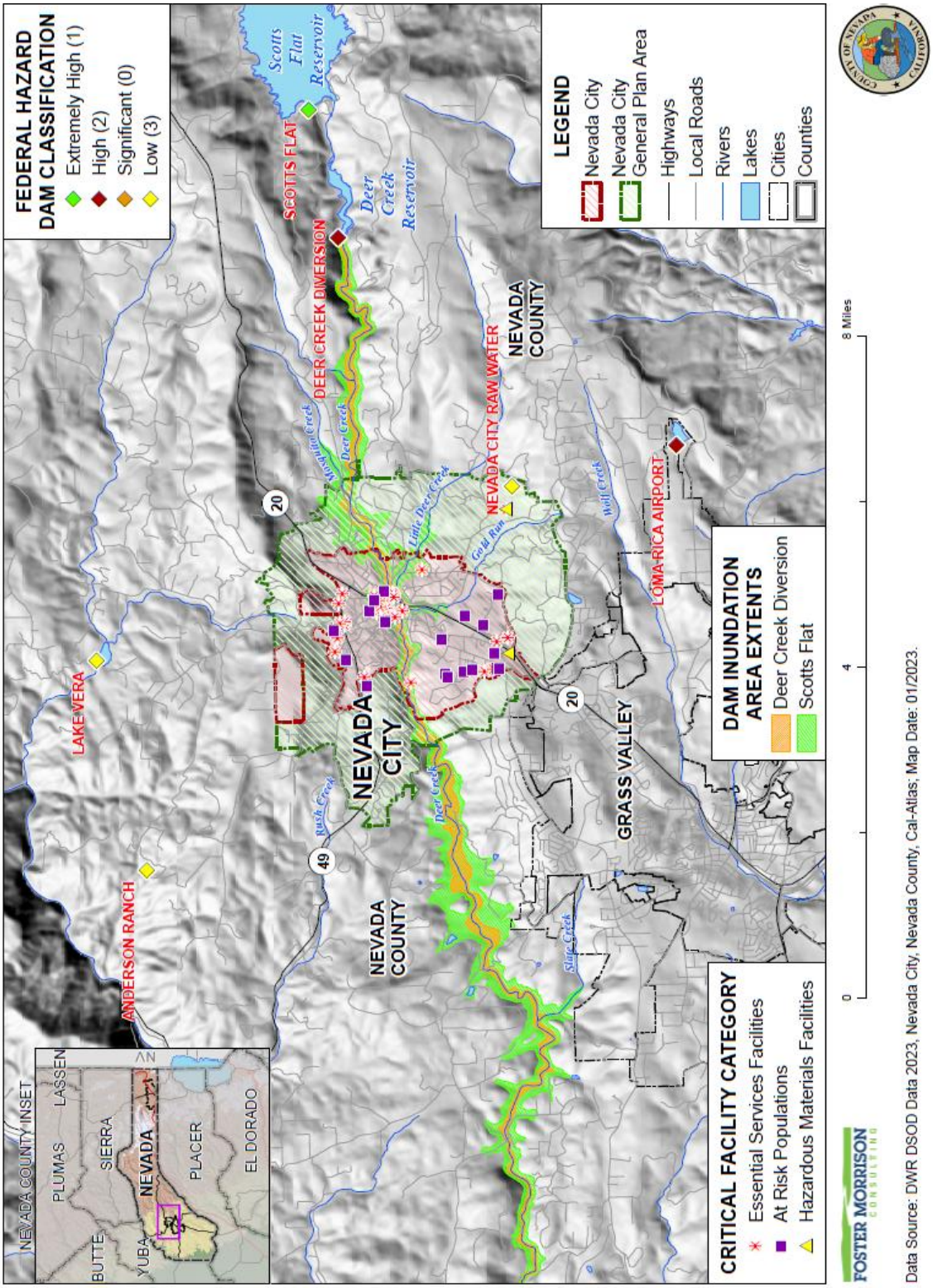
***Figure 21 Critical Facilities Inventory***






RPC 2(b)(i)(2)

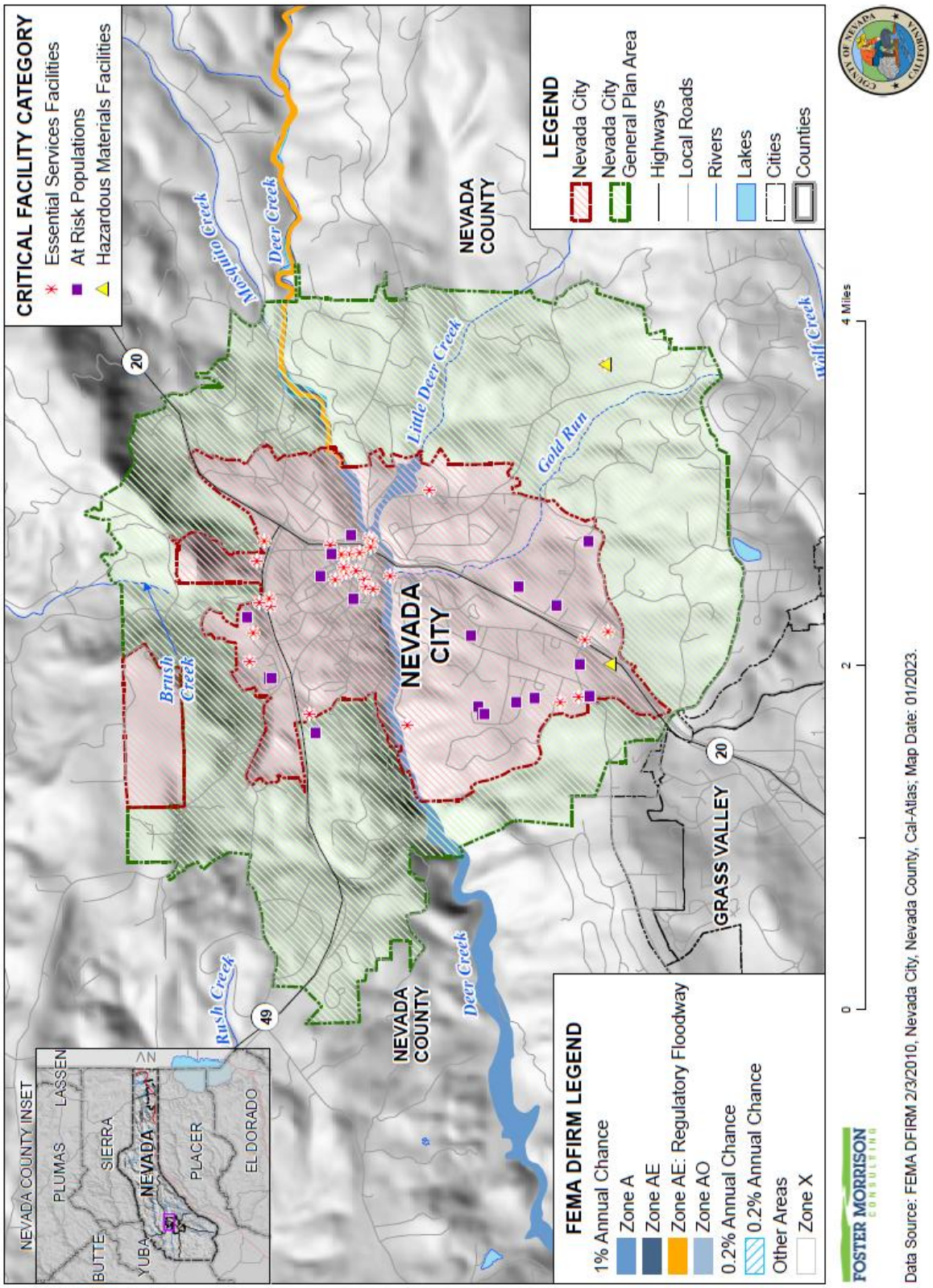
***Figure 22 Critical Facilities and Dam Inundation Areas***






RPC 2(b)(i)(2)

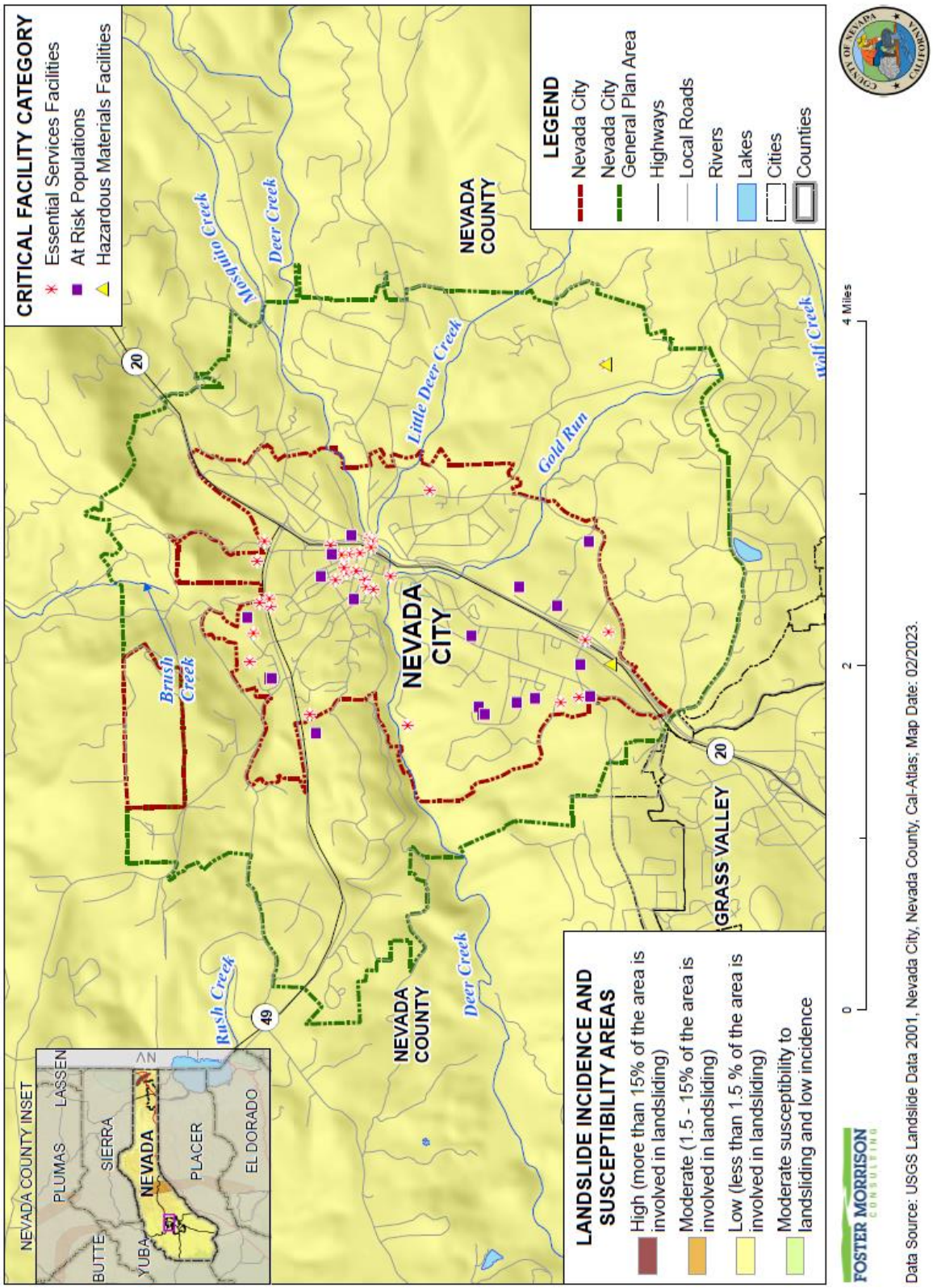
***Figure 23 Critical Facilities and FEMA DFIRM Flood Zones***






RPC 2(b)(i)(2)

