



NEVADA COUNTY PLANNING COMMISSION
STAFF REPORT

APPLICANT: Nevada County

HEARING DATE: January 9, 2020

FILE NO: PLN19-0064; GPT19-0002; EIS19-0005

PROJECT: Recommendation to the Board of Supervisor for proposed amendments to the Nevada County General Plan Chapter 10, Safety Element.

LOCATION: Unincorporated area of Nevada County

ASSESSOR'S PARCEL NUMBER: N/A

PROJECT PLANNER: Sadie Caldas, Associate Planner

ATTACHMENTS:

1. Draft Board Resolution and Initial Study / Negative Declaration (EIS19-0005)
2. Draft Board Resolution and Safety Element Update (GPT19-0002)
3. Draft Safety Element with Track Changes
4. Board of Forestry and Fire Protection Assessment
5. Public and Agency Comments

RECOMMENDATIONS:

- I. Environmental Action: Recommend that the Board of Supervisors after reviewing and considering the proposed Negative Declaration, adopt the attached draft Resolution approving the proposed Negative Declaration (EIS19-0005), finding that the adoption reflects their independent judgment that the project will not result in a physical change to the environment (*Attachment 1*).
 - II. Project Action: Recommend that the Board of Supervisors adopt the attached draft Resolution approving the proposed amendments to the Nevada County General Plan Chapter 10, Safety Element update (GPT19-0002) (*Attachment 2*).
-

STAFF COMMENT:

Background

According to *General Plan Guidelines* by the Governor's Office of Planning and Research (OPR), the purpose of a general plan is to guide land use planning decisions. Land use projects, zoning ordinances and specific area plans are required to conform to the County's General Plan. State law requires that the general plan takes a long-term perspective, since it is a guide that may be in

place over several years and affects current and future generations. The Safety Element applies to all unincorporated areas of Nevada County that are governed by Nevada County, which includes privately-owned parcels in all zoning districts and General Plan designations. The project area excludes incorporated cities, and state and federal lands in Nevada County.

The last update to the Safety Element occurred in 2014. This update is required pursuant to Government Code Section 65302(g), upon the County's recent adoption of the Housing Element (2019) and the 2017 update to the Local Hazard Mitigation Plan (adopted in 2018). This code section has requirements for what a Safety Element must contain and when updates are required. The draft Safety Element has been prepared to meet the requirements of Government Code Section 65302(g).

Project Description

The project being proposed is for an update to the General Plan's Safety Element (Chapter 10). The draft Safety Element is being presented to the Planning Commission for consideration and a recommendation to the Board of Supervisors. The Safety Element addresses potential and existing hazards in the County, which are outlined in the following categories: Emergency Preparedness, Geological Hazards/Seismic Activity, Flood Hazards, Airport and Military Airspace Hazards, Hazardous Material and Mining Hazards, Public Safety Services and Facilities, Fire Hazards and Protection, and Severe Weather Hazards. Senate Bill 379 (approved in 2015) requires that the risks of climate change are identified in the Safety Element update, and Senate Bill 1000 (approved in 2016) requires that environmental justice policies and goals are integrated into elements of the General Plan. To comply with these requirements, two additional categories for Climate Change Resiliency and Mitigation, and Environmental Justice have been added to the Safety Element. Throughout the rest of the Safety Element there have been several other revisions, to include but not limited to: 1) updating the data, information and references with more current sources; 2) incorporating additional language to comply with new and/or amended California State Laws; 3) revising policies where progress has been made or where changes in situations have occurred; and 4) incorporating the 2017 Local Hazards Mitigation Plan. With these updates, additional information on the following topics has been included: statutory requirements, land use influences, Nevada County evacuation notification categories, earthquakes, subsidence, dam failure, mining hazards, wildland fires, fire protection plans and programs, power outages, and severe weather hazards. The goals, policies and programs in the Safety Element have been updated to reflect the current discussion and hazards in the Safety Element revisions.

Among several sections that have been updated to include more relevant information, the draft Safety Element removed specific details and requirements that are in policies and regulations that can frequently change. By referencing these requirements instead of listing the specific details of the requirements, the Safety Element will maintain relevancy and can be utilized appropriately as a long-term policy guide. Specifically, there are several proposed revisions to the fire protection policies that include specific requirements of the Nevada County Defensible Space Standards. Instead of listing all of the defensible space requirements in the Safety Element, the draft has proposed policies that require application and enforcement of these regulations. Therefore, as fire safety standards are updated over time, the Safety Element will stay current with a reference to these regulations and it will not have policies that become outdated.

Relationship to Government Code Sections

The following State of California Government Code Sections directly relate to the proposed Safety Element update:

- Section 65302(g) establishes the requirements of the contents of a Safety Element.
- Section 65302(g)(3) requires that upon the next revision of the Housing Element update on or after January 1, 2014, the Safety Element shall be reviewed and updated as necessary to address fire risks for land classified as state responsibility areas and land classified as very high fire hazard severity zones.
- Section 65302(g)(4) requires that upon the next revision to the Local Hazard Mitigation Plan on or after January 1, 2017, the Safety Element shall be reviewed and updated as necessary to address climate adaptation and resiliency strategies.
- Section 65302(g)(7) requires that the County consults with the California Geological Survey of the Department of Conservation and the Office of Emergency Services prior to revising the Safety Element.
- Section 65302(g)(8)(h)(1) requires that an environmental justice goals, policies and objectives are integrated into elements of the General Plan.
- Section 65302.5 requires that the draft Safety Element is submitted to the State Board of Forestry and Fire Protection to review and provide recommendations. The section requires that the Board of Supervisors for the County shall consider the recommendations and communicate in writing to the State Board of Forestry and Fire Protection if any of the recommendations are not accepted. This section also requires that the draft Safety Element is submitted to the California Geological Survey of the Department of Conservation and that the legislative body shall consider the findings made by the division.
- Section 65302.6 authorizes counties to adopt a local hazard mitigation plan with its safety element.
- Section 65302(g)(5) requires that after this revision to the Safety Element, the Safety Element shall be reviewed upon each revision to the Housing Element or Local Hazard Mitigation Plan, but not less than once every eight years.

Proposed Amendments

The draft Safety Element and the attached version with track changes (Attachment 3) has all of the proposed revisions to the Safety Element. The list of proposed amendments below is a brief summary of revisions to each category in the Safety Element.

1. Introduction and Setting

- Provided the purpose of the Safety Element and added Climate Change Resiliency and Mitigation, and Environmental Justice to the list of categories.

2. Statutory Requirements

- This section has been added to the Safety Element to explain statutory requirements by the Governor's Office of Planning and Research, the Federal Emergency Management Agency, the Nevada County Office of Emergency Services, the California Department of Forestry and Fire Protection, and the California Geological Survey of the Department of Conservation.

3. Emergency Preparedness

- Land Use Influences – Discussion on Land Use Influences has been added.
- Emergency Plans and Guides – Hazards from the Local Hazard Mitigation Plan (LHMP) have been updated in the Emergency Plans and Guides discussion, along with minor text edits and the removal of expired information/dates.
- Emergency Notification System – Minor text edits and updated information.
- Evacuation Planning – Minor text edits and additional information on local roads.
- Nevada County Evacuation Notification Categories – This section was added to provide information on evacuation notification categories and rescue services.
- Policies – Several policy updates have been made.

4. Geological Hazards/Seismic Activity

- Avalanches – No changes.
- Landslides, Debris and Mud Flows – Minor text amendments and additional information on soil and infrastructure hazards have been included.
- Earthquakes – Updated this section to more current information.
- Subsidence – This section was added to discuss hazards from subsidence, with descriptions of areas that are more prone to risks, including mining sites, karst, and the drawdown of groundwater.
- Policies – Redundant and impractical policies were removed.

5. Flood Hazards

- Flooding – Minor text amendments and added information on frequency, causes of flooding, and impacts.
- Dam Failure – There have been several revisions to this section, including the categories for downstream hazard potential, a list of dams in Nevada County that have a hazard rating of high and extremely high, and discussion of additional laws and requirements in place after the failure of the Oroville Dam.
- Seiches – No changes.
- Policies – Slight text amendments to current policies and a policy has been added.

6. Airport Hazards

- Airport Land Use Compatibility Plan – Minor text amendments.
- Military Airspace Compatibility – No changes.
- Program – One program has been removed.

7. Hazardous Materials and Mining Hazards

- Minor text amendments and additional information on mining hazards.

- Policies – Text amendments have been made to existing policies and one policy has been added.
8. Public Safety Services and Facilities
- Policies and Programs – There have been text amendments to the policies in this section and the addition of two programs.
9. Fire Hazards and Protection
- Wildland Fires – There have been several revisions to this section in order to update information on hazards, causes of hazards and wildfire behavior. A figure on wildfire behavior has been added. References to past fires and the amount of damaged they caused have been removed. Discussion on the Bates Bill of 1992 and Hazard Severity Zones has been added. A list of vulnerabilities and discussion on power outages from public safety power shutoffs has been added, and outdated information has been removed.
 - Policies and Programs – There have been text amendments to existing policies and programs. New policies and programs have been added to this section and some have been combined. Outdated policies and programs have been removed.
10. Fire Safe Infrastructure
- Fire Safe Circulation – Minor text amendments and updated information.
 - Roadside Vegetation Management – Minor text amendments and updated information.
 - Emergency Water Storage – Included statement on maintenance of facilities.
 - Critical Facilities and Populations at Risk – This section has been added. A list of facilities that provide services has been included.
 - Fire Agencies and Support Organizations – Information was clarified and discussion of the Interagency Wildfire Air Attack Base, the White Cloud Helitack base, the Washington Ridge Conservation Camp, and the Fire Safe Council has been included.
 - Fire Protection Regulations – Minor text amendments.
11. Fire Protection Plans and Programs
- Federal and State Plans – Minor text amendments have been made and references to the current LHMP.
 - Community/Area Plans – Section has been removed.
 - Fire Prevention Programs – Section has been removed.
12. Severe Weather Hazards
- Wind, Lightning, Snow (Blizzards), Freezing, Heavy Rain, Drought – Several revisions to this section have been made to add current information and more detail on these hazards. Drought was added as a severe weather hazard and discussion on impacts from drought (ecosystems, agriculture, water levels, wetlands, fires, tree health) have been included. A list of incidents from 1960 to 2013 was removed.
 - Policies and Programs – An existing program has been turned into a policy.

13. Climate Change Resiliency and Mitigation

- This category has been added to the Safety Element with discussion on how climate change and its impacts may exacerbate natural hazards, such as drought and food production, water supply, flooding, wildfire, landslides/mudflows, pests and agricultural operations.
- Policies – Policies have been added to this section to address and mitigate climate change impacts.

14. Environmental Justice and Vulnerable Populations

- This category has been added to the Safety Element, which includes discussion on principles of fairness, regardless of race, color, national origin, or income in the development of laws and regulations that affect every community's natural surroundings and the places that people live and work. This category discusses how vulnerable populations and communities can be impacted by land use patterns, such as inequitable exposure to pollutants, or the ability to prepare and recover from hazardous events.
- Policies – Policies have been added to this section to reduce the exposure of safety risks and increase preparedness for all populations and communities in Nevada County.

15. List of Acronyms

- The list of acronyms has been removed. Acronyms are identified throughout the Safety Element.

AGENCY REVIEW AND PUBLIC COMMENTS:

Planning Department staff started consultation on the Safety Element update in July 2018. The County sent local Native American tribes a request for consultation letter, pursuant to Senate Bill 18 (Burton) and Assembly Bill 52 (Gatto) in July 2018. Subsequently, Staff started consultation with local fire districts, the Community Development Agency (CDA) Departments, the County Office of Emergency Services, and the California Department of Forestry and Fire Protection to collect feedback and start making revisions to the draft Safety Element. An updated draft of the Safety Element was completed and a letter requesting comments was distributed on October 4, 2019, to all agencies, homeowner associations, and special interest groups on the Planning Departments distribution list. In all, the request for comments was sent to 280 agencies, departments or groups. A hard copy of the draft was sent to the local public libraries and was available at the Planning Department and the Board of Supervisor's office for review. A draft of the Safety Element was also posted to the Planning Department's webpage for review. A discussion of the review by the California Board of Forestry and Fire Protection, and agency/public comments that the Planning Department received are outlined below, with staff comments in *italics*.

California Department of Forestry and Fire Protection:

Due to the requirements in Government Code Section 65302.5, the draft Safety Element was sent to the California Board of Forestry and Fire Protection on October 15, 2019, with a request for review. The draft Safety Element was reviewed by the Board of Forestry on November 5, 2019. The review includes an assessment to determine if the Safety Element meets the fire safety

planning requirements that are outlined in Section 65302. The assessment determined that the Safety Element update is adequate for meeting fire safety planning requirements with a few recommendations. The Board of Forestry's recommendations, along with Staff's discussion in *italics* are below:

- Recommend having local ordinances that meet or exceed Fire Safe Regulations and Certified by the Board of Forestry.

This is currently underway by the County. Updated ordinances to meet Fire Safe Regulations were reviewed by the Board of Supervisors on December 16, 2019, and are anticipated to be reviewed by the Board for adoption in January 2020.

- Recommend identifying a policy that requires fuel modification around homes and new subdivisions for new development.

The County has already adopted an ordinance to require a fuel modification zone or greenbelt along all or some subdivision exterior boundaries. This is required in Nevada County Land Use and Development Code (LUDC), Section L-XVI 5.3.

- Recommend adopting the County's Local Hazard Mitigation Plan into the Safety Element.

The Board of Supervisors adopted the Local Hazard Mitigation Plan (LHMP) on July 10, 2018, by Resolution 18-361. The LHMP has been incorporated into the Safety Element with this update and a resolution (Attachment 2) is being proposed to adopt LHMP into the Safety Element.

- Recommend formally adopting the Hazard maps (Fire Hazard Severity Zones) by local ordinance.

The County LUDC references the Fire Hazard Severity Zone Maps and has standards based on severity zones. The severity zone maps were developed by Cal Fire in 2007. Cal Fire is working to publish a current version of the maps. Upon the State's adoption of a current version of the maps, the County Fire Planner intends to bring the updated maps to the Board of Supervisors to propose adoption.

Cal OES (Governor's Office of Emergency Services):

- Cal OES commented that the language in the draft Safety Element meets the requirements to comply with AB 2140, which would allow the County to be considered for California Disaster Assistance Act funding.

California Geological Survey:

- Government Code Section 65302(g)(7) requires that the County consults with the California Geological Survey for Safety Element updates. Staff consulted with this agency and received comments regarding minor edits to the Geological Hazards section.

All recommendations have been included in the revisions to the Safety Element.

California Department of Transportation (Caltrans):

- Caltrans provided comments advising Nevada County to work with Caltrans on Climate Adaption efforts and climate risks where State Highway facilities and services would become resources.

Based on these comments, Staff added Policy CC-10.13.5 for the County to work with State agencies on adaptation strategies to address climate change.

California Department of Toxic Substances Control (DTSC):

- DTSC recommended that the Safety Element should include acid mine drainage in the discussion.

Staff included discussion of acid mine drainage in the mining section of the Hazardous Materials and Mining Hazards category.

Nevada County Transportation Commission (NCTC)

- NCTC provided comments stating that the policies in the draft Safety Element are consistent with the Nevada County Land Use Compatibility Plan and the Truckee Tahoe Airport Land Use Compatibility Plan.

Nevada County Information & General Services Agency (IGS)

This agency provided several comments, which are outlined below:

- IGS commented on two policies (FP-10.9.2 and FP-10.9.3) and two programs (Program FP-10.11.2 and FP-10.11.3) that should include the Nevada County Office of Emergency Services (OES).

These policies and programs have been revised to include OES.

- Pursue affordable residential green waste disposal opportunities/programs for the community. This is currently a barrier to more residential parcel vegetation management.

Staff added Policy FP-10.10.5 for the County to be supportive of programs for residential green waste disposal opportunities to encourage vegetation management.

- Working with the State, address homeowner fire insurance challenges.

Staff added language to Policy FP-10.9.6, to include that obtaining recognition for fire safety programs may help with fire insurance challenges. Policies in the Safety Element are meant to be a guide to reduce short and long-term loss of life, injuries and damage to property from natural and human caused public safety hazards, but it would not include policies that are directed toward insurance challenges.

- Working with OES and the Fire Safe Council, support and promote existing and new Firewise communities.

The Safety Element has a policy (FP-10.9.4) to support and encourage communities to become certified under the Firewise Communities certification program.

- The County needs to perform traffic analysis in combination with a fire/heat analysis to determine if there are issues with County roads that are designated as primary and secondary egress routes for evacuations, and mitigation plans should be developed to address high risk egress routes.

There are several policies in the category for Emergency Preparedness that relate to evacuation routes. Policy EP-10.1.4 is to provide for adequate evacuation routes in areas of a high fire hazard, and Policy EP-10.1.8 is to support the development and maintenance of Countywide and local emergency evacuation plans. The policies in the Safety Element are supportive of developing evacuation plans.

The Sierra Fund:

- The Sierra Fund commented on mining impacts, climate change and environmental justice. The Sierra Fund suggested that information about fish consumption advisories, water quality contamination from hydraulic mining, and smoke as another impact on climate change should be included in the Safety Element. The Sierra Fund also discussed that the California Department of Water Resources identified the City as Grass Valley as a disadvantaged community.

Staff added discussion in the mining section of the Safety Element on hydraulic mining impacts and potential human health threats from exposure of contaminants and through consumption. Staff also included smoke as an impact to air quality in the Climate Change Resiliency and Mitigation section.

Nevada County Climate Action Now and Community Environmental Advocates (CEA) Foundation:

Staff received comments from these groups regarding fire protection, climate change resiliency and mitigation, environmental justice, the Energy Action Plan, and building codes. A summary of each category is discussed below:

- Fire Protection – Recommendations were made to no longer permit construction in fire-prone areas unless buildings are off grid or services by underground utilities; the County should ensure that all facilities will remain available during a shutdown; and that the County should add battery storage to the County solar system, and could use battery power for facilities to be a place for residents to gather information and charge devices.

The General Plan identifies low density development in rural areas where there is a high fire risk. The Safety Element is meant to identify hazards in the County and does

not change density. Any future subdivisions or development projects requiring land use permits would have a site-specific analysis, which may require mitigation to reduce any potential impacts.

Discussion regarding public safety power shutoff (PSPS) events has been included in the Safety Element revisions. Policy FP-10.9.7 has also been added to support viable plans for resources during PSPS events.

- Climate Change Resiliency and Mitigation – Comments regarding climate change were that two of the policies (CC-10.13.3 and CC-10.13.4) in the Safety Element that discuss climate change and analysis, but do not include implementation or guidelines.

Staff revised these policies to add that mitigation measures shall be implemented as feasible and that new projects shall reduce or limit impacts as feasible.

- Environmental Justice – Comments to this section were regarding impacts from PSPS events.

Staff included all impacts listed in this comment into the discussion of PSPS events in the Safety Element, and Policy FP-10.9.7 has also been added to support viable plans for resources during PSPS events.

- Energy Action Plan (EAP) – Comments were to incorporate the strategies from the EAP into the Safety Element.

Staff added discussion of the EAP in the Climate Change Resiliency and Mitigation category of the Safety Element. Policy CC-10.13.6 was added to the Safety Element, identifying that the EAP shall be implemented through the support and collaboration of working groups. Program CC-10.13.1 was also added for the County to research funding, financing and partnership opportunities that would offset costs for energy efficiency appliances and infrastructure.

- Building Codes (reach codes) – Comments requested that the County considers a “reach” code ordinance, which would adopt requirements for building codes beyond State building codes and regulations. Some of the specific recommendations were prohibiting natural gas infrastructure (with exceptions), requiring new multi-family buildings to have seventy percent (70%) electric vehicle capable spaces, tax reductions, and reduced parking in exchange for electric vehicle supply equipment being included. Comments also requested research for funding, financing and partnership opportunities to offset costs for energy efficient appliances and infrastructure.

The LUDC Chapter V: Buildings has requirements for electric vehicle charging stations, with the purpose to implement an expedited permitting process to achieve timely cost-effective charging stations. Revisions to specific building codes and requirements would be made in the LUDC or in the California Building Code. Program CC-10.13.1 was added to the Safety Element for the County to research

funding, financing and partnership opportunities that would offset costs for energy efficiency appliances and infrastructure.

Shingle Springs Band of the Miwok Indians

- The Tribe requested continued consultation through updates as the project progresses.

The Tribe was sent the Notice of Availability and Notice of Intent to Adopt the proposed negative declaration for the Safety Element update. The Tribe will also be notified of the Planning Commission hearing on January 9, 2020. No additional comments have been received since the request for consultation.

United Auburn Indian Community (UAIC)

- The UAIC sent comments regarding how hazardous events impact cultural resources and the Tribe referenced a document with information on these hazards and protecting cultural resources. Specifically, the Tribe discussed impacts from wildfires and floods. The UAIC also requested that the environmental documents are sent to the Tribe.

The Safety Element already has discussion regarding losses from fires, which includes cultural resources. Staff added discussion to the Flood Hazard category regarding losses to cultural resources from flooding. The General Plan, Chapter 19, has an Element on Cultural Resources to discuss preservation and protection of cultural resources. This project is only to update the Safety Element and it does not include amendments to the Cultural Resources Element. The Tribe was sent the Notice of Availability and Notice of Intent to Adopt the proposed negative declaration for the Safety Element update. The Tribe will also be notified of the Planning Commission hearing on January 9, 2020. No additional comments have been received from the UAIC.

Planning Commissioner Rich Johansen

- Commissioner Johansen commented that the Safety Element did not include discussion on drought, ground water sustainability, and food security.

Staff added drought as a section in the category for Severe Weather Hazards. This section has been revised to discuss water levels, and impacts on agriculture and food-production costs. Discussion was also added to the Climate Change Resiliency and Mitigation category to discuss drought, ground water, and food security, and these topics were added to the list of impacts from climate change. Policy CC-10.13.4 was updated to require that new discretionary development includes an analysis of affects to climate change and water resources. Policy CC-10.13.3 has been included with this update to identify strategies and mitigation measures to reduce climate change and risks of natural disasters, such as drought and severe weather events.

ENVIRONMENTAL REVIEW:

The changes which are proposed to the Safety Element are strictly policy document text amendments only. The adoption of the proposed Safety Element updates would not grant any land use entitlements for development projects, and it would not cause any physical changes. Therefore, the proposed update to the Safety Element is not anticipated to create significant

impacts to environmental resources. The Nevada County Planning Department has prepared a draft initial study/negative declaration (ND) for the proposed project that was circulated for a 30-day public comment between December 6, 2019, and January 6, 2020 (Attachment 1). The Notice of Availability (NOA) was sent to all agencies, homeowner associations and special interest groups on the Planning Departments distribution list. Additionally, the initial study and proposed negative declaration were sent to the State Clearinghouse for review by the responsible state agencies, and notices for the initial study and the proposed negative declaration were posted in *The Union* and the *Sierra Sun*. As of the writing of this staff report (December 23, 2019), no written comments on the initial study/negative declaration have been received.