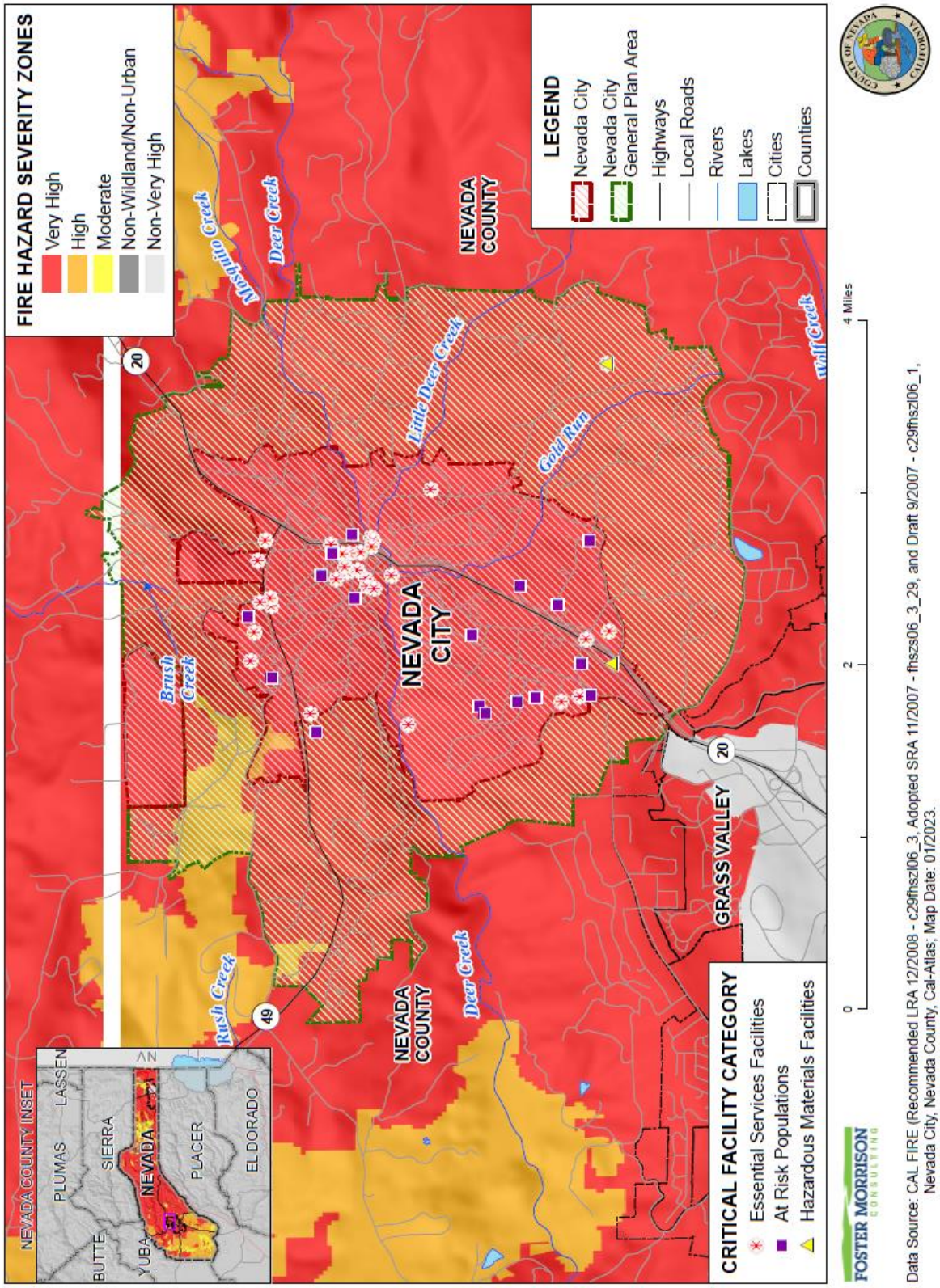
***Figure 24 Critical Facilities and Landslide Incidence and Susceptibility Areas***






RPC 2(b)(i)(2)

***Figure 25 Critical Facilities and Fire Hazard Severity Zones***






RPC 2(b)(i)(2)

### Climate Change and Critical Facilities

The City can expect to experience a greater number of disasters, particularly wildfire and flooding, because of climate change, which makes it more urgent to consider measures to mitigate these hazards to critical facilities. More detailed information on this is found in the Climate Change Vulnerability Assessment Section-A and the 2017 Nevada County LHMP Annex B (included in Appendix B of this Element).

## G. Hazardous Materials (HM) (including Mining Hazards)

Hazardous materials include any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the environment. Hazardous materials include a wide variety of substances commonly used in households and businesses. Industrial chemicals, motor oil, gasoline, paint, solvents, lawn care and gardening products, household cleaners, and refrigerants are among the diverse range of substances classified as hazardous materials.

Use, storage and transportation of hazardous materials and wastes is heavily regulated by federal, state, and local agencies, including the California Department of Toxic Substances Control, which is authorized to implement the regulations of the Federal Environmental Protection Agency. The Nevada County Environmental Health Department monitors commercial storage, use, and generation of hazardous materials, substances, and waste.

### *Stationary Sources of Hazardous Materials*

Nearly all businesses and residences store and generate some amount of hazardous materials and waste. Certain businesses and industries, including gas stations, automotive service and repair shops, and dry cleaners, generate larger amounts of these substances. In 2022, there were approximately 32 active businesses in the City using hazardous materials in sufficient quantities to require filing a report with the Nevada County, as required by the California Health and Safety Code. Large quantity generators produce over 2,200 lbs. of hazardous waste per month. Small quantity generators produce less than 2,200 lbs. per month, and exempt generators produce less than 220 lbs. per month.

Robinsons Enterprises, a petroleum bulk storage and transportation plant, located at the south end of the City on Lower Colfax Road, is considered a large quantity generator. The City's wastewater treatment plant, located at the west end of the City off Jordan Street, is the only other large generator within the City. The wastewater treatment plant is a concern to the City based on its use of chlorine gas to process potable water. This Element is proposing a program to convert the City's wastewater treatment plant from using chlorine gas to using liquid chlorine or other measures to avoid the potential of a hazardous gas release. All other listed businesses in the City are either small quantity or exempt generators.

To assure safe handling of hazardous materials, all permits issued by Nevada County include a required annual inspection of the City Fire Department. To support this annual inspection and

to enhance the City's efforts to monitor fire safe requirements, the City is currently contemplating hiring a part time fire code inspector to assist in inspecting hazardous materials operations in addition to other fire safe inspections, such as building occupancy, and fire safe building and land management.

In addition to stationary sources that use, store and generate hazardous materials and waste, the City can also be affected by sites that have been contaminated by a release of these materials. Several state agencies monitor hazardous materials/waste facilities where releases have occurred. Potential and known contamination sites are monitored and documented by the Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC). A review of the DTSC EnviroStor database indicates two active voluntary cleanup sites in Nevada City: 1) at the end of Bridge Street, involving soil clean up; and 2) at 101 Providence Mine Road, where the Grove residential subdivision project is being developed also involving soil remediation. EnviroStor also identified 7 other cleanup sites with closed cases. GEO Tracker, another source from the RWQCB indicates that there are 13 sites in the City that have undergone removal of underground fuel storage tanks and are certified as clean sites.

### *Transported Hazardous Materials*

Hazardous materials are transported through Nevada City on two major transportation routes: Highway 49 and Highway 20. The 2017 Nevada County LHMP indicates that most of the City is at risk of exposure to a major hazardous materials spill since most of the City is located within 2 miles from these routes.

#### Hazard Material Spills/Releases from Transport

There have been no recorded major hazardous material spills or releases in Nevada City in the last 30 years (though there have been minor events) and there have been no federal or state disaster declarations for hazardous materials in the City.

### *Past Mining Activities*

A substantial portion of the Nevada City area is underlain by a deep, extensive labyrinth of abandoned mine-tunnels. Dozens of mining claims were worked in the Nevada City area during the heyday of gold mining. Some were large, mechanized operations. Most were small and more labor-intensive. These mines are now abandoned. The California Department of Conservation GIS data identified two mines, Champion and Gracie, and two unnamed mines located in Nevada City and more located within the City's General Plan Area (see Figure 26). Other potential mining hazards beyond subsidence, such as hazardous materials used in mining activities and the need for remediation, may also be a concern for addressing public safety concerns, and particularly, addressing future development within areas that have experienced previous mining activities. Through a number of public outreach meetings on the CAPSE, many community members expressed concerns from hazards associated with previous mining activities, including

contamination related issues. Sierra Fund, a non-profit agency in Nevada County, supports efforts by the City in investigating, identifying, and helping mitigate impacts to the community from mining. The City may wish to pursue developing a more focused plan and possible programs to address mining hazards beyond geologic concerns beyond this Climate Adaptation and Safety Element Update. For example, the City could prepare a mineral management element that not only considers other potential hazards from mining activities than subsidence, such as remediation of contaminated areas and reactivation of mining in the City.

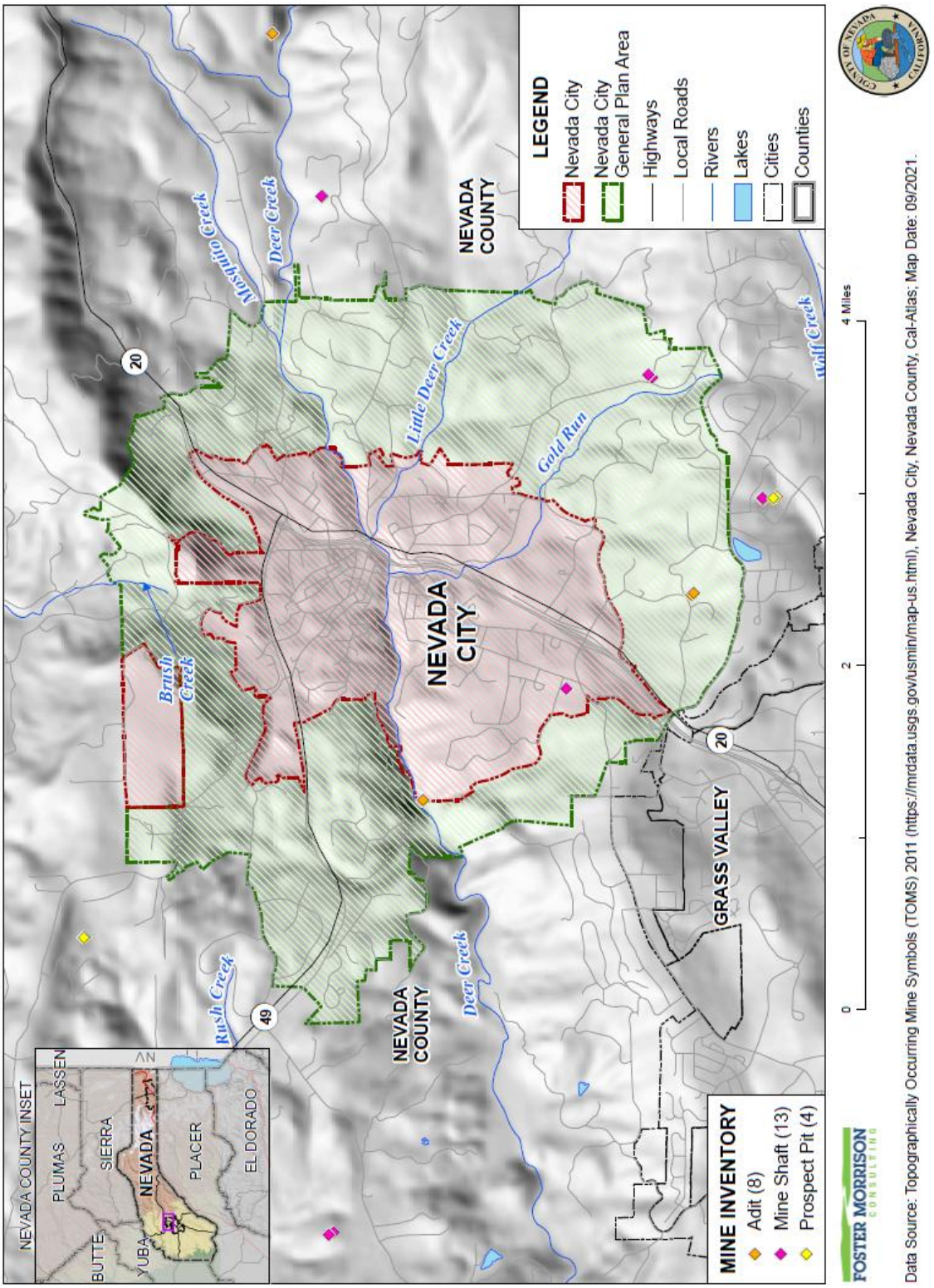
### *Climate Change and Hazardous Materials*

Climate change is not expected to exacerbate stationary hazardous materials facilities or hazardous materials transport in Nevada City.



RPC 2(b)(i)(2)

***Figure 26 Mine Inventory***






RPC 2(b)(i)(2)

## H. Severe Weather (SW)

Severe weather is generally defined as any destructive weather event and usually occurs in Nevada City as localized storms, primarily in the form of heavy rains and high winds that bring power outages, impact roadways, and isolate of vulnerable regions (single access road closures). Rain, lightning, and high winds are likely to continue as one of the natural threats to the City and Nevada County. Extreme heat is also identified as a form of severe weather to be addressed. Temperature extremes are likely to continue to occur annually.

### *Storms*

Storms in Nevada City are generally characterized by heavy rain and strong winds. Although exceedingly heavy snow falls on the nearby mountains, it very rarely falls in the City. However, extreme cold and freezing conditions, often from storms, pose a significant threat to public safety, and particularly more vulnerable populations. Heavy storms can cause both widespread flooding as well as extensive localized drainage issues. Lack of adequate drainage systems has become an increasingly important issue. In addition to the flooding that often occurs during these storms, strong winds when combined with saturated soil conditions can down large trees, and cause landslides and other slope failures. Flooding and geologic hazards were previously covered in Sections D and E of this Plan. Some storms are accompanied by thunder and lightning. Lightning is a concern when it is cloud-to-ground type that can kill or injure people and destroy structures. Lightning is a particular concern during fire season due to the number of fires that are started by lightning.

High winds often accompany severe storms and thunderstorms and can cause significant property damage, threaten public safety, and have adverse economic impacts from business closures and power loss. Nevada County, including the City, is subject to significant, non-tornadic, winds. High winds are defined as sustained wind speeds of 40 mph or greater lasting for one hour or longer, or winds of 58 mph or greater for any duration. Winds also exacerbate fire conditions by drying out the ground cover, propelling embers at great distances ahead of the fire and increasing the ferocity of an existing fire.

### *Temperature Extremes*

Winter snowstorms occur primarily in the higher elevations of Nevada County but can also affect the City to a certain degree. Winter snowstorms, including strong winds and blizzard conditions can result in localized power and phone outages and closures of streets, highways, schools, businesses, and nonessential government operations. During periods of heavy snow there is also an increase in the number and severity of traffic accidents. Heavy snowfall during winter in higher elevations can lead to flooding or landslides during the spring in lower elevations if the area snowpack melts too quickly. This can also create numerous challenges for emergency responders.