SUMMARY:

State law requires that the Safety Element is updated because of the recent updates to the Housing Element and the adoption of the Local Hazard Mitigation Plan. To comply with State law, two categories for Climate Change Resiliency and Mitigation and Environmental Justice have been included in the draft Safety Element. Staff has worked with local fire districts, the Office of Emergency Services (OES), County departments and agencies, and several other groups to ensure that the Safety Element has the most current information and Goals, Policies and Programs to address short and long-term hazards in Nevada County. The updated 2017 Local Hazard Mitigation Plan (LHMP) has been incorporated into the draft Safety Element and all of the required agencies, including the California Board of Forestry, California Geological Survey, and Cal OES have reviewed the draft Safety Element. With the removal of outdated regulations and by referencing current regulations, the Safety Element will maintain relevancy and can be utilized appropriately as a long-term policy guide. Upon approval of this update, the Safety Element will not be required by State law to be reviewed again until the next update to the Housing Element or LHMP, but not less than once every eight years.

With the collaboration of multiple departments, agencies and interest groups, and in compliance with State laws, Staff recommends that the Planning Commission: 1) recommend that the Negative Declaration (EIS19-0005) is an adequate environmental review for the Safety Element update pursuant to Sections 15074 of the CEQA Guidelines; and 2) make a favorable recommendation to the Board of Supervisors for the approval of the Safety Element update, as outlined in the recommended actions below.

RECOMMENDATION: Staff recommends the Planning Commission take the following actions:

- I. Environmental Action: Recommend that the Board of Supervisors after reviewing and considering the proposed Negative Declaration, adopt the attached draft Resolution approving the proposed Negative Declaration (EIS19-0005), finding that the adoption reflects their independent judgment and that the project will not result in a physical change to the environment (*Attachment 1*).
- II. Project Action: Recommend that the Board of Supervisors adopt the attached draft Resolution approving the proposed amendments to the Nevada County General Plan Chapter 10, Safety Element update (GPT19-0002), finding that amendment is consistent

with the General Plan and will not be detrimental to public interest, health, safety, convenience, or welfare of the County (*Attachment 2*).

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Brian Foss", is written over a horizontal line.

Brian Foss, Director of Planning



RESOLUTION NO. _____

OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NEVADA

A RESOLUTION ADOPTING A NEGATIVE DECLARATION FOR THE UPDATE TO THE NEVADA COUNTY GENERAL PLAN CHAPTER 10, SAFETY ELEMENT (PLANNING FILE NOS. GPT19-0002, EIS19-0005)

WHEREAS, the County of Nevada, acting by and through its Board of Supervisors, did on the fourteenth day of November 1995, adopt a General Plan for the County of Nevada, as evidenced by Resolution No. 95-530, pursuant to the provisions of Title 7, Chapter 3, Article 6 of the Government Code of the State of California, and,

WHEREAS, the County of Nevada has established a General Plan Amendment procedure; and,

WHEREAS, on December 6, 2019 the Planning Department staff prepared an Initial Study and Negative Declaration (“IS/ND”) for the Project, a copy of which is attached to this Resolution as Exhibit A; and,

WHEREAS, the Notice of Availability for Public Review and Notice of Intent to Adopt a Proposed Negative Declaration for the IS/ND was submitted directly to affected local, regional, state, and federal agencies and the IS/ND was released for a 30-day public review period, commencing on December 6, 2019 and ending on January 6, 2020; and,

WHEREAS, the IS/ND analyzes all of the potential environmental impacts of the proposed Project and found that no significant impacts would result from the approval of the Project; and,

WHEREAS, on January 9, 2020, the Planning Commission held a public hearing on the proposed Project in which the Commission reviewed the proposed IS/ND together with all comments received during the public review period, and recommended adoption of this same Negative Declaration before making a recommendation to the Board on the proposed Project; and,

WHEREAS, on _____ the Board of Supervisors held a public hearing on the proposed Project in which the Board reviewed the proposed IS/ND together with all comments received during the public review period.

NOW, THEREFORE, BE IT RESOLVED, that the Nevada County Board of Supervisors has reviewed and considered the recommendation of the Planning Commission and has

independently reviewed the Initial Study and proposed Negative Declaration (Planning File No. EIS19-0005), together with all comments received during the public review period, and hereby finds and determines as follows:

1. The above recitals are true and correct.
2. On the basis of the whole record before the Board of Supervisors, there is no substantial evidence that the proposed Project will have a significant effect on the environment.
3. The IS/ND reflects the Board's independent judgment and analysis.
4. The documents and materials constituting the record of the proceedings on which this decision is based are located and in the custody of the Nevada County Planning Department at 950 Maidu Avenue, Nevada City, California.

BE IT FURTHER RESOLVED that the Board of Supervisors hereby adopts the Negative Declaration (Planning File No. EIS19-0005) for the *Safety Element Update* Project, which furthers the Goals, Objectives, and Policies of the Nevada County General Plan.

Ayes: Supervisors

Noes:

ATTEST:

Absent:

JULIE PATTERSON HUNTER
Clerk of the Board of Supervisors

Abstain:

By: _____

Chair

**NEVADA COUNTY, CALIFORNIA
INITIAL STUDY**

To: All Internal and External Governmental and Non-Governmental Agencies, Special Interest Groups and Cities/Counties on the County Planning Department Distribution list; County Counsel*; State Clearinghouse*

**receives full report; all others receive NOA only with the full report available online*

Date: December 6, 2019

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File Number(s): PLN19-0064; GPT19-0002; EIS19-0005

Assessor's Parcel Numbers: N/A

Applicant/Representative: **County of Nevada**
950 Maidu Avenue
Nevada City, California 95959

Zoning District: N/A

General Plan Designation: N/A

Project Location: Unincorporated Area of Nevada County

Project Description: The project is an update to the Nevada County Safety Element, Chapter 10, which was previously adopted by Nevada County in 2014. The Safety Element update is required by Government Code Section 65302(g) upon the County's recent adoption of the Housing Element (2019) and the update to the Local Hazard Mitigation Plan (2017). The Safety Element addresses potential and existing hazards in the County, which are outlined in the following categories: Emergency Preparedness, Geological Hazards/Seismic Activity, Flood Hazards, Airport and Military Airspace Hazards, Hazardous Material and Mining Hazards, Public Safety Services and Facilities, Fire Hazards and Protection, and Severe Weather Hazards. Senate Bill 379 (approved in 2015) requires that the risks of climate change are identified in the Safety Element update, and Senate Bill 1000 (approved in 2016) requires that environmental justice policies and goals are integrated into elements of the General Plan. To comply with these requirements, two additional categories for Climate Change Resiliency and Mitigation, and Environmental Justice have been added to the Safety Element. Throughout the rest of the Safety Element there have been several other revisions, to include but not limited to: 1) updating the data, information and references with more current sources; 2) incorporating additional language to comply with new and/or amended California State Laws; 3) revising policies where progress has been made or where changes in situations have occurred; and 4) incorporating the 2017 Local Hazards Mitigation Plan. With these updates, additional information on the following topics has been included: statutory requirements, land use influences, Nevada County evacuation notification categories, earthquakes, subsidence, dam failure, mining hazards, wildland fires, fire protection plans and programs, power outages, and severe weather hazards. The goals, policies and programs in the Safety Element have been updated to reflect the current discussion and hazards in the Safety Element revisions. The list of proposed amendments below identifies revisions to each category in the Safety Element.

Proposed Amendments: Please see the draft Safety Element update for all of the proposed revisions and text amendments. The draft of the Safety Element update can be downloaded from the Nevada County website at <https://www.mynevadacounty.com/2870/2019-Safety-Element-Update>. The list below addresses the main changes in each category.

1. Introduction and Setting

- Provided the purpose of the Safety Element and added Climate Change Resiliency and Mitigation, and Environmental Justice to the list of categories.

2. Statutory Requirements

- This section has been added to the Safety Element to explain statutory requirements by the Governor's Office of Planning and Research, the Federal Emergency Management Agency, the Nevada County Office of Emergency Services, the California Department of Forestry and Fire Protection, and the California Geological Survey of the Department of Conservation.

3. Emergency Preparedness

- Land Use Influences – Discussion on Land Use Influences has been added.
- Emergency Plans and Guides – Hazards from the Local Hazard Mitigation Plan (LHMP) have been updated in the Emergency Plans and Guides discussion, along with minor text edits and the removal of expired information/dates.
- Emergency Notification System – Minor text edits and updated information.
- Evacuation Planning – Minor text edits and additional information on local roads.
- Nevada County Evacuation Notification Categories – This section was added to provide information on evacuation notification categories and rescue services.
- Policies – Several policy updates have been made.

4. Geological Hazards/Seismic Activity

- Avalanches – No changes.
- Landslides, Debris and Mud Flows – Minor text amendments and additional information on soil and infrastructure hazards have been included.
- Earthquakes – Updated this section to more current information.
- Subsidence – This section was added to discuss hazards from subsidence, with descriptions of areas that are more prone to risks, including mining sites, karst, and the drawdown of groundwater.
- Policies – Redundant and impractical policies were removed.

5. Flood Hazards

- Flooding – Minor text amendments and added information on frequency, causes of flooding, and impacts.
- Dam Failure – There have been several revisions to this section, including the categories for downstream hazard potential, a list of dams in Nevada County that have a hazard rating of high and extremely high, and discussion of additional laws and requirements in place after the failure of the Oroville Dam.
- Seiches – No changes.
- Policies – Slight text amendments to current policies and a policy has been added.

6. Airport Hazards

- Airport Land Use Compatibility Plan – Minor text amendments.
- Military Airspace Compatibility – No changes.

- Program – One program has been removed.
7. Hazardous Materials and Mining Hazards
- Minor text amendments and additional information on mining hazards.
 - Policies – Text amendments have been made to existing policies and one policy has been added.
8. Public Safety Services and Facilities
- Policies and Programs – There have been text amendments to the policies in this section and the addition of two programs.
9. Fire Hazards and Protection
- Wildland Fires – There have been several revisions to this section in order to update information on hazards, causes of hazards and wildfire behavior. A figure on wildfire behavior has been added. References to past fires and the amount of damaged they caused have been removed. Discussion on the Bates Bill of 1992 and Hazard Severity Zones has been added. A list of vulnerabilities and discussion on power outages from public safety power shutoffs has been added, and outdated information has been removed.
 - Policies and Programs – There have been text amendments to existing policies and programs. New policies and programs have been added to this section and some have been combined. Outdated policies and programs have been removed.
10. Fire Safe Infrastructure
- Fire Safe Circulation – Minor text amendments and updated information.
 - Roadside Vegetation Management – Minor text amendments and updated information.
 - Emergency Water Storage – Included statement on maintenance of facilities.
 - Critical Facilities and Populations at Risk – This section has been added. A list of facilities that provide services has been included.
 - Fire Agencies and Support Organizations – Information was clarified and discussion of the Interagency Wildfire Air Attack Base, the White Cloud Helitack base, the Washington Ridge Conservation Camp, and the Fire Safe Council has been included.
 - Fire Protection Regulations – Minor text amendments.
11. Fire Protection Plans and Programs
- Federal and State Plans – Minor text amendments have been made and references to the current LHMP.
 - Community/Area Plans – Section has been removed.
 - Fire Prevention Programs – Section has been removed.
12. Severe Weather Hazards
- Wind, Lightning, Snow (Blizzards), Freezing, Heavy Rain – Several revisions to this section have been made to add current information and more detail on these hazards. A list of incidents from 1960 to 2013 was removed.
 - Policies and Programs – An existing program has been turned into a policy.
13. Climate Change Resiliency and Mitigation
- This category has been added to the Safety Element.
 - Policies – Policies have been added to this section.