Extreme cold often accompanies a winter storm or is left in its wake. Prolonged exposure to cold can cause frostbite or hypothermia and can be life-threatening. Infants and the elderly are most

susceptible. Pipes may freeze and burst in homes or buildings that are poorly insulated or without heat. Also, as referenced in the Climate Vulnerability Assessment Appendix A to this Element), extreme heat events are days that exceed a maximum temperature of 96.2°F degrees. While there have been no FEMA or Cal OES declared heat disasters to date, there have been nine extreme heat events according to the National Climate Data Center in Nevada City. These occurred during the years 1999, 2000 (five occurrences), and 2013 (three occurrences). Due to climate change, it is expected that the City will continue to experience a greater number and increased intensity of these events.

A majority of homes in Nevada City are older homes and were constructed over 39 years ago. Furthermore, over 30 percent of the City's housing stock (over 1,400 units) was built before 1939. If these homes were not retrofitted with insulation and improved with heating and cooling equipment then folks that live in them, especially vulnerable populations, are at higher risk for both cold and heat-related illnesses during these weather events.

Very high and low temperatures can harm plants and animals that are not well adapted to them, including natural ecosystems. Outdoor workers in construction or landscaping are also much more exposed to the elements than most people, so they are more susceptible to extreme cold and heat conditions and the potential illnesses. Indirectly, extreme cold and heat puts more stress on power lines, causing them to run less efficiently. These events also cause more demand for electricity (usually to run heating and air conditioning units), and in combination with the stress on the power lines, may lead to brownouts and blackouts.

The City currently collaborates with Nevada County, through Better Together Nevada County, Nevada County Health and Human Services Department, and Sierra Roots. Sierra Roots is a non-profit agency that serves homeless, located in Nevada City, providing temporary shelter programs to address vulnerable populations during extreme weather events. The City works with Nevada County, Sierra Roots, and others to coordinate this service. This Element includes some policies and programs to support these programs. As referenced in Appendix D, List of Critical Facilities, there are a number of evacuation centers and weather shelters identified. Figure 21 shows these facilities and also references several possible weather shelters at various churches in the City that could be used for sheltering, not only for extreme cold weather events, but also used for extreme heat and bad weather events. The list and map also identify a number of schools in the City that could be used for evacuation centers in the event of a weather disaster, such as a flood, smoke, or wildfire, to name a few.

### *Drought*

Drought is defined as a deficit of water supply in a region due to below-average precipitation over a seasonal period. Over several years this can cause a serious hydrological imbalance that results in biological losses and can further lead to economic losses. When drought conditions set in, water supply decreases, and water conservation becomes necessary. Since the end of July 2021, 41.64 percent of the land area within Nevada County, including the City, has been designated as being in extreme drought. Drought conditions cause other safety problems such

as increased likelihood of pine beetle infestation, high forest mortality, increased wildlife mortality, water shortages, and mandatory water conservations measures, among others.

In June of 2021 the Nevada City Council passed Resolution No. 2021-25 declaring a Stage 3 drought (Water Shortage Warning), triggering the corresponding mandatory conservation measures outlined in the City's 2015 Drought Action Plan. The resolution was triggered by a review of City water conditions, which included a finding that the City's reservoir reached 4 feet below spill level 3 months sooner than the historical norm. The City also began ordering supplemental water from NID months earlier than is typically done. Conservation measures mandated by the City include 15 percent reductions in year-over-year water usage by all customers and restrictions on certain types of water usage such as outdoor watering.

### *Climate Change and Severe Weather*

Climate change is expected to cause an increase in intense rainfall, which is usually associated with strong storm systems. This means that the City could see more intense storms in the coming years and decades. While average annual rainfall may increase or decrease slightly, climate change is expected to cause an increase in the number of years that see intense levels of precipitation. Heavy rainfall and snowfall can increase the frequency and severity of other hazards, including flooding and landslides. Climate change is also expected to increase the total number of intense storms that affect the area, possibly causing an increase in the frequency of severe weather events and any associated hazards. More detailed information on this is found in the Climate Change and Resiliency and Adaptive Capacity Section A.

Tree Hazards

Severe weather can contribute to exposing the public to tree hazards. The City owns and manages approximately 400 acres of open space consisting of natural forested areas. These areas have a number of trees and vegetation that pose an impact to public health and safety, such as wildfire that can spread to habitable structures and/or the potential to obstruct storm flows through natural drainage courses. Also, the City is responsible to maintain trees along public streets or other public properties that can drop branches tree and/or branches onto people or property that can be hazardous. The City's Engineering and Public Works Department maintains these areas. PG&E have conducted considerable work to remove or trim trees, and remove hazardous vegetation along powerlines. This work is expected to continue to reduce hazards. The 2017 Nevada County LHMP recommends that the City implement an annual tree and vegetation removal and tree trimming monitoring program to address wildfire hazards and reduce tree branch falls. The CAPSE includes policies/programs to address this.

### *Power Outages*

Although power outages can be experienced during other hazards events and disasters, they are most closely associated with severe storms. There are four types of intentional disruptions:

- **Planned**: Some disruptions are intentional and can be scheduled based maintenance or upgrading needs
- **Unscheduled**: Some intentional disruptions must be done "on the spot." in response to an emergency
- **Demand-Side Managem**ent: Some customers (i.e., on the demand side) have entered into an agreement with their utility provider to curtail their demand for electricity during periods of peak system loads
- **Load Shedding**: When the power system is under extreme stress due to heavy demand and/or failure of critical components, it is sometimes necessary to intentionally interrupt the service to selected customers to prevent the entire system from collapsing, resulting in rolling blackouts

The California Independent System Operator (CAISO) is tasked with managing the power distribution grid that supplies most of California, except in areas served by municipal utilities. CAISO is thus the entity that coordinates statewide flow of electrical supply. CAISO uses a series of stage alerts to the media based on system conditions. The alerts are:

- Stage 1 – reserve margin falls below 7 percent
- Stage 2 – reserve margin falls below 5 percent
- Stage 3 – reserve margin falls below 1.5 percent

Rotating blackouts become a possibility when Stage 3 is reached. Rotating outages and/or blackouts such as those experienced in 2000/2001 and 2006 can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

A new intentional disruption type of power shortage/failure event has recently occurred in California. In recent years, several wildfires have started as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are coordinating to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may be shut off for public safety in an effort to prevent wildfire. This is called a Public Safety Power Shutoff (PSPS).

To prevent fires, the electrical services provider for the City and western Nevada County (PG&E) initiated PSPS events starting in 2019, to reduce fire risks associated with power lines. Depending on the fire risks, power outage events may occur in specific areas of the City or for all PG&E customers in the region. PSPS events can create additional risks to the residents and businesses, such as inadequate access to medical devices and services, food preservation and safety, proper storage of medication, uncontrolled temperatures and exposure to excessive heat or cold, inadequate ventilation, lack of water and proper sanitation, disrupted communications, inability to use electronic gates or garage doors, and closed businesses and services. Throughout a PSPS, emergency services in the City and throughout Nevada County remain functional with back-up

power supplies, but many businesses and agencies may not be operational. A PSPS can, therefore, pose health and safety risks to all impacted businesses and residents with an elevated risk to more vulnerable communities with less resources available during and after power outages.

Since establishment of the PSPS, PG&E has expanded this program to include real-time monitoring of extreme weather and fire danger conditions, enhancing vegetation management around power lines and conducting accelerated safety inspections of electric infrastructure. Other fire safety programs by PG&E include hardening of the electrical system to improve resistance to wildfire risks. This program involves wrapping power poles and power lines with fire resistant materials, widening overhead power line spacing, installing additional poles between existing poles, removing powerlines connected to trees, strategically removing of overhead electrical facilities, and undergrounding power lines. Much of this has been and will continue to be experienced within the City and throughout Nevada County.

### I. Noise Exposure (NE)

Excess noise can threaten quality of life and human health by causing annoyance or disrupting sleep and everyday activities. Reducing the negative impact of unwanted and excessive noise is an important aspect of maintaining Nevada City's quality of life and community character, including being located in a relatively peaceful mountain environment. This section evaluates noise in the community and provides approaches to address and mitigate excessive noise. This section also complies with the requirements of noise elements in accordance with State General Plan laws. This section includes review as of the following noise components:

- Identification of noise problems in the community as established in guidelines provided by the Office of Noise Control in the State Department of Health Services. This includes analysis and quantification of noise in the community based on current and projected noise levels for all major sources of noise within the City.
- Presentation of Noise contours s for major noise sources and stated in terms of the day/night average level (DNL) or other appropriate noise descriptors. The noise contours are the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified above. These noise contours are used as a guide for establishing a pattern of land uses in the Land Use Element that minimizes the exposure of community residents to excessive noise. Section 5 of this Plan includes policies, implementation measures, and possible solutions that address existing and foreseeable noise problems.

### *Ambient Noise*

The ambient noise environment in Nevada City is defined by several noise sources. The most prevalent source of near continuous noise in the City is traffic on SR 20 and SR 49. Intermittent noise sources consist primarily of local traffic on City streets, commercial activities on Broad Street (seen on the image to the right), and typical neighborhood noise sources. Activities at parks and schools also affect the noise environment within Nevada City, but to a much more localized extent. Noise sources associated with construction and property maintenance also contributed to the noise environment, typically on an intermittent and fairly temporary basis.

### *Existing and Projected Noise*

As Nevada City grows, coupled with overall growth in the region, traffic volumes on local highways and city streets will increase, resulting in higher traffic noise environments. Similarly, growth in tourism-related activities, and increased commercial activities in the City will all contribute to higher ambient noise levels over time. As referenced in the Background Report by Bollard Acoustical Consultants for this Plan, existing and projected noise from traffic shows these projected changes to community noise levels. Table 2 identifies locations where noise measurements were taken and relates to Figure 27 which shows actual noise levels (contours). These are important to show existing noise levels from vehicular sources along the highways. Table 3 identifies projected noise levels in the City to 2045, based on projected traffic (shown on Figure 28).

### *Table 2 Existing Traffic Noise Levels and Distances from Major Roadways (2020)*

| Segment | Roadway | Segment Description | DNL at 100' [dB] | Distance to DNL Contours [feet] | | |
|---|---|---|---|---|---|---|
| | | | | 70 dB | 65 dB | 60 dB |
| 1 | Highway 20 | Banner Ridge to Gold Flat Road | 72 | 146 | 315 | 678 |
| 2 | Highway 20 | Gold Flat Road to Sacramento St | 72 | 131 | 283 | 609 |
| 3 | Highway 20 | Sacramento St to Broad St | 70 | 95 | 204 | 440 |
| 4 | Highway 20 | Broad St to Coyote St | 68 | 75 | 162 | 348 |
| 5 | Highway 20 | Coyote St to Highway 49 East Jct. | 68 | 73 | 158 | 341 |
| 6 | Highway 20 | East of Highway 49 East Jct. | 64 | 42 | 91 | 196 |
| 7 | Highway 49 | West of North Highway 20 Jct. | 65 | 48 | 103 | 221 |

*Source: Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with traffic counts from CalTrans.*



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### *Table 3 Future Noise Levels and Distances to Traffic Noise Contours from Major Roadways (Projected to 2045)*

| Segment | Roadway | Segment Description | DNL at 100' [dB] | Distance to DNL Contours [feet] | | |
|---|---|---|---|---|---|---|
| | | | | 70 dB | 65 dB | 60 dB |
| 1 | Highway 20 | Banner Ridge to Gold Flat Road | 75 | 232 | 500 | 1076 |
| 2 | Highway 20 | Gold Flat Road to Sacramento St | 75 | 208 | 449 | 967 |
| 3 | Highway 20 | Sacramento St to Broad St | 73 | 151 | 324 | 699 |
| 4 | Highway 20 | Broad St to Coyote St | 71 | 119 | 257 | 553 |
| 5 | Highway 20 | Coyote St to Highway 49 East Jct. | 71 | 116 | 251 | 541 |
| 6 | Highway 20 | East of Highway 49 East Jct. | 67 | 67 | 144 | 311 |
| 7 | Highway 49 | West of North Highway 20 Jct. | 68 | 76 | 163 | 351 |

*Source: Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with traffic counts from CalTrans.*

### *Figure 27 Existing Noise Contours*

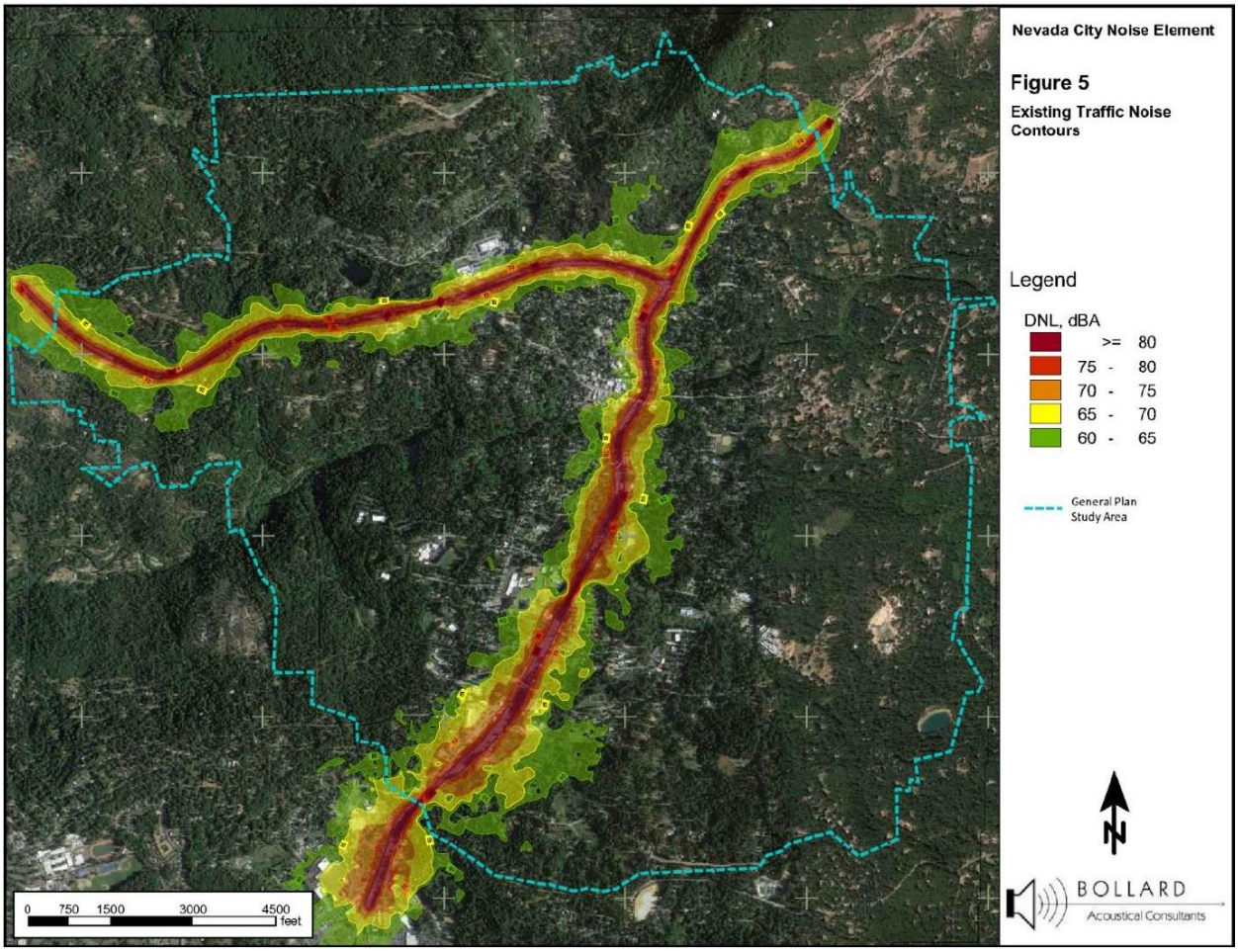




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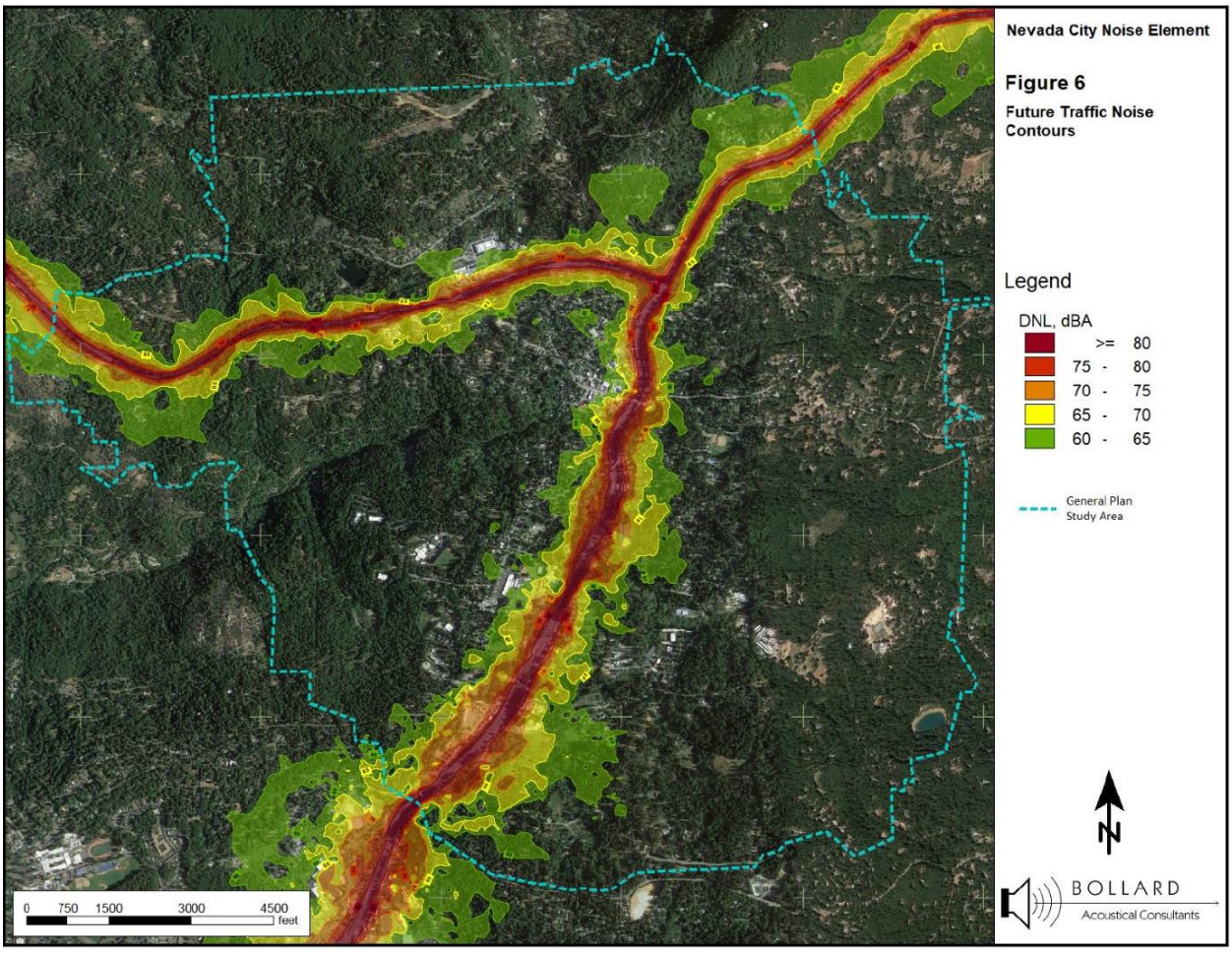
*Figure 28 Future Noise Contours (2045)*




In addition to traffic noise, there are other obvious stationary noise sources identified in the Background Report. The noise survey conducted in 2022 also identified a site located within the Broad Street commercial with the highest ambient noise levels in the City. Other noise generators that were evaluated in the Background Report include:

- Noise generated from events held at Pioneer Park should require noise mitigation, as needed which can be included as performance standards as part of the City issuing special event permits.
- Although not located within the City, the Nevada County Sportsmen's Club shooting range, located on Banner Mountain Trail, should be considered if new noise-sensitive uses are proposed in the vicinity of this facility.

These three locations are identified on Figure 29.



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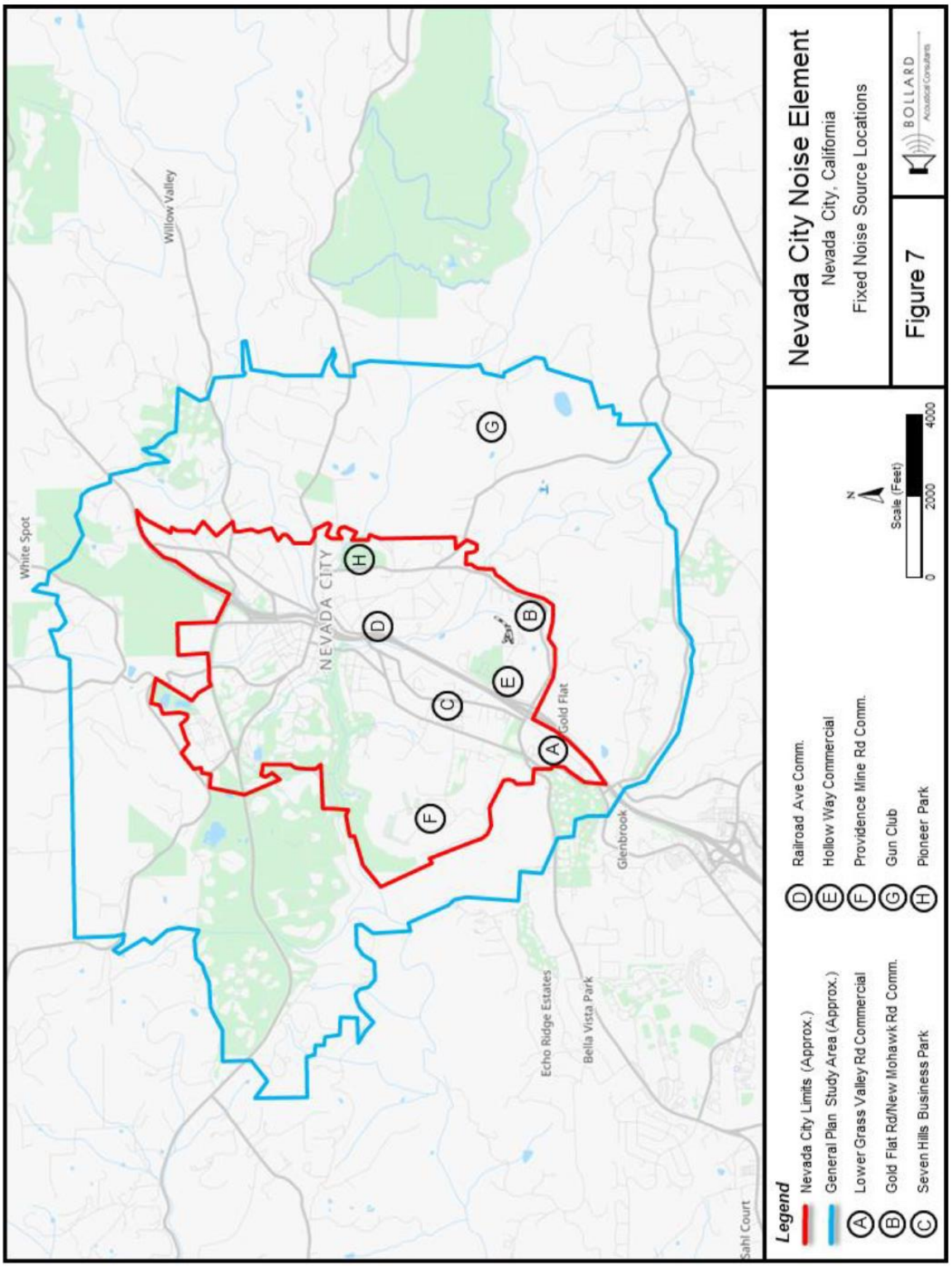
***Figure 29 High Noise Locations***



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Residential development near these areas should be carefully reviewed and potentially include measures to reduce interior noise levels. The Background Report provides a table for noise thresholds to consider in reviewing new development and specific noise goals, policies, and programs to address noise impacts are addressed in Section 4 of this Element.

### *Climate Change and Noise Exposure*

Climate change is not expected to exacerbate noise in Nevada City.

## J. Other Considerations (OC)

### *Other Hazards*

#### Airport Hazards

The closest airport, Nevada County Airport, is located approximately nine miles southeast of the City. Although air traffic occurs over the City, it is not impacted by the airport's approaches/departures that is cause for significant hazard to the City.

#### Military Land Use

*S*B 1462 and SB 1468 require that the General Plan disclose any land use conflicts with military air space and/or training routes in the General Plan Land Use Element (may also be related to the Safety Element). Also, the law requires disclosure of any military operations or installations within 1,000 feet of the City. Potentially, land use conflicts to these resources could constrain housing production. Based on mapping analysis conducted by the California Office of Planning and Research there are no conflicts with military land or air uses in or around Nevada City.

#### Water Quality

The 2017 Nevada County LHMP Annex B references water quality impacts on Deer Creek from the City's water intake facility at the Water Treatment Plant. During high flows, unregulated water is discharged into the creek which creates sedimentation. The intake facility needs to be improved to avoid sedimentation impacts on Deer Creek (refer to Appendix B of this Element).

### *Vulnerable Communities and Environmental Justice*

#### Vulnerable Communities

*T*he term "vulnerable population and community" includes disadvantaged communities based on geographic, socioeconomic, public health and environmental hazards criteria. It is further defined to include, but is not limited to:

- Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation; or



RPC 2(b)(i)(2)

- Areas with concentrations of people that are of low-income, high unemployment, low levels of home ownership, high rent burden, sensitive populations, or low levels of educational attainment; or
- Populations that are vulnerable in their ability to prepare for, react to, or recover from emergency situations such as those with communication limitations or barriers (lack of phone and/or wi-fi access or language), and individuals, neighborhoods, or institutions, with limited or no mobility.

The purpose of the Climate Adaptation and Safety Element Update is to reduce loss of life, injuries, and damage to property resulting from natural and human caused public safety hazards including flooding, geologic and seismic hazards, fire hazards, severe weather and the additional consequences of climate change. This Element identifies areas where private and public decisions on land use, appropriate levels and locations of public services and the dissemination of educational materials for both preparedness and response are addressed. In addressing the different safety hazard potentials in the City, this Element contains a number of relevant policies and programs that address the needs of vulnerable populations and communities.

### Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. SB 1000, signed into law September 24, 2016, required an Environmental Justice Element or related goals, policies, and programs integrated in other elements of the General Plan, such as the Safety Element, to address the disproportionate treatment of City regulations on these groups. These groups are defined in the statute as disadvantaged communities located within the City's planning areas. Based on Cal EPA data, the City does not have any known disadvantaged communities as defined under SB 1000. However, the City has many residents that meet this standard, so this Element contains a number of relevant policies that address the intent of this law.