14. Environmental Justice and Vulnerable Populations

- This category has been added to the Safety Element.
- Policies – Policies have been added to this section.

15. List of Acronyms

- The list of acronyms has been removed. Acronyms are identified throughout the Safety Element.

Project Site and Applicability: The proposed Safety Element update applies to all unincorporated areas of Nevada County that are governed by Nevada County, which includes privately-owned parcels in all zoning districts and General Plan designations. The project area excludes incorporated cities, and state and federal lands in Nevada County. Out of the approximate 625,000 acres of the County, the project area (privately held land) is approximately 429,000 acres.

Other Permits, Which May Be Necessary: The proposed update is for a General Plan text amendment. The General Plan is a policy document and it will not result in the approval of a specific project or a change to the physical environment. No other permits are required for the text amendment. All future development projects and/or amendments will require a project-specific environmental review prior to project approval.

Relationship to Other Projects: There are no other projects directly related to the Safety Element update.

Tribal Consultation: Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On July 26, 2018, Staff sent an invitation to the United Auburn Indian Community of the Auburn Rancheria (UAIC), the Washoe Tribe of Nevada and California (Washoe Tribe), the Tsi-Akim Maidu Tribe, and the Nevada City Rancheria Nisenan Tribe to begin AB52 and SB18 consultation for the proposed Safety Element update. UAIC responded to the invitation and requested to open consultation on the proposed Safety Element update. On October 19, 2018, staff held a conference call with UAIC to discuss the proposed amendments. After the conferenced phone call, UAIC followed-up with an email on October 19, 2018, advising that they had no additional comments and that they would like to close consultation. No other comments or consultation was requested by any other tribe at that time.

The draft Safety Element was routed for distribution on October 4, 2019, for public comment and agency review. The Planning Department received comments from the UAIC on the draft Safety Element and requested the Planning Department to send the UAIC a copy of the environmental document for the project. The Shingle Springs Band of Miwok Indians was not part of the initial invitation for consultation on the Safety Element update because this Tribe had not requested consultation on projects in Nevada County until August 2019. The Safety Element update was routed to the Tribe on October 4, 2019, and the County received comments from the Tribe on October 29, 2019, requesting continued consultation and updates as the project progresses. The Tribe also requested records searches, surveys and/or environmental, archaeological, or cultural reports that have been completed for the project. Since the project is for an update to a policy document and it does not require a physical change to a specific site, cultural surveys and records searches are not included in the Safety Element update. The Nevada County Planning Department will continue consultation with both Tribes, and the Planning Department will send the California Native American Tribes a Notice of Availability for public review and a Notice of Intent to adopt a Negative Declaration for this project, which will allow the California Native American Tribes the opportunity to comment on the analysis of environmental impacts.

SUMMARY OF IMPACTS and PROPOSED MITIGATION MEASURES

Environmental Factors Potentially Affected:

All of the following environmental factors have been considered. Those environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation" as indicated by the checklist on the following pages.

<input type="checkbox"/>	1. Aesthetics	<input type="checkbox"/>	2. Agriculture / Forestry Resources	<input type="checkbox"/>	3. Air Quality
<input type="checkbox"/>	4. Biological Resources	<input type="checkbox"/>	5. Cultural Resources	<input type="checkbox"/>	6. Energy
<input type="checkbox"/>	7. Geology / Soils	<input type="checkbox"/>	8. Greenhouse Gas Emissions	<input type="checkbox"/>	9. Hazards / Hazardous Materials
<input type="checkbox"/>	10. Hydrology / Water Quality	<input type="checkbox"/>	11. Land Use / Planning	<input type="checkbox"/>	12. Mineral Resources
<input type="checkbox"/>	13. Noise	<input type="checkbox"/>	14. Population / Housing	<input type="checkbox"/>	15. Public Services
<input type="checkbox"/>	16. Recreation	<input type="checkbox"/>	17. Transportation	<input type="checkbox"/>	18. Tribal Cultural Resources
<input type="checkbox"/>	19. Utilities / Service Systems	<input type="checkbox"/>	20. Wildfire	<input type="checkbox"/>	21. Mandatory Findings of Significance

No mitigation measures are proposed for this project to update the Safety Element.

INITIAL STUDY AND CHECKLIST

Introduction

This checklist is to be completed for all projects that are not exempt from environmental review under the California Environmental Quality Act (CEQA). The information, analysis and conclusions contained in the checklist are the basis for deciding whether an Environmental Impact Report (EIR) or Negative Declaration is to be prepared. If an EIR is determined to be necessary based on the conclusions of the Initial Study, the checklist is used to focus the EIR on the effects determined to be potentially significant. This Initial Study uses the following terms to describe the level of significance of adverse impacts. These terms are defined as follows.

- **No Impact:** An impact that would result in no adverse changes to the environment.
- **Less than Significant Impact:** An impact that is potentially adverse but does not exceed the thresholds of significance as identified in the impact discussions. Less than significant impacts do not require mitigation.
- **Less than Significant with Mitigation:** An environmental effect that may cause a substantial adverse change in the environment without mitigation, but which is reduced to a level that is less than significant with mitigation identified in the Initial Study.
- **Potentially Significant Impact:** An environmental effect that may cause a substantial adverse change in the environment; either additional information is needed regarding the extent of the impact to make the significance determination, or the impact would or could cause a substantial adverse change in the environment. A finding of a potentially significant impact would result in the determination to prepare an EIR.

1. AESTHETICS

Existing Setting: The aesthetic character of Nevada County is generally rural, natural, and historic with spectacular rolling vistas of foothills, valleys, mountains, with green meadows, extensive forests, wetlands and habitats unique to Nevada County and the Sierra Mountains. Important aesthetic resources in the County include natural and historic forms, including river gorges, creeks, mountains, hills, meadows, geologic formations, and native vegetation, which consist of grass-oak woodlands, montane brush lands, mixed conifer forest, and eastside pine with sage. Historic forms within the County include bridges, homes, and other structures more than 50 years old. Sites and natural forms with cultural importance to, or repeated use by, Native American tribes also contribute to aesthetic significance

Except as provide in Public Resources Code Section 21099, would the proposed project	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Have a substantial adverse effect on a scenic vista?				✓	A, L
b. Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				✓	A, L,28
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				✓	A

Except as provide in Public Resources Code Section 21099, would the proposed project	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				✓	A, 18

Impact Discussion:

1a-d The General Plan contains an Aesthetics Element (Chapter 18), which establishes specific goals, objectives and policies related to aesthetic resources in Nevada County. No amendments are currently proposed for the Aesthetics Element of the General Plan. The Safety Element update identifies hazards in Nevada County and does not propose any physical changes to the environment or aesthetics. The proposed update only consists of text amendments to policy documents, which are intended to guide development within the County. The adoption of the proposed update will not grant any entitlements for development projects, and all future development projects will require site/project-specific environmental review at the time of project submittal. The adoption of the update will not have any effects on scenic vistas, scenic resources, or visual character, and it will not create new sources of light or glare that would affect views in the area; therefore, *no impact* would result from the adoption of the Safety Element update.

Mitigation: None required.

2. AGRICULTURAL/FORESTRY RESOURCES

Existing Setting: Farmlands of local importance is scattered throughout western Nevada County with major concentrations occurring northeast and east of Nevada City, near Penn Valley, and in the south and Southwest County. Countywide, there are 6,043 acres of Farmlands of Local Importance, 1,283 acres of Farmlands of Statewide Importance, 462 acres of Unique Farmlands and 290 acres of Prime Farmlands. There are no important agricultural lands mapped in eastern Nevada County. Generally, Nevada County soils are poor for intensive agricultural use; however, some soil types could support limited intensive agricultural use, including timber production. Nevada County supports extensive commercial timber resources, the majority of which are under the jurisdiction of the Tahoe National Forest in the eastern areas of the County. Pursuant to Nevada County Zoning District Maps, there are approximately 166,173 acres that are zoned General Agriculture (AG) and Agriculture Exclusive (AE) which provides for primary agricultural uses and there are approximately 36,712 acres which are zoned Residential Agriculture (RA), which allow agriculture uses as an accessory use to residential development. According to the United States Department of Agriculture (USDA), Agricultural operations in 2017 comprised approximately 52,061 acres, or approximately 12% of total lands, with approximately 673 farms in operation, with an average size of 77 acres.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the				✓	A, L, 7

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
California Department of Conservation's Division of Land Resource Protection, to non-agricultural use?					
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				✓	A, 18
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g)), timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓	A, L, 18
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓	L, 18
e. Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓	A, L, 7

Impact Discussion:

2a-e The General Plan contains a Forest Element (Chapter 15) and an Agriculture Element (Chapter 16), which establish specific goals, objectives and policies related to forestry and agricultural resources in Nevada County. No amendments are currently proposed to the Forest or Agriculture Elements. The adoption of the Safety Element update will not result in impacts to Important Farmlands (Prime, Unique, Statewide or Local Important Farmlands), nor will it conflict with existing zoning or result in the conversion of agricultural, timberland, timberland uses, or a Williamson Act contract. The proposed update consists only of text amendments to a policy document, which is intended to guide development within the County. No physical construction or changes to the existing land uses would result from the Safety Element update. Any future development projects would require a site/project-specific environmental review and approval. Therefore, *no impact* would result from the adoption of the Safety Element update.

Mitigation: None required.

3. AIR QUALITY

Existing Setting: Nevada County is located in the Mountain Counties Air Basin. The overall air quality in Nevada County has improved over the past decade, largely due to vehicles becoming cleaner. State and Federal air quality standards have been established for specific “criteria” air pollutants including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter. In addition, there are State standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. State standards are called California Ambient Air Quality Standards (CAAQS) and federal standards are called National Ambient Air Quality Standards (NAAQS). NAAQS are composed of health-based primary standards and welfare-based secondary standards.

Western Nevada County is classified as a Serious Nonattainment Area for the 2008 ozone NAAQS and Moderate Nonattainment for the 2015 ozone NAAQS. It is also Nonattainment for the ozone CAAQS. The area is also Marginal Nonattainment for the 2008 ozone NAAQS and is Nonattainment for the ozone

CAAQS. Most of western Nevada County’s ozone is transported to the area by wind from the Sacramento area and, to a lesser extent, the San Francisco Bay Area. Ozone is created by the interaction of Nitrogen Oxides and Reactive Organic Gases (also known as Volatile Organic Compounds) in the presence of sunlight, especially when the temperature is high. Ozone is mainly a summertime problem, with the highest concentrations generally observed in July and August, especially in the late afternoon and evening hours.

Nevada County is also Nonattainment for the PM10 CAAQS, but Unclassified for the PM10 NAAQS due to lack of available recent data. The number after “PM” refers to maximum particle size in microns. PM10 is a mixture of dust, combustion particles (smoke) and aerosols, whereas PM2.5 is mostly smoke and aerosol particles. PM2.5 sources include woodstoves and fireplaces, vehicle engines, wildfires and open burning. PM10 sources include the PM2.5 plus dust, such as from surface disturbances, road sand, vehicle tires, and leaf blowers. Some pollen and mold spores are also included in PM10, but most are larger than 10 microns. All of Nevada County is Unclassifiable/Attainment for the PM2.5 NAAQS and Unclassified for the PM2.5 CAAQS (US Environmental Protection Agency, 2015).