## Section 5 GOAL, POLICIES, PROGRAMS

The following goals, policies, and programs are grouped by referenced hazard categories:

1. Climate Change, Resiliency and Adaptive Capacity (CC)
2. Emergency Preparedness and Evacuation (EP)
3. Fire Hazards and Protection (FP)
4. Flood Hazards (FH)
5. Geologic Hazards/Seismic Activity (GH)
6. Hazardous Materials and Mining Hazards (HM)
7. Public Safety Services and Facilities (SF)
8. Severe Weather (SW)
9. Noise Exposure (NE)
10. Other Safety Considerations (OC)



RPC 2(b)(i)(2)

## 1. Climate Change, Resiliency and Adaptive Capacity (CC)

### *GOALS*

**GOAL CC-1**: GOAL CC-1 Protect the City's populations, especially its most vulnerable, from the impacts of climate change.

**GOAL CC-2**: Restore and protect climate-vulnerable natural resources, ecosystems, and open spaces.

**GOAL CC-3**: Increase the reliability and redundancy of local and regional infrastructure and services.

**GOAL CC-4**: Support local business continuity and economic resilience from the impacts of climate change.

### *POLICIES*

**POLICY CC-1**: Coordinate with Nevada County and neighboring jurisdictions to prioritize climate adaptation efforts that address regional climate change vulnerabilities of community members, infrastructure and services, natural resources and ecosystems, and critical facilities and buildings.

**POLICY CC-2**: Integrate and regularly update best available climate science, projections, and potential impacts into relevant City plans, codes, and planning documents including the Municipal Code, Disaster Plan, and Capital Improvement Program.

**POLICY CC–3**: Include climate projections in design criteria to ensure new critical facilities and infrastructure are built to function effectively in the face of future climate hazards and weather extremes.

**POLICY CC-4**: Review and revise the Nevada City Building Code as necessary to include weatherization standards that account for climate hazards such as extreme heat and extreme precipitation events.

**POLICY CC-5**: Prioritize programs and investments aimed at addressing climate change impacts and supporting community resilience for vulnerable populations, such as seniors, children, individuals with existing health conditions, individuals who live or work outdoors, and lower-income residents.

**POLICY CC-6**: Coordinate with neighboring communities to develop an extreme heat response plan that designates cooling centers and establishes a temperature threshold triggering citywide notification and coordination for opening designated cooling centers to the public.

**POLICY CC-7**: Expand the implementation of drought-tolerant green infrastructure, including landscaping and street trees, in public and private spaces to address the impacts of extended drought, extreme precipitation, and extreme heat.

**POLICY CC–8**: Promote the use of drought-tolerant green infrastructure, including landscaped areas, as part of cooling strategies in public and private spaces.

**POLICY CC–9**: Partner with Nevada City Chamber of Commerce, Nevada County Economic Resource Council, and Sierra Business Council to pilot and implement actions by local business to prepare for and reduce the risk of climate hazards, including wildfire, drought, flood, and extreme precipitation.

**POLICY CC-10**: Support efforts by the Nevada County Public Health Department and local community organization to establish extreme heat and air quality monitoring systems and develop accessible and language appropriate community education resources to prepare community members for increase extreme heat events and air pollution.

**POLICY CC-11**: Prepare for a reduced long-term water supply resulting from more frequent and severe drought events, including working with regional water providers to implement extensive water conservation measures and ensure sustainable water supplies, including for fire suppression needs.

**POLICY CC-12**: Renovate existing City-owned assets and design future facilities to incorporate renewable energy generation systems, battery storage systems, and energy-efficient design and features, as feasible.

**POLICY CC-13**: Encourage new developments and existing property owners to incorporate sustainable, energy-efficient, and environmentally regenerative features into their facilities, landscapes, and structures to reduce energy demands and improve on-site resilience. Support financing efforts to increase community access to these features.

**POLICY CC-14**: Increase the resiliency of City-owned structures to severe weather events and support homeowners and business owners to increase the resilience of their buildings and properties through retrofits, weatherization, and other improvements.

Other policies, and programs addressing climate adaptation, adaptive capacity, and resiliency are woven throughout the remaining sections of this element, as they relate to safety concerns, such as wildfire, flooding, emergency preparedness, evacuation, public safety services and facilities, and geologic hazards.

## 2. Emergency Preparedness and Evacuation (EP)

### *GOAL*

**GOAL EP-1**: Provide a coordinated approach to hazard and disaster response preparedness.

### *POLICIES*

**POLICY EP-1**: Ensure a coordinated interagency program for disaster preparedness that will facilitate Federal and State disaster assistance by planning for the reduction of the effects of natural hazards and training for disaster management.

**POLICY EP-2**: Provide for adequate evacuation routes in areas of high fire hazard, flooding, and other natural disasters.

**POLICY EP-3**: Identify existing public and private roadways in fire hazard severity zones and the wildland-urban interface (WUI) that are not in compliance with current fire safety regulations, including road standards for evacuation and emergency vehicle access, vegetation clearance, and other requirements of the California Fire Safe (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations)to the extent resources are available. Work at retrofitting City-owned roadways as needed to meet current standards and require private property owners to do the same, to the extent feasible and given the absence of other site constraints.

**POLICY EP-4**: Encourage, assist with, and coordinate efforts by the City's Fire Safety Advisory Committee, and others, the update of disaster plans on a regular basis such as the Nevada County Operational Area Emergency Operations Plan, Community Emergency Preparedness and Evacuation Guides, the Nevada City Disaster Plan, the Nevada County Wildfire Evacuation Preparedness Action Plan, and other similar plans.

**POLICY EP-5**: Collaborate with NCCFD and Nevada County to develop adequate infrastructure and provide roadside fuel reduction, defensible space, and vegetation management, particularly along evacuation routes.

**POLICY EP- 6**: Require proposed development and to the extent feasible, non-conforming development, to provide adequate access for fire and emergency vehicles and equipment, adequate infrastructure, proper vegetation clearance and maintenance on public and private roads that meets or exceeds the standards in the California Fire Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations) ).

**POLICY EP-7**: Help support the development and maintenance of Countywide and local emergency evacuation plans that also address at risk populations.

**POLICY EP-8**: Collaborate with the Nevada Irrigation District in developing measures to assure sustainable water supplies that may include, but not be limited to, water conservation programs, increased water supply capacities in the City and NID, and coordination of drought mitigation.

**POLICY EP-9**: Implement drought measures associated with the City's Drought Action Plan and Nevada Irrigation drought programs.

### *PROGRAMS*

**PROGRAM EP-1**: Coordinate with Nevada County and with other emergency response agencies to update the City's Emergency Operations Plan every five years thereafter. Coordinate with agencies to implement measures, including response to fire, earthquake, blizzard, hazardous materials spills, and other disasters.

**Agency/Departments**: Nevada County Office of Emergency Services and City Fire and Police Departments.

**Funding Source**: Grant funding as it becomes available

**Time Frame**: As soon as grant funding becomes available, but no later than 2025

**PROGRAM EP-2**: Coordinate with Nevada County, Nevada County Consolidated Fire District, CAL FIRE, USFS, Police Department, and other entities providing emergency response to conduct regular emergency response and fire suppression training.

**Agency/Departments**: Nevada County Office of Emergency Services with assistance from City Police and Nevada County Consolidated Fire District

**Funding Source**: General Fund and County funding

**Time Frame**: Ongoing

**PROGRAM EP-3**: In accordance with AB 747, and in collaboration with Nevada County, an evacuation route capacity analysis and evacuation plan shall be conducted concurrently with the production of the Nevada County Local Hazard Mitigation Plan Update. This plan shall include Identifying existing roadways used as evacuation routes that are not compliant with current Fire Safe Regulations and require development standards that meet or exceed the California Fire Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and a plan for bringing emergency ingress and egress requirements of CAL FIRE and City road and driveway standard into conformance and provide alternative methods of evacuation, such as transit, carpooling, and shelter in place. The City shall then adopt new requirements/regulations reflecting recommendations from this plan such as new development mitigation measures, such as restricting residential development within high or very high fire hazard severity zones.

**Agency/Department**: Nevada County Office of Emergency Services in collaboration with Nevada County Consolidated Fire and Protection District, City Engineering, Police and Planning Departments

**Funding Source**: Grant funding or other funds available through collaboration with Nevada County Office of Emergency Services, and potentially cost sharing with General Fund

**Time Frame**: 2023

**PROGRAM EP-4**: To the extent the City has financial resources, the City shall prepare an update to the General Plan Circulation Element to include an overall Circulation Map in accordance with State General Plan laws. This analysis shall incorporate evacuation routes and their capacity, safety, and viability under a range of emergency scenarios from the 2023 Update to the Nevada County Local Hazard Mitigation Plan

**Agency/Department**: City Planning and Engineering Departments

**Funding Source**: Grant funding or other funds available

**Time Frame**: After the Nevada County Local Hazard Mitigation Plan has been adopted between 2023 and 2026

Also See Program FP-1, regarding new development providing adequate evacuation and emergency access in the next section; Fire Hazards and Protection.

### 3. Fire Hazards and Protection (FP)

#### *GOALS*

**GOAL FP-1**: Ensure safety for life and property in both wildlands and developed areas.

**GOAL FP-2**: Enhance fire safety and improve fire protection effectiveness through infrastructure and service improvements.

**GOAL FP-3**: Reduce fire risk to life and property through land use planning, ordinances, and compliance programs.

**GOAL FP-4**: Encourage fire safety education and support programs to promote participation, voluntary compliance, and community awareness of fire safety issues.

**GOAL FP-5**: Reduce fire severity and intensity through fuels management.

#### *POLICIES*

**POLICY FP-1**: Work with NCCFD, Nevada County, and other partner agencies to pursue state and federal grant funds and/or develop a sustainable funding source to provide financial incentives

or assistance for business and residential defensible space, home hardening, and fuels reduction work.

**POLICY FP-2**: Coordinate with utility companies to develop strategies to avoid the ignition of fires from utility equipment and ensure companies are complying with regulations to minimize risk of wildfires.

**POLICY FP-3**: Continue to participate in the California Master Mutual Aid Agreement program and conduct emergency hazard drills with key stakeholder organizations, community groups and organizations, outside agencies, and local and County officials across the community to improve preparedness for known threats and hazard.

**POLICY FP-4**: Work with fire insurance providers to create incentives for property owners who have fire-proofed or flood-proofed their homes and/or businesses to ensure they have fire insurance.

**POLICY FP-5**: Continue making available educational materials and website postings regarding environmental regulations, guidelines, and protection measures that property owners should be aware of and are responsible for when planning and undertaking fuels management activities. These educational materials and website postings shall be available to members of the public on the City's website and at the public counter at City Hall.

**POLICY FP-6**: To provide a better understanding of the benefits of reducing vulnerabilities to wildfire risks through site design, defensible space and building material/design options available with ignition-resistant building materials, continue to outreach and cooperate and support efforts to expand public education programs. To the extent the City has resources available, it shall support public education sponsored by Firewise USA, CAL FIRE, Fire Safe Council, the US Forest Service, the Nevada County Office of Emergency Services, and others.

**POLICY FP-7**: Maintain a web page on the City website that includes a list of agencies and contacts for emergency situations, information about emergency preparedness, links to the CodeRed system, and links to useful resources. This outreach effort must include programs to reach at risk populations.

**POLICY FP-8**: Continue to engage with Firewise USA, Fire Safe Councils, and other networking organizations to improve local and regional coordination when addressing wildfire risks.

**POLICY FP-9**: Encourage fuel modification on public and private forestland, such as the use of prescribed burning and creation and long term maintenance of community fire breaks, fuel breaks in strategic areas located in and around the City such as the Deer Creek Watershed,

**POLICY FP-10**: Continue to help support affordable publicly accessible fuel reduction programs such as the City Slivers and Residential Chipping programs.

**POLICY FP-11**: Ensure and maintain the long-term sustainability of water supplies to meet current and anticipated future firefighting needs.

**POLICY FP-12**: Collaborate with CAL FIRE, the Nevada County Consolidated Fire District, local community organizations, and others to regularly study and develop strategies, including through Community Wildfire Protection Plans that address the change in wildfire risk associated with climate change.

**POLICY FP-13**: Apply and enforce the California Fire Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures) through City and County-adopted ordinances. These regulations include, but are not limited to, requiring and maintaining defensible space that are applicable to State responsibility area lands and lands classified and designated as very high fire hazard severity zones. Defensible space regulations and requirements shall be applied as reflected on current and future maps defined in subdivision (i) of Section 51177 of the California State Government Code.

**POLICY FP-14**: Continue to adopt revisions to the California Fire and Building Codes and other standards, which address fire safety, as they are updated by the State. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices and to comply with the California Fire Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures).

**POLICY FP-15**: Develop and update programs as needed that ensure recovery and redevelopment after a large fire and that reduce future vulnerabilities to fire hazard risks through site preparation, redevelopment layout design, fire-resistant landscape planning, and home hardening building design and materials.

**POLICY FP-16**: Continue to coordinate with PG&E to underground power lines throughout the community, especially in the wildland-urban interface and fire hazard severity zone areas where wildfire risk is greatest.

**POLICY FP-17**: Support and participate with partner agencies, such as Nevada County, the Nevada County Consolidated Protection District, CAL FIRE, Nevada County Fire Safe Council and the City of Grass Valley to develop a local program to identify, prioritize, and fund fuel modification projects, such as community fire breaks and long term maintenance to protect new and existing developments in the Local Responsibility Area, and leverage the California Vegetation Treatment Program (CalVTP) and Program EIR for eligible projects in the State Responsibility Area.

**POLICY FP-18**: Use public and private funding, where available, to the greatest extent practical to assist private landowners in implementing defensible space and building retrofits to achieve a low-risk condition.