Ultramafic rock and its altered form, serpentine rock (or serpentinite), both typically contain asbestos, a cancer-causing agent. Ultramafic rock and serpentine are likely to exist in several areas of Nevada County. The areas mapped as more likely to contain natural occurrences of asbestos are in portions of western Nevada County (California Department of Conservation, 2000).

An evaluation of project impacts related to greenhouse gas emissions is provided in Section 8 of this Initial Study.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Conflict with or obstruct implementation of the applicable air quality plan.				✓	A,G
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?				✓	A,G
c. Expose sensitive receptors to substantial pollutant concentrations?				✓	A,G,L
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✓	A,G
e. Generate substantial smoke ash or dust?				✓	A,G

Impact Discussion:

3a-e The General Plan contains an Air Quality Element (Chapter 14), which establishes specific goals, objectives and policies related to air quality in Nevada County. No amendments are currently proposed to the Air Quality Element. The adoption of the Safety Element update will not result in impacts to air quality in Nevada County. The proposed update consists only of text amendments to a policy document, which is intended to guide development within the County. The update does not revise, replace or attempt to supersede any existing air quality standards or plans adopted by the County, State, or Federal government. The text amendment does not include any physical construction or changes that would contribute to a cumulative increase of pollutants, or that would impact sensitive receptors. Any future development or projects would require a site/project-specific environmental review and approval. Due to there being no physical changes, the update

would not have an impact on emissions, and it would not generate ash or dust; therefore, there would be *no impact* to air quality from the adoption of the Safety Element update.

Mitigation: None required.

4. BIOLOGICAL RESOURCES

Existing Setting: Nevada County contains a wide range of plants, animals, and habitat types. With elevations ranging from 300 feet above mean sea level in the west to 9,143 feet above mean sea level in the east and precipitation amounts varying from 30 inches in the west to 60 inches near the crest of the Sierras, the County supports a true diversity of habitat types. Generally, the County can be characterized by gently rolling oak woodlands in the west that transition to coniferous forest in the middle ranges and a desert-like association on the eastern slope of the Sierras. A given type of vegetation association, with associated animal life, is referred to as a life zone. A life zone is an area with generally uniform or homogeneous characteristics located within general geographic boundaries. The life zones in Nevada County include Upper Sonoran, Transition, Canadian, Hudsonian, Arctic-Alpine and Mixed Conifer-Jeffrey Pine-Sagebrush.

The California Department of Fish and Wildlife (CDFW) recognizes five primary wildlife habitat types in California: tree dominated; shrub dominated; herbaceous dominated; aquatic; and developed. These habitats occur in continuous stretches and isolated pockets depending on the overall topography, elevation, climate and pattern of development in a particular area. Wildlife may move between various habitat types to satisfy their life requirements. Wildlife utilize riparian corridors, low lying or “saddle” areas of ridges, established trails, and other corridors for their inter-habitat movement. In addition, many species, including deer, move seasonally in response to their seasonal habitat requirements. In this context, it is possible that loss of a habitat could constitute an adverse effect (because of local or regional scarcity and ecological value of a habitat) even though the individual species of plants that make up the habitat, or animal species which use the habitat may not, in and of themselves, be endangered or rare.

Habitats throughout the County have been modified by human activity. The western portions of the County, especially the Upper Sonoran and Transition life zones, have experienced rapid residential growth in recent decades. The resultant parcelization, fencing, alteration of vegetation, introduction of domestic animals, roadways, noise, and night lighting have served to reduce the habitat values throughout the area. In the mid to high elevations, logging, mining, and development of second homes and subdivisions have also served to alter habitats. Habitat values can be reduced by both direct (construction of housing) and indirect (increased density in wide movement corridors) activities. Although the overall trend in the County is toward a decline in habitat values as identified by the CDFW, there is a wide localized variation in habitats, tolerances of species, and degrees of human disturbance.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓	K,17
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by				✓	A,K,L,17

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
the California Department of Fish and Game or US Fish and Wildlife Service?					
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓	A,K,L, 10,17
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓	A,16,17
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓	A,16,17, 18
f. Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓	A,16,17, 18
g. Introduce any factors (light, fencing, noise, human presence and/or domesticated animals) which could hinder the normal activities of wildlife?				✓	A,2,16, 17,18

Impact Discussion:

4a-g The General Plan contains a Wildlife and Vegetation Element (Chapter 13), which establishes specific goals, objectives and policies related to sensitive biological resources in Nevada County. No amendments are being proposed to the Wildlife and Vegetation Element, or to any other ordinances regarding the protection of biological resources. The adoption of the Safety Element update would not result in potential impacts to biological resources. The proposed update consists only of text amendments to policy documents, which are intended to guide development within in the County. The proposed update would not grant any entitlements for development projects and it does not propose any physical changes. Any future development or projects would require a site/project-specific environmental review and approval. Due to there being no physical changes, the update would not have an impact on biological resources, and it does not conflict with local policies regarding the protection of resources; therefore, there would be *no impact* to biological resources from the adoption of the Safety Element update.

Mitigation: None required.

5. CULTURAL RESOURCES

Existing Setting: The varied environmental zones, the geological characteristics, and the geographical position of Nevada County account for a cultural resource base, which is exceedingly rich and exceptionally complex. This explains the relatively large number of recorded prehistoric and historic sites and the wide array of types. Prehistoric site types which have been inventoried include villages and associated cemeteries, multi-task camps, single task-specific locales (such as bedrock mortar milling features), and special use sites (hunting blinds, petroglyphs and quarries). Historic themes within Nevada County are manifest archaeologically by site types related to mining, water management, logging, transportation,

emigrant travel, ranching and agriculture, grazing, and the ice industry. A number of State laws regulate the disturbance of archaeological sites and the Nevada County General Plan and Zoning Regulations establish procedures for identifying potentially sensitive sites.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				✓	A,17,18
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				✓	A,17,18
c. Disturb any human remains, including those interred outside of formal cemeteries?				✓	A,17,18

Impact Discussion:

5a-c The adoption of the proposed Safety Element update would not impact cultural resources, and there are no changes being proposed to the Chapter 19 of the General Plan, which establishes policies for Cultural Resources. Pursuant to Nevada County Land Use and Development Code as well as the Nevada General Plan, all applicable projects require an applicant to initiate a North Central Information Center (NCIC) records search to provide the most current information about the sensitivity of a particular parcel to contain cultural resources and to assess the need for a cultural resource study. As part of the review by NCIC, a recommendation will be made as to the determination if a Cultural Resource Study is required based on if there are known cultural, historical or traditional resources within the project area. If the NCIC recommendation determines that a cultural resource is recommended then a qualified professional will be required to submit an archeological survey that will review site-specific cultural resources and the proposed project’s impact to those resources, if present.

In addition, pursuant to Assembly Bill 52 (Gatto, 2014) and Senate Bill 18 (Burton, 2004), all applicable projects require will require the County to consult with traditionally and culturally affiliated California Native American tribes. The intent is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving local tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use decisions are made by a local government. Furthermore, the consultation requirements of SB 18 apply to General Plan or Specific Plan processes proposed on or after March 1, 2005.

Thus, future projects will be reviewed for compliance with the California Environmental Quality Act and as a general rule; any potential impacts will be mitigated through project conditioning and review. Therefore, the Safety Element update would have *no impact* on cultural resources.

Mitigation: None required.

6. ENERGY

Existing Setting: Electric and natural gas facilities are provided in Western Nevada County by the Pacific Gas & Electric Company (PG&E). There are five PG&E substations within the County. Four of these substations have distribution voltages of 12kV and one substation has a distribution voltage of 21kV. Three of the substations are served via 60kV transmission lines and two substations are served via 115kV transmission lines. The transmission lines are networked and generation for these transmission lines comes from generators located throughout the state. The transmission lines are operated by California Independent System Operators, CALISO. In Eastern Nevada County, the Truckee Donner Public Utility District also supplies electricity. Propane is a common fuel source used in Nevada County by individual homes and businesses.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation?				✓	A
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓	A,D

Impact Discussion:

6a-b The adoption of the proposed Safety Element update would not result in an impact to energy resources. The Safety Element update is strictly a policy document and does not provide entitlements to any specific land use projects. Other areas of the General Plan, including the Housing Element (Chapter 8), identify energy conservation with policies regarding energy efficiency. The Safety Element update does not propose any changes to plans or policies for energy efficiency or renewable energy. Any future development or projects would be subject to an environmental review, which will analyze energy impacts. All future development would also be subject to the California Energy Code (Title 24) requirements. Therefore, the Safety Element update would have *no impact* on energy resources, or to state or local plans for renewable energy or energy efficiency.

Mitigation: None Required.

7. GEOLOGY / SOILS

Existing Setting: Nevada County is within the Sierra Nevada Mountains, a geologic block approximately 400 miles long and 80 miles wide which extends in a north-south band along the eastern portion of California. The terrain of Nevada County is distinctly characterized by two features of the Sierra Nevada Mountains. The western third of the County is comprised of rolling foothills, which form a transition between the low-lying Sacramento Valley to the west and the mountains to the east. The eastern two-thirds of the County is comprised of the steep terrain and exposed granite of the Sierra Nevada Mountains.

The geologic substructure of the County can be divided into three very broad groups, which are reflected in the surface soils:

- Western Foothills – This area, extending from the Yuba County border to just northeast of the Grass Valley/Nevada City area, is generally comprised of metavolcanic and granitic formations.
- Central Portion – The area extending northeast of the Grass Valley/Nevada City area to the upper mountainous area near Bowman Lake Road is generally comprised of sedimentary, metasedimentary and volcanic formations.
- Eastern Portion – This portion of the County through the high Sierra to the Nevada state line is generally comprised of volcanic and granitic formations.

According to the Nevada County Resource Conservation District there are a total of twenty-nine (29) soils series, including cut and fill and alluvial lands within the county. The soil series include Ahwahnee; Aiken; Alluvial lands, Argonaut; Auberry; Auburn; Boomer; Chaix; Chaix thick solum variant; Cohasset; Dubakella; Dubakella shallow variant; Hoda; Horshoe; Hotaw; Iron Mountain; Josephine; Mariposa; Maymen; McCarthy; Musick; Rescue; Secca; Shenandoah; Sierra; Sites; Sobrante; and Trabuco. The soil types are described by topography, slope, permeability, dwelling limitations, septic limitations, erosion hazards, and agricultural and timber capacities. In general, the County soils are variable; the soil permeability ranges from very slow to very rapid, and the erosion hazard ranges from slight to very high. The soil erosion hazard ratings of moderate to high are typically associated with slopes that are fifteen percent (15%) or greater.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury or death involving: <ul style="list-style-type: none"> i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure including liquefaction? iv. Landslides? 				✓	A,L,5,6, 12,26
b. Result in substantial soil erosion or the loss of topsoil?				✓	D
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				✓	D,12
d. Be located on expansive soil creating substantial direct or indirect risks to life or property?				✓	D
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓	A,B,C

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓	A
g. Result in substantial grading on slopes over 30 percent?				✓	A,L,9,18

Impact Discussion:

7a-g The Safety Element update is a text amendment to a policy document, and it will not result in any physical changes or ground disturbance. Potential geological hazards, including avalanches, landslides, debris, mud flows, earthquakes, and subsidence are addressed in the Safety Element update. The revisions that have been made in the Geological Hazards/Seismic Activity section are to clarify or update information and to address subsidence, which is a hazard that is not currently discussed in the Safety Element. There were also revisions to the policies for Geological Hazards/Seismic Activity to remove redundancy and policies found to be impractical and unclear. This update is for a text amendment to a policy document that does not propose any changes to building codes or standards for any future construction. Any future development projects would be reviewed on a project-by-project basis for geological hazards. Geological and seismic hazards will be analyzed in the site-specific environmental review for future development projects and will be required to meet all local and State building codes. Therefore, the Safety Element update would have *no impact* on Geology and Soils.