**POLICY FP-19**: Continue to require review by the Planning Department and the Fire Department, including NCFD prior to the issuance of development permits for proposed construction projects and conceptual landscaping plans in Very Fire Hazard Severity Zones identified by CAL FIRE and Wildland-Urban Interface Zones.

**POLICY FP-20**: Coordinate with the Nevada Irrigation District, where applicable, to maintain an adequate, long-term water supply for fire suppression needs for the community.

**POLICY FP-21**: Support measures that help firefighting crews and emergency response teams respond to fire hazards or work under low-visibility conditions, such as high-visibility signage for streets and building addresses that meet or exceed the standards in the California Fire Safe Regulations (Sections 1273 and 1274 of the California Code of Regulations – Title 24, Division 1.5, Chapter 7, Articles 2 and 3).

**POLICY FP-22**: Continue to uphold fire-resistant landscaping and defensible space and home hardening requirements for new residential and commercial development All development must comply with Nevada City and California Fire Safe Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures) and the California Water Efficient Landscaping regulations (California Government Code section 65591 et seq).

**POLICY FP-23**: To improve fire flow in some of the older sections of the City, prioritize water main replacement with a goal of replacing over 4 miles of aging water lines in the City.

**POLICY FP-24**: To reduce the potential wildfire spread from City owned forested areas, the City shall remove trees that are dead or are dying from invasion of bark beetle and drought conditions and trees and vegetation in these areas that are determined by the City to be hazardous.

**POLICY FP-25**: Support and coordinate with Nevada County, Nevada County Fire District, and the Nevada County Local Agency Formation Commission, review of development proposals and/or annexations to the City to ensure that land use and development are located where fire and emergency services have sufficient capacity to meet project needs or require that they be upgraded to provide necessary capacity as part of the proposed development activities. This review will also include assuring land uses are appropriate in relation to fire severity interface.

**POLICY FP-26**: New development and major remodel development projects may be required to prepare a project-specific fire hazard and risk assessment and incorporate project-specific risk reduction measures, subject to the determination and approval of the local agency.

**POLICY FP-27:** Support City efforts to enhance fire safety services such as staff support for fire safety and hazardous materials inspections.

### *PROGRAMS*

**PROGRAM FP-1**: In accordance with the California Fire Hazard Reduction Around Buildings and Structures Regulations (Title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) and to address fire safety risks, update the approach to reviewing new development and land use entitlements and to the extent feasible, retrofit development, and include the amendments/updates to regulations/requirements and require a Fire Protection Plan when applicable. This Program shall also ensure that new development be located where fire and emergency services have sufficient capacity to meet project needs or require that they be upgraded to provide necessary capacity as part of the proposed development activities to ensure new development has adequate fire protection and shall include the following provisions:

*Updated Regulations for New Development and Land Use Entitlements:*

a. Provision of public and private standards for road and driveway design, to ensure the ability of emergency service providers to respond to structural and wildland fires and calls for medical and law enforcement emergency assistance. Designs shall provide for secondary road access necessary for fire safety or emergency access;

b. Ensure that each property outside of a developed water system shall maintain water storage to provide wildfire and structure protection on the property;

c. Ensure that sign and address standards for new development as well as retrofit, which will provide for easy identification of roads, streets, driveways and buildings by emergency service providers; and

d. Create measures/standards for defensible space to reduce hazards associated with the structural and wildland intermix, including:

1. Fuel modification and vegetation management procedures adjacent to structures and fuel breaks where appropriate;
2. Vegetation management adjacent to roads and driveways to provide safe travel for residents, and firefighting, medical and police personnel; and
3. Building setbacks.

e. Update building to meet or exceed building hardening requirements in Chapter 7A of the California Building Code or other applicable codes, based on local studies or conditions identified in the local fire hazard and risk assessment.

f. Create a planning process for review of new subdivisions, such as tentative maps and parcel maps, that requires that specific findings be made by the City for these types of land use entitlements that are located within a State Responsible Area or a Very High Fire Hazard Severity Zone.

g. Create a planning process to determine what new and significant remodel project are subject to preparing fire protection plans that incorporate project-specific risk reduction measures, subject to the determination and approval of the local agency.

h. Revise Zoning Code to Prohibit land uses that could exacerbate the risk of ignitions, such as outdoor storage of hazardous or highly flammable materials, outdoor welding, or temporary fireworks sales.

*Fire Protection Plan Requirements:*

1. Risk Analysis
2. Identification of Areas Lacking Service
3. Fire Response Capabilities
4. Fire Safety Requirements – Defensible Space, Infrastructure, and Building Ignition Resistance
5. Mitigation Measures and Design Considerations for Non-Conforming Fuel Modification
6. Wildfire Education Maintenance and Limitations
7. Evacuation Plan

**Agency/Department**: Nevada County Consolidated Fire District in collaboration with CAL FIRE, the Nevada County Office of Emergency Services, City Engineering, Fire, and Planning Departments.

**Funding Source**: General Fund

**Time Frame**: 2024

**PROGRAM FP-2**: Update landscaping standards, such as Chapter 17-80, Zoning Code Performance Standard, to incorporate fire-resistant planting material prohibiting flammable landscaping plantings or materials storage in the structure ignition zone (e.g., within 0–5 feet of the structure). Include in this amendment landscaping standards to address vegetation maturity in the required number of initial plantings and vegetation location/spacing requirements to address long-term defensible space and wildfire protection for the life of the landscaping.

**Agency/Department**: City Planning and Fire Departments in collaboration with Nevada County Fire District

**Funding Source**: General Fund

**Time Frame**: 2024

**PROGRAM FP-3**: Support efforts by partner agencies, such as Nevada County and the City of Grass Valley in developing a comprehensive WUI risk reduction program and associated funding/financing for existing development to improve defensible space, increase home and structural hardening, and increase vegetation and fuels management in wildland areas adjacent to existing development.

**PROGRAM FP-4**: To the extent the City has financial resources, replace 4,000 linear feet (or 0.75 linear miles annually) of water main, including hydrants and water service connections for domestic and fire sprinkler use.

**Agency/Department**: City Engineering and Public Works Department

**Funding Source**: Grants, City Water Fund, and General Fund

**Time Frame**: Annually

**PROGRAM FP-5**: To the extent the City has resources, expand the City's tree maintenance program to reduce the potential wildfire spread from City owned forested areas to include regular monitoring of trees and removing trees that are dead or are dying from invasion of bark beetle and drought conditions and trees and vegetation in these areas that are determined by the City to be hazardous Engineer/or Arborist.

**Agency/Department**: City Engineering and Public Works Department

**Funding Source**: General Fund

**Time Frame**: On-going

### 4. Flood Hazards (FH)

#### *GOAL*

**GOAL FH-1**: Protect life and property by minimizing exposure to flood hazards.

#### *POLICIES*

**POLICY FH-1**: Coordinate with local, regional, state, and federal agencies with responsibility for flood management to minimize flood hazards and improve safety.

**POLICY FH-2**: Continue working with appropriate local, state, and federal agencies (particularly the Federal Emergency Management Agency [FEMA]) to maintain the most current flood hazard and floodplain information based on historical flood behavior and future climate change projections. Use that information as a basis for project review and to guide development in accordance with federal, state, and local standards.

**POLICY FH-3**: To ensure new construction or substantive improvements will not result in increased peak run-off or flood potential, coordinate new development review with responsible State and Federal agencies and require flood/drainage mitigation such as:

a. Avoidance of stream channel modifications;
b. Avoidance of excessive areas of impervious surfaces;
c. Use of on-site retention or detention of storm water;
d. Require building/structural setbacks from drainageways per State and Federal Agency requirements;
e. Require that new development or substantial improvements of existing structures within the 100-year floodplain meet federal and state standards;

f. Incorporate stormwater drainage systems that effectively control the rate and amount of runoff so as to prevent increases in downstream flooding potential.

**POLICY FH-4**: Require stormwater management plans to be climate-informed to respond to large storm and rain-on-snow events and to promote on-site water retention. Promote nature-based methods and best management practices (e.g., bioswales, natural ground cover) to increase permeable surfaces to reduce runoff.

**POLICY FH-5**: Require that new critical facilities (e.g., hospitals, emergency command centers, communication facilities, fire stations, police stations) are located outside of 100-year floodplains. Where such location is not feasible, design these facilities to mitigate potential flood risk to ensure functional operation during a flood event.

**POLICY FH-6**: Encourage treatment of wildfire-burned areas to control stormwater runoff prior to winter rains, particularly in areas prone to landslides. Promote planting and rapid regrowth of fire-resistant vegetation cover using best practices as soon as possible to prevent erosion, protect bare soils, and aid in control of stormwater runoff.

**POLICY FH-7**: Continue to participate in the National Flood Insurance Program (NFIP) to ensure qualification for flood insurance and disaster assistance.

**POLICY FH-8**: The City shall ensure that all new development adheres to all provisions in Chapter 13.20 "Floodplain Management" of the Municipal Code, consider climate models, and update the provisions accordingly to remain consistent with any future federal, state, and local regulatory requirements.

**POLICY FH-9**: The City shall continue monitoring the progress of safety programs conducted by the Nevada Irrigation District (NID) for safety of the Scotts Flat Lake and Deer Creek Diversion dams to reduce the risk of dam failures. The City shall encourage the NID to diligently complete the spillway safety improvement project for the Scotts Flat Lake Dam and to make safety repairs as soon as possible.

**POLICY FH-10**: The City shall collaborate with other key stakeholders, such as Nevada County, Nevada Irrigation District, and Sierra Fund, to identify key impact areas on Dear Creek and Little Deer Creek that are most exposed to post-wildfire debris flows.

### *PROGRAMS*

**PROGRAM FH-1**: To avoid localized flooding at strategic locations, to the extent the City has resources, the City shall collaborate with FEMA, CalTrans, other State and local agencies to make improvements to the drainage system at:

a. The convergence of Deer and Little Dear Creeks;
b. Oregon Ravine through downtown and along Commercial Street;
c. Pioneer Park at Little Deer Creek; and

d. Sacramento Street and Broad Street parking lot (see Appendix B, Annex-B of the Nevada County Local Hazard Mitigation Plan for specific improvements for each location).

**Agency/Department**: Engineering Department

**Funding Source**: Grants

**Time Frame**: 2025-28

**PROGRAM FH-2**: The City shall amend Chapter 13.20 of the Municipal Code, Floodplain Management, to require new critical facilities (e.g., hospitals, emergency command centers, communication facilities, fire stations, police stations) to be located outside of 100-year floodplains unless it is not feasible to do so. The amended regulations may only allow these types of critical facilities to be located in a 100-year floodplain if the design mitigates potential flood to ensure functional operation during a flood event.

**Agency/Department**: Engineering Department

**Funding Source**: General Fund

**Time Frame**: 2024

**PROGRAM FH-3**: The City shall update Chapter 13.20 of the Municipal Code, Floodplain Management, as needed to consider climate models, and update the provisions accordingly to remain consistent with any future federal, state, and local regulatory requirements.

**Agency/Department**: Engineering Department

**Funding Source**: General Fund

**Time Frame**: Ongoing

**PROGRAM FH-4**: The City will work with other stakeholders, such as Nevada County, Nevada Irrigation District, and Sierra Fund, to identify key impact areas on Dear Creek and Little Deer Creek that are most exposed to post-wildfire debris flows. This may include review of the implications this scenario would have on stormwater runoff during larger storm events. This review could result in a set of recommended set of pre-disaster mitigation measures to be implemented to help mitigate impacts from post-wildfire debris flow events. Mitigation measures could include:

- rapid reforestation and stabilization of wildfire-affected areas susceptible to debris flow runoff to stabilize soils;
- communication and coordination with residents and businesses located within potential impact areas from post-wildfire debris flow events; and

- development of analysis techniques to predict debris flow events based on rainfall and moisture conditions.

**Agency/Department**: Fire and Engineering Departments

**Funding Source**: General Fund

**Time Frame**: 2026

### 5. Geologic Hazards/Seismic Activity (GH)

#### *GOAL*

**GOAL GH-1**: Ensure a high level of safety and minimize the loss of life injury, and property damage from earthquake, landslide, severe erosion, and other geotechnical hazards.

#### *POLICIES*

**POLICY GH-1**: In accordance with California Government Code Section 65302 (g)(4)(B), ensure that new development incorporates design and engineering that minimizes the risk of damage from seismically induced surface rupture, ground shaking, ground failure, seiche, slope instability leading to mudslides and landslides, subsidence, and other seismic hazards.

**POLICY GH-2**: Require geologic hazard investigations/reports prepared by qualified geotechnical and soils engineers to review new development that may be located within areas that are known (areas determined to be seismically active by the State Department of Conservation or potentially have geologic concerns, such as steep slopes and/or areas of unstable soil. Such investigations shall include recommended mitigation of significant geologic hazards if identified. The City shall require mitigation as may be recommended in these reports.

**POLICY GH-3**: Encourage upgrading of unreinforced masonry buildings to prevent disastrous earthquake damage. Also encourage retrofitting of structures, particularly older buildings, to withstand landslides.

**POLICY GH-4**: Ensure that new construction meets current structural and safety standards.

**POLICY GH-5**: Consult with agencies as needed, such as the California Department of Conservation and Sierra Fund to evaluate the potential subsidence impacts from mining on new development depending on location in proximity to known mines.