Mitigation: None required.

8. GREENHOUSE GAS EMISSIONS

Existing Setting: Greenhouse gases (GHGs) are those gases that trap heat in the atmosphere. GHGs are emitted by natural and industrial processes, and the accumulation of GHGs in the atmosphere regulates the earth's temperature. GHGs that are regulated by the State and/or EPA are carbon dioxide (CO₂), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrous oxide (NO₂). CO₂ emissions are largely from fossil fuel combustion. In California, approximately 43 percent of the CO₂ emissions come from cars and trucks. Electricity generation is another important source of CO₂ emissions. Agriculture is a major source of both methane and NO₂, with additional methane coming primarily from landfills. Most HFC emissions come from refrigerants, solvents, propellant agents and industrial processes, and persist in the atmosphere for longer periods of time and have greater effects at lower concentrations compared to CO₂. The adverse impacts of global warming include impacts to air quality, water supply, ecosystem balance, sea level rise (flooding), fire hazards, and an increase in health related problems.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, was adopted in September 2006 and requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through regulations to reduce emissions from stationary sources and from vehicles. The California Air Resources Board (ARB) is the State agency responsible for developing rules and regulations to cap and reduce GHG emissions. In addition, the Governor signed Senate Bill 97 in 2007 directing the California Office of Planning and Research to develop guidelines for the analysis and mitigation of the effects of greenhouse gas emissions and mandating that GHG impacts be evaluated in CEQA documents. CEQA Guidelines Amendments for GHG Emissions were adopted by OPR on December 30, 2009. The

Northern Sierra Air Quality Management District (NSAQMD) has prepared a guidance document, *Guidelines for Assessing Air Quality Impacts of Land Use Projects*, which includes mitigations for general air quality impacts that can be used to mitigate GHG emissions.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓		A,G,20,21
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			✓		A,G,20,21

Impact Discussion:

8a-b Adoption of the Safety Element update would not result in impacts to greenhouse gas emissions in Nevada County. The update is strictly to a policy document that does not provide entitlements to any specific land use projects. The Safety Element update does not revise, replace or attempt to supersede any existing greenhouse gas emission standards adopted by the County, the Northern Sierra Air Quality Management District or the State of California. As part of this update, discussion has been added to the Safety Element to address climate change resiliency and mitigation. Policies and a program to mitigate climate change have been included in the update, which may reduce emissions. Individual future development proposals will be subject to project-specific environmental review to ensure that the project will be in compliance with local and regional standards and procedures for minimizing short-term and long-term impacts related to increases in greenhouse gas emissions. Therefore, the Safety Element update would have *no impact* on greenhouse gas emissions.

Mitigation: None required.

9. HAZARDS/HAZARDOUS MATERIALS

Existing Setting: The interface of the natural and manmade environments creates potential safety hazards associated with avalanches, landslides, earthquakes, floods, and wildfires. Other potential safety hazards, such as airport operations and transportation of hazardous materials, arise from the potential for accidents during the transport of goods and people. Each of these hazards has particular characteristics that affect the future development of the County. Some of these safety hazards can be minimized with emergency planning, while other hazards are reduced by development standards and land use planning.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓	A,C
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓	C

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓	A,L
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?				✓	C,25
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓	L,19
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓	H,19,23
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓	H,M,23

Impact Discussion:

9a-g Adoption of the Safety Element update would not result in an impact to, or the creation of, potential hazards or hazardous materials for the citizens of Nevada County or to the environment. The Safety Element is strictly a policy document that identifies and discusses hazards in Nevada County, with the intent to create goals, policies and programs that would reduce short-term and long-term damage and injuries from natural and human-caused safety hazards. The hazards identified in the Safety Element update include Emergency Preparedness; Geological Hazards/Seismic Activity; Flood Hazards; Airport and Military Airspace Hazards; Hazardous Materials and Mining Hazards; Public Safety Services and Facilities; Fire Hazards and Protection; Severe Weather Hazards; Climate Change Resiliency and Mitigation; and Environmental Justice. The update to the Safety Element provides and/or references current data associated with each hazard and incorporates the Local Hazard Mitigation Plan (LHMP). The LHMP is the implementing tool of the County’s Safety Element; whereas, the Safety Element is a policy document that informs, directs and guides land use decisions to avoid or reduce risks from hazards. The LHMP is updated and maintained by Nevada County’s Office of Emergency Services and has a separate review and approval than the Safety Element. Individual projects will also be reviewed on a project-by-project basis for hazards and hazardous materials. Any future projects will undergo a project-specific environmental review to ensure that the project will be in compliance with local and State requirements for hazardous materials, and to address significant hazards to the public or the environment. Due to the Safety Element update only being a text amendment to a policy document with goals and policies to reduce hazards, and because the update does not propose any physical changes, *no impact* to hazards or hazardous materials are anticipated.

Mitigation: None required.

10. HYDROLOGY / WATER QUALITY

Existing Setting: Nevada County is located within the watersheds of Truckee River, the Yuba River and the Bear River, which combined drain approximately 420 square miles. Combined, these rivers drain about 420 square miles. The smaller watercourses and creeks that flow into these watersheds are supplied from melting snow pack, annual rainfall, springs, and surfacing groundwater. In general, the County’s water quality varies with topography and development. Water quality tends to be good in the mountainous, less developed areas, and is impacted at lower elevations or in more developed areas. Water quality is influenced by several sources, including soil erosion, sedimentation, septic systems, pesticides, and agriculture. Water resources have a multitude of uses from agricultural to domestic, as well as fish and aquatic/riparian habitat, wildlife and plant habitat, and year-round recreation. A number of historic irrigation ditch systems are located throughout the western County, owned and maintained by the Nevada Irrigation District, and on a much smaller scale, by the San Juan Ridge County Water District. There are a number of public water purveyors within the County; the Nevada Irrigation District, and the Cities of Grass Valley and Nevada City primarily serve western Nevada County with the Washington County Water District providing service to the small community of Washington. In eastern Nevada County, the Donner Summit and Truckee Donner Public Utility Districts, and the Glenshire Mutual Water Company provide domestic treated water service.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				✓	A,D
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓	A,C
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: <ul style="list-style-type: none"> i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impeded or redirect flood flows? 				✓	A,B,D,L,9
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓	L,9,13,19,23
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓	A,D,17

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
f. Place housing within a 100-year flood hazard area as mapped on a federal Flood hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓	L,9,13
g. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				✓	L,13

Impact Discussion:

10a-g Adoption of the Safety Element update would not result in a significant impact to hydrology and water quality. The General Plan contains a Water Element (Chapter 11), which establishes specific goals, objectives and policies related to water resources in Nevada County, and no amendments are being proposed to the Water Element. The Safety Element update is a document that contains goals, policies and programs to guide land use decisions to minimize risks from hazards, and it does not propose to amend any water quality control plans or sustainable groundwater management plans. The Safety Element is strictly a policy document that identifies hazards in Nevada County and aims to reduce short and long-term loss of life, injuries and damage to property from natural and human-made disasters. There Safety Element update does not involve any physical changes or impacts to water quality, groundwater or drainage patterns. Likewise, there are no changes or disturbance within the floodplain, and the Safety Element does not give approval for any development. In addition, the Safety Element discusses flood hazards in Nevada County and contains goals to maintain the most current flood hazard and flood plain information as a basis for project review. Any future development projects would require a site-specific environmental review and would be reviewed for impacts to hydrology and water quality. Therefore, the Safety Element update would have *no impact* on hydrology/water quality.

Mitigation: None required.

11. LAND USE / PLANNING

Existing Setting: Nevada County is bound by Sierra County to the North, Yuba County to the West, Placer County to the South and the State of Nevada to the East. There are three incorporated cities within the County including Grass Valley, Nevada City and Truckee. The project area is the approximately 429,000 acres of privately held land in the unincorporated area of Nevada County, excluding, incorporated cities, state and federal lands. Land uses in the unincorporated County consists of mixed land use patterns, including residential, commercial, industrial, agricultural and public uses. Federal and State public lands in the County total approximately 314 square miles of the County’s 943 square miles, or about thirty-three percent (33%) of the County’s total land area. The unincorporated County contains a variety of resources and constraints, diverse topography, and sensitive environments.

Within the unincorporated County, residential and rural development is governed by the General Plan—an overall policy guide—and the Nevada County Land Use and Development Code, which establishes specific zoning standards that vary with each zoning district. Nevada County has four residential districts, four rural districts, five commercial districts, three industrial districts, five special purpose districts, and twelve combining districts.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Physically divide an established community?				✓	A,L
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				✓	A,17,18

Impact Discussion:

11a-b The General Plan contains a Land Use Element (Chapter 1), which establishes specific goals, objectives and policies related to land use planning and community development in Nevada County. As part of this update, there are no amendments being proposed to the Land Use Element of the General Plan. The Safety Element update identifies land use and development as being a critical factor in emergency preparation. The update to the Safety Element would not have any physical changes or environmental impacts on a community, and it would not conflict with land use plans, policies or regulations. The revisions to the Safety Element would inform individuals of how land use influences development. The update is only to a policy document and it does not grant entitlements or approve any development. Any future development projects would require a site-specific environmental review and would be reviewed on a project-by-project basis for impacts to land use and consistency with land use plans, policies, and regulations. Therefore, the Safety Element update would have *no impact* on physically dividing a community or causing a significant environmental impact due to conflicts with land use plans, policies or regulations.

Mitigation: None required.

12. MINERAL RESOURCES

Existing Setting: Significant areas of Nevada County contain mineral deposits and between the 1850’s and the early 1900’s, the County’s economy was mine based. These mineral resources include gold, copper, silver, lead, zinc, chromite, and small amounts of tungsten and manganese. Industrial minerals include barite, quartz for silicon production, and small amounts of limestone, asbestos, clay and mineral paint. In addition, significant deposits of sand, gravel, and rock types suitable for construction aggregate are exposed throughout the County. Within the County are large areas classified as Mineral Resource Zones (MRZs) that have existing deposits measured or indicated by actual site data (MRZ-2a) or inferred from other sources (MRZ-2b).

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓	A, 1
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓	A, 1

Impact Discussion:

12a-b The General Plan contains a Mineral Management Element (Chapter 17), which establishes specific goals, objectives and policies related to mineral resources in Nevada County. There are no amendments being proposed to the Mineral Management Element of the General Plan. Adoption of the Safety Element update would not result in an impact to mineral resources. Any future development project would be assessed for potential impacts to mineral resources at the site where the project is being proposed, and it would be under the California Environmental Quality Act (CEQA) Guidelines. The proposed update does not revise, replace or attempt to supersede any existing mineral resource protection standards adopted by the County or the State of California. Therefore, the Safety Element update would have *no impact* on mineral resources.

Mitigation: None Required.

13. NOISE

Existing Setting: The General Plan and Land Use and Development Code have established maximum allowable noise levels for land use projects and encourages future sensitive land uses to be located in areas where noise generation is limited. Given the rural character of the area, the ambient noise level is quite low. Daytime ambient noise levels are typical of rural and low-density residential areas. Significant noise sources in the County include traffic on major roadways, railroad operations, airports, and localized noise sources such as from industrial uses. Ambient noise levels in areas that are not located in the vicinity of major transportation routes are generally very low.

Would the proposed project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?				✓	A,17,18
b. Generation of excessive ground borne vibration or ground borne noise levels?				✓	A
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓	A,L

Impact Discussion:

13a-c The General Plan contains a Noise Element (Chapter 9), which establishes specific goals, objectives and policies related to noise in Nevada County. There are no amendments being proposed to the Noise Element of the General Plan, and there are no amendments to the noise standards that are identified in the General Plan or the Land Use and Development Code. The Safety Element update is strictly a policy document that addresses hazards in Nevada County, and the adoption of the proposed Safety Element update would not result in the generation of any noise. Any future development projects would require a site-specific environmental review and

would be reviewed on a project-by-project basis for impacts to noise levels or excessive ground borne vibrations. Due to the Safety Element update being a policy document that would not change or conflict with noise standards, and there being no physical changes or development from the Safety Element update, there would be *no impact* on noise levels or ground borne vibrations.

Mitigation: None Required.

14. POPULATION / HOUSING

Existing Setting: In 2018, the State of California Department of Finance estimated that unincorporated Nevada County had a population of 66,207 and consisted of 31,182 housing units. Small towns and rural development that is largely integrated into the natural environment characterize the unincorporated County. Single-family residential development is the predominant housing type within the unincorporated area of the County; much of which occurs in rural areas and small communities.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓	A,17
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓	A

Impact Discussion:

14a-b The General Plan contains a Housing Element (Chapter 8) that lists goals, policies and programs that are focused on maintaining and improving the existing housing stock, and the Housing Element provides guidance to assist in minimizing potential environmental impacts of population growth. However, no amendments to the Housing Element are included as part of this project to update the Safety Element. The proposed update consists only of text amendments to policy documents, which are intended to guide development within the County. Adoption of the update would not directly impact population and/or housing by unplanned population growth or from displacing people or housing. Furthermore, the adoption of the proposed update will not grant any entitlements for development projects and any future development project would be subject to CEQA analysis and a site-specific review. Therefore, *no impact* to population or housing would result from the Safety Element update.

Mitigation: None required.

15. PUBLIC SERVICES

Existing Setting: Public services within the unincorporated County are provided by the County of Nevada, state and federal agencies, and numerous special districts, including fire protection districts, school districts, park and recreation districts, and an irrigation district.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following the public services:					
1. Fire protection?				✓	H, M
2. Police protection?				✓	A
3. Schools?				✓	A, P
4. Parks?				✓	A
5. Other public services or facilities?				✓	A

Impact Discussion:

15a The General Plan contains a Public Facilities and Services Element (Chapter 3), which establishes specific goals, objectives and policies related to public services in Nevada County. No amendments are currently proposed to the Public Facilities and Services Element of the General Plan; however, the Safety Element discusses emergency preparedness and evacuation planning, which involves services from local fire districts and law enforcement agencies. If there is an occurrence of a hazardous event in the County, public services and facilities may be utilized to assist the community and mitigate hazards. The adoption of the proposed Safety Element update, itself, will not make any physical changes or result in a physical impact to public services. Although the Safety Element discusses hazards that may call on public services, the Safety Element itself is a policy document that does not propose any physical changes, new facilities, or changes to existing facilities or services, and it is used as a guide to reduce impacts from natural and human-caused hazards. Any future development projects would require a site-specific environmental review and would be reviewed on a project-by-project basis for impacts to public services. Due to the Safety Element not creating any physical changes, the update is anticipated to have *no impact* on adverse physical changes for new or altered facilities.

Mitigation: None required.

16. RECREATION

Existing Setting: Recreational opportunities within Nevada County are varied, ranging from public parks with intensively used recreational facilities, to vast tracts of forestlands and drainage systems, which provide a natural environment for passive recreation. Three separate Recreation and Park districts are formed within the County, including the Bear River and Western Gateway Park Districts in western Nevada County and the Truckee Donner Recreation & Park District in eastern Nevada County.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓	A
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓	A
c. Conflict with established recreation uses of the area, including biking, equestrian and/or hiking trails?				✓	A, L

Impact Discussion:

16a-c The General Plan contains a Recreation Element (Chapter 5) which establishes specific goals, objectives and policies related to recreational uses and facilities in Nevada County. No amendments are currently proposed to the Recreation Element of the General Plan. Adoption of the Safety Element update would not result in potential impacts to recreational resources in Nevada County. The Safety Element update is strictly a policy document and does not provide entitlements to any specific land use projects. All future development would be subject to the County’s Recreation Mitigation Fee, which will assist in minimizing potential impacts. This fee will be applied at the appropriate timeframe when the project is being built. Additionally, all future projects will be subject to site-specific environmental review and must comply with all applicable County policies and regulations regarding recreational services. Therefore, the Safety Element update would have *no impact* related to recreational resources.

Mitigation: None required.

17. TRANSPORTATION

Existing Setting: The Nevada County circulation system is composed of a combination of state highways, county roadways, city-maintained roadways, and privately maintained roadways. Generally, roadways are grouped into six basic classifications including: Interstate Highways and Freeways, Principal Arterials, Minor Arterials, Major and Minor Collectors, Local Roads and Regional Emergency Access Roads. The County maintains approximately 560 miles of roadways with the remainder being maintained by State and Federal Agencies, Cities, and private Road Maintenance Associations. Numerous county roadways provide intermediate and localized access to rural areas of the county, as well as to the more populated cities of Grass Valley, Nevada City, and Truckee and the communities of Lake Wildwood, Alta Sierra, Lake of the Pines, and others.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle or pedestrian facilities?				✓	A,B
b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				✓	A,B

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
c. Substantially increase hazards due to a geometric design feature (e.g., a sharp curve or dangerous intersection) or incompatible uses (e.g., farm equipment)?				✓	A,H,M
d. Result in inadequate emergency access:				✓	H,M
e. Result in an increase in traffic hazards to motor vehicles, bicyclists, or pedestrians, including short-term construction and long-term operational traffic?				✓	A,H,M

Impact Discussion:

17a-c The adoption of the proposed Safety Housing Element update would not result in potential impacts to transportation and circulation. Traffic and circulation specific mitigation measures have been integrated into the Circulation Element (Chapter 4) of the County’s General Plan in the form of goals, policies and programs, to ensure that local traffic impacts are mitigated to less than significant levels. There are no changes to the Circulation Element being proposed, and there are no conflicts with circulation plans or ordinances in this update. The Safety Element update includes information on evacuation procedures and roads that are considered primary evacuation routes. The update also includes revisions to policies to require road maintenance and to ensure roads are maintained and meet access standards on all new development projects. Any future projects would be subject a review of transportation impacts and may require that a traffic analyses is prepared. The traffic analysis would be reviewed for compliance with County codes, and would require an environmental review for traffic impacts. Due to the Safety Element update being a text amendment that would not cause any physical changes, there would be *no impact* on transportation.

Mitigation: None required.

18. TRIBAL CULTURAL RESOURCES

Existing Setting: The varied environmental zones, the geological characteristics, and the geographical position of Nevada County account for a cultural resource base, which is exceedingly rich and exceptionally complex. This explains the relatively large number of recorded prehistoric and historic sites and the wide array of types. Prehistoric site types which have been inventoried include villages and associated cemeteries, multi-task camps, single task-specific locales (such as bedrock mortar milling features), and special use sites (hunting blinds, petroglyphs and quarries). Nevada County lies within the territory of the Nisenan, or Southern Maidu. The Nisenan occupied the upper drainages and the adjacent ridges of the Yuba River, the north, middle and south forks of the American River and at least the upper north side of the Cosumnes River. The territory is conventionally believed to extend to the crest of the Sierra to the east and the Sacramento River to the west. A number of State laws regulate the disturbance of archaeological sites and the Nevada County General Plan and Zoning Regulations establish procedures for identifying potentially sensitive sites. Tribal Cultural Resources include sites, features, and places with cultural or sacred value to California Native American Tribes. Both the Washoe Tribe of Nevada and California and United Auburn Indian Community of the Auburn Rancheria (UAIC) have contacted the County to request consultation on projects falling within their delineated ancestral lands. More recently, in August 2019, the Single Springs Band of the Miwok Indians has requested consultation on project in western and eastern Nevada County.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: <ul style="list-style-type: none"> i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. 				✓	A,J,17

Impact Discussion:

18a Assembly Bill 52 (Chapter 532, Statutes 2014) required an update to Appendix G (Initial Study Checklist) of the California Environmental Quality Act Guidelines to include questions related to impacts to tribal cultural resources. Changes to Appendix G were approved by the Office of Administrative Law on September 27, 2016. Senate Bill 18 (SB 18), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.” The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to General Plan or Specific Plan processes proposed on or after March 1, 2005. Both the Washoe Tribe of Nevada and California and United Auburn Indian Community of the Auburn Rancheria (UAIC) have contacted the County to request consultation on projects falling within their delineated ancestral lands. Just recently, after the start of the Safety Element update, the Single Springs Band of the Miwok Indians requested consultation on projects in Nevada County.

On July 26, 2018, Staff sent an invitation to the United Auburn Indian Community of the Auburn Rancheria (UAIC), the Washoe Tribe of Nevada and California (Washoe Tribe), the Tsi-Akim Maidu Tribe, and the Nevada City Rancheria Nisenan Tribe to begin AB52 and SB 18 consultation for the proposed Safety Element update. UAIC responded to the invitation and requested to open consultation on the proposed Safety Element update. On October 19, 2018, staff held a conference call with UAIC to discuss the proposed amendments. After the conferenced phone call, UAIC followed-up with an email on October 19, 2018, advising that they had no additional comments

and that they would like to close consultation. No other comments or consultation was requested by any other tribe at that time.

The draft Safety Element was routed for distribution on October 4, 2019, for public comment and agency review. The Planning Department received comments from the UAIC on the draft Safety Element and requested the Planning Department to send the UAIC a copy of the environmental document for the project. The UAIC also commented about including additional information in the Safety Element update to address the effects of hazardous events, specifically wildfires and floods, have on cultural resources. The Safety Element currently includes that wildfires can cause a loss on cultural resources, and with the update is being revised to include that flood can also cause a loss to cultural resources. The General Plan, Chapter 19, has an Element on Cultural Resources to discuss preservation of protection of cultural resources. This project is only to update the Safety Element and does not include amendments to the Cultural Resources Element.

The Shingle Springs Band of Miwok Indians was not part of the initial invitation for consultation on the Safety Element update because this Tribe had not requested consultation on projects in Nevada County until after the update was underway. The Safety Element update was routed to the Shingle Springs Band of Miwok Indians on October 4, 2019, and the County received comments from the Tribe on October 29, 2019, requesting continued consultation and updates as the project progresses. The Tribe also requested records searches, surveys and/or environmental, archaeological, or cultural reports that have been completed for the project. Since the project is for an update to a policy document and it does not require a physical change to a specific site, cultural surveys and records searches are not included in the Safety Element update. The Nevada County Planning Department will continue consultation with both Tribes, and the Planning Department will send the California Native American Tribes a Notice of Availability for public review and Notice of Intent to adopt a Negative Declaration for this project, which will allow the California Native American Tribes the opportunity to comment on the analysis of environmental impacts.

The adoption of the proposed Safety Element update, itself, will not impact Tribal Cultural Resources. Any future development project submittal will be required to be reviewed for Tribal Cultural Resources and would require future consultation of traditionally and culturally affiliated California Native American tribes. Additionally, future projects will be reviewed for compliance with the California Environmental Quality Act, and as a general rule; any potential impacts will be mitigated through project conditioning and review. Therefore, the Safety Element update would have *no impact* on tribal cultural resources.