#### *PROGRAMS*

**PROGRAM GH-1**: Investigate the need and resource availability for preparing a Mineral Management Element of the General Plan and a Mining and Reclamation Ordinance to address hazardous mining issues and new mining projects. This shall include applying a new approach to

reviewing new development and land use entitlements and include the amendments/updates to regulations/requirements as follows:

a. Provision of public and private standards for road and driveway design which will ensure and enhance the ability of emergency service providers to respond to structural and wildland fires and call for medical and law enforcement emergency assistance. The standards shall provide for secondary road access to new projects where necessary for fire safety or emergency access;
b. Ensuring that each property outside of a developed water system shall maintain sufficient usable water storage to provide wildfire and structure protection on the property;
c. Ensuring that sign and address standards, which will provide for easy identification of roads, streets, driveways and buildings by emergency service providers; and
d. Creating measures/standards to reduce hazards associated with the structural and wildland intermix, including:

1. Fuel modification and vegetation management procedures adjacent to structures and fuel breaks where appropriate;
2. Vegetation management adjacent to roads and driveways to provide safe travel for residents, and firefighting, medical and police personnel; and
3. Building setbacks.

**Agency/Department**: Nevada County Consolidated Fire District in collaboration with CAL FIRE, the Nevada County Office of Emergency Services, City Engineering, and Planning Departments.

**Funding Source**: General Fund

**Time Frame**: 2024

### 6. Hazardous Materials and Mining Hazards (HM)

#### *GOAL*

**GOAL HM-1**: Protect public health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials and waste.

#### *POLICIES*

**POLICY HM-1**: When locating new on and off-site hazardous waste management facilities, the City shall follow the procedures set forth in California State Health and Safety Code Division 20, Chapter 6.5, Article 8.7 Procedures for the Approval of New Facilities, with the objective of minimizing safety hazards associated with hazardous material and hazardous waste incidents.

**POLICY HM-2**: Comply with the Nevada County Hazardous Materials Area Plan which provides direction and establishes the policies, responsibilities, and procedures required to protect the health and safety of the City. County's citizens, the environment and public and private property from the effects of hazardous materials emergency incidents. As the principal guide for agencies

of Nevada County, the Area Plan shall maintain consistency with the National Incident Management System (NIMS), which is the framework for incident management where government and private entities at all levels can work together effectively. Operational as well as a reference document, the Area Plan may be used for pre-emergency, as well as a resource for emergency response.

**POLICY HM-3**: Promote prompt clean-up and/or remediation of sites contaminated by mine wastes or other hazardous materials. The City shall not grant any discretionary or ministerial land use entitlement to develop or change boundaries or reconfigure parcels believed on properties known to be contaminated, unless and until the nature, extent, type and location of the contamination is determined and satisfactory arrangements are made for clean-up or remediation, in accordance with City and/or State and local regulations.

**POLICY HM-4**: Continue to coordinate with the Nevada County Environmental Health Department in the review of all projects that require the use, storage, or transport of hazardous materials and waste to ensure necessary measures are taken to protect public health and safety.

**POLICY HM-5**: Continue to cooperate with Nevada County and Waste Management of Nevada County to facilitate opportunities for safe disposal of household hazardous waste and development of public education programs to help residents understand the importance of proper disposal of hazardous waste as climate conditions change.

### *PROGRAMS*

**PROGRAM HM-1**: To the extent resources are available, the City shall convert the City's Wastewater Treatment Plant from using chlorine gas to using liquid chlorine or other measures to avoid the potential of a hazardous gas release (from the Nevada County Local Hazard Mitigation Plan.

**Agency/Department**: Engineering Department

**Funding Source**: Grants

**Time Frame**: 2025 or sooner, upon securing grants

## 7. Public Safety Services and Facilities (SF)

### *GOALS*

**GOAL SF-1**: Support efforts to improving an efficient and effective system of health and emergency services.

**GOAL SF-2**: Ensure adequate public safety services and facilities are provided to the Community of Nevada City.

### *POLICIES*

**POLICY SF-1**: Maintain appropriate levels of safety and protection services and facilities.

**POLICY SF-2**: Consider the following in the review of new development and land use entitlements:

a. The ability of law enforcement personnel to protect multi-family, commercial, industrial, and business park uses, including but not limited to:

1. exterior lighting of building and parking areas; and
2. vegetation management to provide adequate view of parking areas, building entrances, other areas accessible to the public and maintenance of defensible space.

b. Standards to ensure adequate site and building access for fire and emergency medical access.

**POLICY SF-3:** To the extent the City has resources, support efforts to retrofit existing public safety services and critical facilities to comply with fire safety regulations, such as California Fire Safety Regulations, such as Title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations).

**POLICY SF-4:** To the extent feasible support efforts to locate new public safety services and critical facilities in locations in lower risk hazard areas.

## 8. Severe Weather (SW)

### *GOAL*

**GOAL WH-1**: Minimize injury and property damage due to severe weather hazards (rain, snow, lightning, and high winds).

### *POLICIES*

**POLICY SW-1**: Support efforts by the County and other local agencies in coordination of multi-jurisdictional preparedness programs and coordinating public awareness of emergency preparedness that educate the public for potential severe weather hazards by:

a. Providing education opportunities to local community groups; and

b. Distributing and website posting of the latest educational documents on emergency preparedness.

**POLICY SW-2**: Establish and maintain one or more community resilience hubs to better support the needs of vulnerable populations during extreme climate events, such as extreme heat days and smoke events, including, but not limited to health assistance and resources, food

refrigeration, charging stations, basic medical supplies, other emergency supplies, and language-appropriate outreach.

**POLICY SW-3**: Require that the City's critical facilities have adequate backup power sources and battery storage in order to minimize service disruptions during climate hazard events.

**POLICY SW-4**: Support efforts by the Nevada County and local community organizations, to establish extreme heat and air quality monitoring systems and develop accessible and language appropriate community education resources to prepare community members for increase extreme heat events and air pollution.

**POLICY SW-5**: To the extent the City has resources, support equitable access to climate controlled indoor spaces including efforts by community organizations, faith-based organizations, businesses, local government entities in Nevada County, and other institutions to improve access to weather shelters to reduce exposure to extreme heat, flooding, cold, and smoke.

### *PROGRAM*

**PROGRAM SW-1**: Continue to collaborate with Nevada County and local community organizations, such as Sierra Roots, to establish and maintain weather shelters in the City to reduce exposure to extreme heat, cold, and smoke.

## 9. Noise Exposure (NE)

### *GOALS*

**Goal NE 1**: Protect the existing and future citizens of Nevada City from the harmful effects of exposure to excessive noise.

**Goal NE-2**: Provide flexibility in the review of development of infill and mixed-use properties or properties near the Downtown area which may be located in elevated noise environments.

**Goal NE-3**: Develop strategies for abating excessive noise exposure through appropriate mitigation measures in combination with appropriate zoning to avoid incompatible land uses.

**Goal NE-4**: Provide information regarding the community noise environment so that existing and potential future noise impacts may be effectively addressed in the land use planning and project review processes.

**Goal NE-5**: Recognize that concerts and tourism-related events contribute to the vitality and character of the City and to develop strategies for balancing the acoustical requirements of both residents and such businesses and events.

**Goal NE-6**: Recognize that the City of Nevada City allows Short-Term Vacation Rentals in residential areas and that the City applies the residential standards contained herein uniformly to all residential zones.

**GOAL NE-7**: Encourage public awareness of noise and its hazards and means to minimize its existing and future impacts.

### *POLICIES*

**Policy NE-1**: The Noise Exposure section of the City's Climate Adaptation and Public Safety Element constitutes the City's Noise Element of the General Plan in accordance with California Government Code Section 65302(f).

**Policy NE-2**: Protect existing noise-sensitive land uses from encroachment by new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.

**Policy NE 3**: Table 4 (Standards for New Uses Affected by Traffic Noise Transportation Sources) and Table 5 (Standards for Locally Regulated non-transportation Sources) shall be used as the City's noise standards for to determine environmental thresholds of significance (excluding exceptions) for land uses.

**Policy NE-4**: The Noise Exposure Section standards in the Climate Adaptation and Public Safety Element are applicable to proposed new uses. For resolving conflicts between existing uses, the City's Noise Ordinance shall be applicable.

**Policy NE-5**: To provide a comprehensive approach to noise control, the City shall:

a. Develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.
b. Develop and employ procedures to monitor compliance with the standards of this Public Safety Element/Noise Exposure Section after completion of projects where noise mitigation measures were required.

**Policy NE-6**: Coordinate noise control programs with Nevada County.

**Policy NE-7**: The noise level standards for noise-sensitive areas of new uses affected by traffic noise sources in Nevada City shall be based on Table 4 as shown below.

**Policy NE-8**: Where future traffic noise levels at new uses proposed within Nevada City are predicted to exceed the noise level standards of Table 4, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 4 standards at the noise-sensitive areas of the proposed uses as shown below.

**Policy NE-9**: For capacity-enhancing roadway projects, the construction of new roadways, or projects which will substantially increase traffic on the local roadway network, a noise analysis shall be prepared. If pre-project traffic noise levels already exceed the noise standards as shown in Table 4 as shown below and the increase is significant as defined below, noise mitigation measures should be considered to reduce the project-related traffic noise level increases to less than significant levels.

### *Table 4 Noise Standards for New Uses Affected by Traffic Noise Nevada City Public Safety Element/Noise Exposure Section*

| Land Use | Noise Sensitive[1] | Noise Sensitive Interior Spaces[2,3] | |
|---|---|---|---|
| | Outdoor Area – DNL[7] | DNL[7] | Leq[5,8] |
| Residential | 65 | 45 | --- |
| Mixed Use Residential | --- | 45 | --- |
| Sensitive Uses Located within the Broad Street Commercial Area | 70 | 45 | --- |
| Transient Lodging, Hospitals[4] & Nursing Homes | 65 | 45 | --- |
| Theaters & Auditoriums | --- | --- | 35 |
| Churches, Meeting Halls, Libraries | 65 | --- | 40 |
| Schools[6] | --- | --- | 40 |
| Office/Professional | 65 | --- | 45 |
| Commercial/Retail Buildings | --- | --- | 50 |
| Playgrounds, Parks, etc. | 70 | --- | --- |
| Industrial | --- | --- | 50 |

Notes:

1. Noise sensitive areas are defined in the acoustic terminology section. Where there are no sensitive exterior spaces proposed as part of the new use, only the interior noise level standards shall apply.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
4. As determined for a typical worst-case hour during periods of use.
5. Exterior areas of school uses are not typically noise-sensitive. As a result, the standards for schools are focused on the interior office and classroom spaces.
6. DNL = Day – Night Average Level. Represents 24-hour average of noise with noise occurring during nighttime hours (10 pm to 7 am) penalized by 10 dB prior to averaging.
7. Leq = Average or "Equivalent" noise level. Represents the energy average of all noise occurring during a given period (typically 1-hour).

**Policy NE-10**: Encourage local law-enforcement agencies to enforce the vehicle noise level limits specified within the California Motor Vehicle Code.

**Policy NE-11**: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing fixed / non-transportation noise sources in Nevada City are shown by Table 5 as shown below.

**Policy NE-12**: Where the noise level standards of Table 5 as shown below are predicted to be exceeded at a proposed noise-sensitive area due to existing fixed noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 5 standards within the identified noise-sensitive areas of the proposed use.

**Policy NE-13**: Where a project would result in the introduction of new fixed / non-transportation noise sources where such sources do not currently exist, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards at noise-sensitive areas of existing uses located in the project vicinity as shown in Table 5 below.

**Policy NE-14**: If a noise-generating use is proposed adjacent to vacant lands currently zoned for uses which may be developed with exterior noise sensitivity, the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with Table 5 as shown below using reasonable assumptions pertaining to both the likely sensitivity of the receiving land use and the noise generation of the project. At such time as that noise-sensitivity is introduced on the vacant parcel, the noise-generating use will be responsible for complying with the City's Noise standards.

**Policy NE-15**: Due to variations in types of both noise-generating and noise-sensitive land uses, as well as variations in ambient conditions in the City, the City shall have the ability to set noise standards which are up to 5 dB higher or lower than as shown in Table 5 below if determined appropriate by the Planning Commission and/or City Planning department staff

**Policy NE-16**: If noise-reducing pavement is to be utilized in conjunction with a roadway improvement project, or if such paving exists adjacent to a proposed new noise-sensitive land use, the acoustical benefits of such pavement shall be included in the noise analysis prepared for the project.

***Table 5 Noise Standards for Locally Regulated (non-transportation) Noise Sources – Nevada City Public Safety Element/Noise Exposure Section***

| Receiving Land Use | Period[3] | Exterior Areas[1] | | Interior Spaces[2] | |
|---|---|---|---|---|---|
| | | Lmax[4] | Leq[5] | Lmax[4] | Leq[5] |
| Residential | Day | 75 | 55 | 60 | 45 |
| | Evening | 70 | 50 | 55 | 40 |
| | Night | 65 | 45 | 45 | 35 |
| Mixed Use Residential | Day | --- | --- | 60 | 45 |
| | Evening | --- | --- | 55 | 40 |
| | Night | --- | --- | 45 | 35 |
| Transient Lodging Hospitals[7] & Nursing Homes | Day | 75 | 60 | 60 | 45 |
| | Evening | 75 | 55 | 55 | 40 |



RPC 2(b)(i)(2)

| Receiving Land Use | Period[3] | Exterior Areas[1] | | Interior Spaces[2] | |
|---|---|---|---|---|---|
| | | Lmax[4] | Leq[5] | Lmax[4] | Leq[5] |
| | Night | 70 | 50 | 45 | 35 |
| Sensitive Uses Located within the Broad Street Commercial Area | Day<br>Evening<br>Night | 80<br>75<br>70 | 60<br>55<br>50 | 60<br>55<br>45 | 45<br>40<br>35 |
| Theaters & Auditoriums | Day<br>Evening<br>Night | 75<br>70 | 55<br>50 | 40<br>40<br>40 | 35<br>35<br>35 |
| Churches, Meeting Halls, Libraries | Day<br>Evening | 75<br>70 | 55<br>50 | 55<br>55 | 45<br>40 |
| Schools[8] | Day<br>Evening | ---<br>--- | ---<br>--- | 55<br>55 | 40<br>40 |
| Office/Professional | Day<br>Evening | 80<br>75 | 60<br>55 | 60<br>60 | 45<br>45 |
| Commercial/Retail Buildings | Day<br>Evening | 85<br>80 | 65<br>60 | 60<br>60 | 50<br>50 |
| Playgrounds, Parks, etc. | Day<br>Evening | 75<br>75 | 55<br>55 | ---<br>--- | ---<br>--- |
| Industrial | Day<br>Evening | 80<br>75 | 60<br>55 | 60<br>60 | 50<br>50 |

Specific Notes:

1. Noise sensitive areas are defined acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, as defined in the acoustic terminology section, with windows and doors closed.
3. Daytime hours = 7 am – 7 pm, Evening hours = 7 pm – 9 pm, Nighttime hours = 9 pm – 7 am.
4. Lmax = Highest measured sound level occurring during a given interval of time (Typically 1 hour).
5. Leq = Average or "Equivalent" noise level during the worst-case hour in which the building is in use.
6. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
7. Exterior areas of school uses are not typically noise-sensitive. As a result, the standards for schools are focused on the interior office and classroom spaces.

General Notes Applicable to All Noise Standards and Land Uses:

a. Where the noise source in question consists of speech or music, or is impulsive in nature, or contains a pure tone, the noise standards of this table are reduced by 5 dB. This provision does not apply to permitted amplified music events occurring within Pioneer Park.
b. Where ambient noise levels exceed the noise level standards shown above, the noise standards shall be increased in 5 dB increments to encompass the ambient.
c. Reductions in the noise standards for noise sources identified in general note "A" above shall be applied after any increases warranted by elevated ambient conditions prescribed in general note "B", subject to verification through a noise study.
d. These standards shall not apply to noise generated at the existing Nevada County Sportsman Club or activities at public parks provided such activities have secured a permit from the planning department.

**Policy NE-17**: Noise mitigation measures shall be considered where feasible at existing noise-sensitive uses or areas affected by existing traffic noise exposure exceeding 65 dB DNL.

### *Short-Term Vacation Rentals Policies*

**Policy NE-18**: Recognize the need for Short-Term Vacation Rentals in residential areas and that the City applies the residential standards contained herein uniformly to all residential zones.

**Policy NE 19**: Noise generated by temporary occupants of Sort-Term Vacation Rentals shall not exceed the noise standards of Table 5 as shown above at the noise-sensitive areas of any land uses located within the City of Nevada City.

**Policy NE-20**: Recognize that concerts and tourism-related events contribute to the vitality and character of the City and to develop strategies for balancing the acoustical requirements of both residents and such businesses and events.

**Policy NE-21**: For events which include amplified speech and/or music held within Nevada City Parks and Recreation facilities, the facility rental policies shall be applied, including limitations on hours of operation and adherence to the noise requirements contained within the rental policies.

**Policy NE-22**: For events which include amplified speech and/or music held within areas of Nevada City which are not Nevada City Parks and Recreation facilities, the noise standards of Table 5 as shown above shall be applicable at the noise-sensitive areas of the receiving land uses.

**Policy NE-23**: Until such time as the noise standards contained within the Nevada City Code of Ordinances, Section 8.20 are updated to be consistent with the standards contained within Table 5 as shown above, the City shall recognize that the noise standards contained within Section 8.20 represent average (Leq) noise levels, not maximum (Lmax) noise levels.

**Policy NE-24**: Require all applications for temporary event or facility permits, such as a facility rental contract, for venues at which amplified speech or music are proposed 3 or more times in a calendar year to be accompanied by a project-specific noise analysis demonstrating that the project can comply with Table 5 as shown above.

**Policy NE-25**: All noise analyses prepared to determine compliance with the noise level standards as referenced in Table 4 and Table 5 as shown above and shall:

a. Be the responsibility of the applicant.
b. Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.
c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
d. Estimate projected future (20 year) noise levels in terms of the Standards of Table 4 and Table 5 (as shown above), and compare those levels to the adopted policies of this Climate Adaptation and Public Safety Element.
e. Identify potentially significant noise results, recommend appropriate mitigation to achieve compliance with the adopted policies and standards of this Climate Adaptation and Public Safety Element.
f. If mitigation is recommended, estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.

**Policy NE-26**: Noise analyses prepared for multi-family residential projects, townhomes, mixed-use, condominiums, or other residential projects where floor ceiling assemblies or party-walls

shall be common to different owners/occupants, shall be consistent with the State of California Noise Insulation standards.

**Policy NE-27**: All projects that propose to use heavy construction equipment that have the potential to create vibrations that could cause structural damage to sensitive structures within 100 feet shall be required to submit a pre-construction vibration study prior to the approval of a building permit. Projects shall be required to incorporate specified measures and monitoring identified to reduce impacts. Pile driving or blasting are illustrative of the type of equipment that could be subject to this policy. The Federal Transit Administration (FTA) criteria shall be utilized for the assessment of vibration-related impacts.

**Policy NE-28**: Where exterior noise mitigation is required to achieve satisfaction with the noise standards of either Table 4 or Table 5 (as shown above), the following priorities for mitigation shall be observed where feasible as follows:

a. Use of setbacks or open space buffers.
b. Incorporate site planning to orient and/or shield sensitive exterior areas from the noise source in question.
c. If the noise source is fixed, utilize quieter equipment or implement noise control at the source.
d. Solid walls should be considered a last resort for the mitigation of exterior noise levels and, if feasible, should be placed on earth berms where feasible to lessen their apparent height.

**Policy NE-29**: Construction and demolition activities located within 1,000 feet of noise-sensitive land uses shall occur during the hours of 7 am – 7 pm, excluding Sundays and Federal Holidays, subject to the conditions imposed by City permit.

**Policy NE-30**: Construction activities occurring between the hours of 7 pm and 7 am must comply with the interior noise level standards identified in Table 5 unless an exception has been granted by the City Planning Department.

**Policy NE-31**: The following sources of noise shall be exempt from the provisions of this Noise Exposure Section:

a. Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and emergency generators which are activated during power outages. The routine testing of such warning devices and equipment, including generators, is also exempt provided such testing occurs during daytime hours.
b. All activities occurring at public schools and public school playgrounds and sporting fields, as such activities are not regulated at the local level.
c. Activities associated with temporary events for which a permit has been obtained from the City (i.e., parades, fireworks displays, festivals, etc.).
d. In the event of emergencies, the City shall have the authority to waive the requirements of this Element as deemed appropriate.

### *PROGRAMS*

**Program NE-1**: Amend the City's Noise Ordinance to be consistent with this Climate Adaptation and Public Safety Element to:

a. Reference maximum noise exposure levels by use/zoning district to minimize exposure to excessive noise at nighttime hours consistent with Table 4 and Table 5 (as shown above).
b. Include designating reasonable commercial activity loading/unloading hours. Also, these regulations will establish and enforce noise regulations which set limits on intensity and hours of truck routes within city jurisdiction.
c. Establish and enforce noise abatement requirements for new development in mixed-use and commercial centers/corridors.
d. Exempt certain sources from full compliance with the regulations.
e. Contain restrictions for special events in private and public places.

**Agency/Department**: Police and Planning Departments

**Funding Source**: General Fund

**Time Frame**: Two Years-2025

## 10. Other Safety Considerations (OC)

### *Overall Other Considerations*

The goal below is for all Other Considerations.

#### GOAL

**GOAL OC** – Reduce the exposure to, increase preparedness for, and reduce recovery times from natural and human-caused safety risks for all communities and populations in the City.

#### POLICIES

**POLICY OC-1**: The Nevada County Local Hazard Mitigation Plan is periodically reviewed and updated in accordance with the Federal Disaster Mitigation Act of 2000 and Government Code 65302.6, is incorporated into this Safety Element by reference.

**POLICY OC-2**: Continue to conduct an annual assessment of capital improvement needs and research of available funding sources for funding programs identified in this Safety Element.

#### Power Shutoff Events and Improved Power Grid Safety

**POLICY OC-3**: Through collaboration with Nevada County, the Grass Valley Fire Department, the Nevada County Consolidated Fire District, and other agencies, coordinate with Pacific Gas and Electric power shutoffs.

**POLICY OC-4**: Work with utility companies to determine the feasibility of undergrounding utility lines during construction of new developments and in the most at-risk areas, and to identify funding mechanisms to support undergrounding activities.

### Military Land Use Compatibility

**POLICY OC-5**: Ensure early notification to the military of proposed discretionary development projects within the Military Operation Area (MOA) by implementing California Government Code Sections 65352 (a)(5) and (6)(A), 65940, and 65944 to facilitate the exchange of project related information pertinent to military operations within the MOA.

### Environmental Justice

Although an environmental justice element is not required by statute, the City intends to meet the intent of environmental justice with the following policies:

*POLICIES*

**POLICY OC-6**: Ensure that public emergency operations' (including evacuation routes) educational materials are available via different platforms and in formats that are understandable by the public, including non-English readers.

**POLICY OC-7**: Ensure that Nevada City emergency facilities and services are located and/or can respond equitably to the emergency needs of vulnerable populations and communities.

**POLICY OC-8**: Work with other jurisdictions and agencies to prepare for public safety power shutoffs and shall be supportive of viable plans to provide resources for the community and vulnerable populations during and after public safety power shutoff events.

**POLICY OC-9**: Prioritize programs and investments aimed at addressing climate change impacts and supporting community resilience for vulnerable populations, such as seniors, children, individuals with existing health conditions, individuals who live or work outdoors, and lower-income residents.

**POLICY OC-10**: Help support efforts to educate the public about the health impacts of poor air quality from wildfire smoke through education and outreach, focusing on protection of vulnerable populations including youth and seniors.

**POLICY OC-11**: Prioritize the needs of at-risk, vulnerable, and disadvantaged populations during emergency response and disaster recovery efforts, including increasing awareness of defensible space requirements and promoting understanding of evacuation routes.

### Water Quality

*POLICY*

**POLICY OC-12**: The City shall support programs that reduce pollution impacts within its watershed.

*PROGRAMS*

**PROGRAM OC-13**: To the extent the City has resources, to avoid sedimentation impacts on Deer Creek, improve the water intake system at the City's Water Treatment plan (see Appendix B, Annex-B of the Nevada County Local Hazard Mitigation Plan for specific improvement details and costs).

**Agency/Department**: Engineering Department

**Funding Source**: Grants and General Fund

**Time Frame**: 2025 or sooner, upon securing grants

### Reduced Carbon Footprint:

*POLICIES*

**POLICY OC-13**: The City shall encourage the use of electrical vehicles and equipment when practical as a preference in its procurement process.

**POLICY OC-14**: The City shall promote the installation of electrical vehicle charging stations.

**POLICY OC-15**: The City shall continue to promote alternative transportation modes, such as walking and bicycle trails.

**POLICY OC-16**: The City shall continue to promote the use of solar power, such as solar panels that shade parking lots.

*PROGRAMS*

**PROGRAM OC-14**: To the extent the City has resources and to promote electrical vehicle use, the City shall install electrical vehicle charging stations within City parking areas, along heavy use public streets and parking devoted to City employees.

**Agency/Department**: All City Department

**Funding Source**: Grants and General Fund

**Time Frame**: Establish pilot program in 2024 and ongoing

**PROGRAM OC-15**: The City shall amend its procurement procedures to promote the use and replacement of vehicles and equipment, where practical with electric systems.

**Agency/Department**: All City Department

**Funding Source**: Grants and General Fund

**Time Frame**: 2023

### Miscellaneous

*POLICY*

**POLICY OC-17**: All programs identified in this Climate Adaptation and Public Safety Element should periodically be reviewed by the City to address to changing public safety plans and programs and the Plan programs may be amended as needed to comply with the intent and purpose of all goals and policies of this Plan without substantially amending the Climate Adaptation and Public Safety Element.

*PROGRAM*

**PROGRAM OC-16**: The City Planning Commission shall annually review the Climate Adaptation and Public Safety Element programs as needed to comply with the intent and purpose of all goals and policies to address changing public safety plans and programs that relate to this Plan, Any changes to the programs in this Plan that comply with the intent and purpose of this Plan shall be subject to approved by resolution of the City Council. However, substantial changes to goals, policies, and/or programs in this Plan, that result in inconsistencies with the General Plan or that affect internal consistencies between goals and policies of this Plan shall be subject to a General Plan Amendment.

**Agency/Department**: All City Departments, the Planning Commission, and the City Council

**Funding Source**: General fund

**Time Frame**: Annually

# Section 6 APPENDICES

APPENDIX A – CLIMATE VULNERABILITY ASSESSMENT AND RESULTS
APPENDIX B – ANNEX-B OF THE NEVADA COUNTY LOCAL HAZARD MITIGATION PLAN
APPENDIX C – NOISE ELEMENT/EXPOSURE BACKGROUND REPORT
APPENDIX D – LIST OF CRITICAL PUBLIC FACILITIES
APPENDIX E – PUBLIC PARTICIPATION
APPENDIX F – TERMS AND DEFINITIONS
APPENDIX G – REFERENCES

APPENDIX H – ENVIRONMENTAL INITIAL STUDY/ NEGATIVE DECLARATION



RPC 2(b)(i)(2)