Mitigation: None Required.

19. UTILITIES / SERVICE SYSTEMS

Existing Setting: Public utilities serving Nevada County include the Pacific Gas & Electric Company for natural gas and electricity, and in Eastern Nevada County, the Truckee Donner Public Utility District also supplies electricity. Propane is a common fuel source used in Nevada County by individual homes and businesses.

Wastewater Collection and Treatment: The County does not comprehensively provide wastewater collection and treatment to all areas of the County. Primarily there are eight Community Regions, two Rural Regions, one Rural Area and two districts in Eastern Nevada County that have access to public sewage disposal. Much of Nevada County is served by onsite sewage disposal/septic systems. Lack of extensive public sewage disposal can be viewed as the primary limiting factor to the development of high-

density housing in Nevada County. All other services are viewed to be adequate to accommodate planned higher density multi-family housing. Seven different sewer service areas within the unincorporated area are identified as adequate to serve all types of housing development in Nevada County. These sewer areas include: City of Grass Valley near and long-term Sphere of Influence areas; City of Nevada City five-year Sphere of Influence areas; Truckee Sanitation District Boundaries; Donner Summit Public Utility District (PUD); and the Lake of the Pines, Lake Wildwood, and Penn Valley Sanitation Districts. Of these seven sanitation districts, the County of Nevada is the sole operator of the Lake of the Pines, Lake Wildwood and the Penn Valley Sanitation Districts only. The County also provides wastewater collection and treatment for the North San Juan and Cascade Shores Sanitation Districts.

Water Service: The County does not act as a domestic water supplier. Residential uses are typically served by groundwater, the Nevada Irrigation District, Truckee-Donner Public Utility District or by smaller community water districts. The Nevada Irrigation District (NID) makes up the largest water purveyor in western Nevada County. NID supplies nearly 20,000 homes, farms and businesses with treated water in Nevada and Placer counties in the foothills of Northern California's Sierra Nevada Mountains. NID collects water from the mountain snowpack and stores it in an extensive system of 10 reservoirs. As water flows to customers in the foothills, it is used to generate clean hydroelectric energy and to provide public recreational opportunities. NID supplies both treated drinking water and irrigation water. Adequate water supply is not seen as a constraint to the development of housing during the current planning period.

Solid Waste: In Western Nevada County, the County maintains a transfer station and contracts with independent waste haulers for curbside pickup through established Franchise Agreements. County residents can also dispose of green waste and hazardous waste at the transfer station. In Eastern Nevada County, solid waste is hauled to the Eastern Regional Landfill located in Placer County by an independent contractor.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Require or result in the relocation or the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?				✓	A,D
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				✓	A
c. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste goals?				✓	C
d. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓	C

Impact Discussion:

19a-d The adoption of the proposed Safety Element update would not result in an impact to County utilities and service systems. The Safety Element update is strictly a policy document that does not

provide entitlements to any specific land use projects, or require any physical changes to services or utilities. Likewise, the text amendment does not generate solid waste or conflict with policies or regulations regarding solid waste. Any future development projects would be reviewed for their impact to utilities and services as a part of a project-specific environmental review process at the time of project submittal. Therefore, the Safety Element update would have *no impact* on utilities or service systems.

Mitigation: None Required.

20. WILDFIRE

Existing Setting: 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 also requires the development of local or county plans for that particular county to be eligible for 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 Nevada County Office of Emergency Services (OES), in coordination with the Nevada County Operational Area Emergency Services Council, has developed a Local Hazard Mitigation Plan (LHMP) for Nevada County to meet the requirements of the DMA on behalf of the County, its incorporated cities and towns and participating districts. Approved by the Nevada County Board of Supervisors, the LHMP enables Nevada County to be eligible for future post-disaster mitigation funding. The LHMP recognizes the threat of natural and man-made disasters and hazards pose to people and property within Nevada County and that undertaking hazard mitigation action delineated in the LHMP reduces the potential for harm to people and property from future disaster and hazardous incidents.

If located in or near state responsibility areas or lands classified as very high fire severity hazard zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓	A,H,M,23
b. Due to slope, prevailing winds, or other factor, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?				✓	A,B,H,M, 18
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓	A,H,M
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓	A,H,M,12

Impact Discussion

20a-d The Safety Element of the Nevada County General Plan addresses wildfire hazards in Nevada County and has several policies to improve fire safety. The Safety Element discusses the importance of ingress and egress by roadways, as well as maintaining the Nevada County

Defensible Space Standards. The Element also recognizes the importance of Public Resources Code 4290 and 4291, which are known as the State Responsible Area Fire Safe Regulations. Nevada County also has a Local Hazard Mitigation Plan (LHMP) that was updated in August 2017. Objective 3.6 of the LHMP is to improve communities' capabilities to prevent/mitigate hazards by increasing the use of technologies. Goal 4 of the LHMP is to reduce fire severity and intensity, with Objective 4.4 to promote the implementation of fuel management on private and public lands. The update includes the incorporation of the LHMP and current information on hazards associated with wildfires, including emergency preparedness, evacuation planning, fire safety and protection, and fuels management. The update also includes additional policies to guide projects and residents of the County towards more fire-wise decisions, and it supports practices for fuel management and infrastructure to support wildfire suppression, such as emergency water facilities or community water supplies. Although the Safety Element update identifies wildfire as a hazard and the documents supports infrastructure and practices that would reduce risks and the severity of wildfires, it does not give approval for any specific projects or improvements.

Additionally, the Safety Element update does not impair emergency response or evacuation plans. The update provides more current information and identifies additional risks associated with evacuation planning, but it does not conflict with or change any evacuation plans. Another section of the Safety Element that is being updated is to address land use associated with hazards. This section provides details on how land use influences the density and location of development, which should also be considered in emergency preparedness and planning. The additional information in the Safety Element would inform the public of wildfire risks and it does not increase the risks to people or structures. The Safety Element update includes information on wildfire hazards in Nevada County and contains policies to reduce short and long-term impacts to the community from these hazards, but the Safety Element does not approve any physical changes or impacts to the environment. Any future development project would be subject to a project-specific review and environmental impacts would be analyzed. Therefore, the update to the Safety Element would have *no impact* on increasing risks of wildfires, exposing people and structures to significant risks, the installation of facilities that would impact the environment, nor would it impair emergency response or evacuation plans.

Mitigation: None required.

21. MANDATORY FINDINGS OF SIGNIFICANT ENVIRONMENTAL EFFECT

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California's history or prehistory?				✓	A, M
b. Does the project have environmental effects that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of the project are				✓	A, M

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
considered when viewed in connection with the effects of past, current, and probable future projects.)					
c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?				✓	A, M

Impact Discussion:

- 21a,c The proposed Safety Element update is strictly a policy document, intended to guide the County in reducing short and long-term loss of life, injuries, and damage to property, resulting from natural and human-caused public safety hazards. The adoption of the proposed Safety Element update would not grant any entitlements for development or any physical changes. Additionally, all future development projects would require a site/project-specific environmental review at the time of project submittal. Therefore, the Safety Element update would have *no impact* related to these issues.
- 21b A project’s cumulative impacts are considered significant when the incremental effects of the project are “cumulatively considerable,” meaning that the project’s incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. Reasonably foreseeable projects that could have similar impacts to the proposed project include other anticipated projects within the project vicinity that could be constructed or operated within the same timeframe as the project. The proposed Safety Element update is strictly a policy document, intended to guide the County in reducing damage from natural and human-caused safety hazards. The document contains goals, policies and programs that are aimed at reducing aimed at reducing damage and injuries from hazards, but it does not approve any site-specific projects. Environmental impacts and cumulative impacts would be reviewed through the permit process of each project. Therefore, the adoption of the Safety Element update, would have *no impact* on environmental effects that are individually limited but cumulatively considerable.

Mitigation: None required.

RECOMMENDATION OF THE PROJECT PLANNER

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or a "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Sadie Caldas, Associate Planner

12/6/19
Date

APPENDIX A – REFERENCE SOURCES

- A. Planning Department
 - B. Department of Public Works
 - C. Environmental Health Department
 - D. Building Department
 - E. Nevada Irrigation District
 - F. Natural Resource Conservation Service/Resource Conservation District
 - G. Northern Sierra Air Quality Management District
 - H. Local Fire Districts
 - I. Regional Water Quality Control Board (*Central Valley Region*)
 - J. North Central Information Service, Anthropology Department, CSU Sacramento
 - K. California Department of Fish & Wildlife
 - L. Nevada County Geographic Information Systems
 - M. California Department of Forestry and Fire Protection (Cal Fire)
 - N. Nevada County Transportation Commission
 - O. Nevada County Agricultural Advisor Commission
 - P. Local School District
 - Q. Gold Country Stagecoach
1. State Division of Mines and Geology. *Mineral Classification Map*, 1990.
 2. State Department of Fish and Game. *Migratory Deer Ranges*, 1988.
 3. State Department of Fish and Game. *Natural Diversity Data Base Maps*, as updated.
 4. Cal Fire. *Fire Hazard Severity Zone Map for Nevada County*, 2007. Adopted by CalFire on November 7, 2007. Available at: <http://www.fire.ca.gov/wildland_zones_maps.php>.
 5. State Division of Mines and Geology. *Geologic Map of the Chico, California Quadrangle*, 1992.
 6. State Division of Mines and Geology. *Fault Map of California*, 1990.
 7. California Department of Conservation, Division of Land Resource Protection. 2016. *Nevada County Important Farmland Data*. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/nev16.pdf>.
 8. State Dept. of Forestry & Fire Protection. *Nevada County Hardwood Rangelands*, 1993.
 9. U.S.G.S, *7.5 Quadrangle Topographic Maps*, as updated.
 10. U.S. Fish and Wildlife Service. *National Wetlands Inventory*, December 1995.
 11. Natural Resources Conservation Service. 2007. *Official Soil Series Descriptions (OSD) with series extent mapping capabilities*. Available at http://soildatamart.nrcs.usda.gov/manuscripts/CA619/0/nevada_a.pdf.
 12. U.S. Geological Service. *Nevada County Landslide Activity Map*, 1970, as found in the Draft Nevada County General Plan, Master Environmental Inventory, December 1991, Figure 8-3.
 13. Federal Emergency Management Agency. *Flood Insurance Rate Maps*, as updated.
 14. Northern Sierra Air Quality Management District. *Guidelines for Assessing Air Quality Impacts of Land Use Projects*, 2000.
 15. County of Nevada. *Nevada County General Plan Noise Contour Maps*, 1993.
 16. Nevada County. 1991. *Nevada County Master Environmental Inventory*. Prepared by Harland Bartholomew & Associates, Inc. (Sacramento, CA). Nevada County, CA.
 17. Nevada County. 1995. *Nevada County General Plan: Volume 1: Goals, Objectives, Policies, and Implementation Measures*. Prepared with the assistance of Harland Bartholomew & Associates, Inc. (Sacramento, CA). Nevada County, CA.
 18. Nevada County. *Nevada County Zoning Regulations*, adopted July 2000, and as amended.
 19. Nevada County. *Safety Element*, adopted 2014.
 20. California Attorney General's Office. "Addressing Climate Change at the Project Level." January 6, 2010.

21. US Environmental Protection Agency. *Current Nonattainment Counties for All Criteria Pollutants*. January 31, 2015. www.epa.gov/oaqps001/greenbk/ancl.html.
22. California Department of Conservation, Division of Mines & Geology. "Report 2000-19: A General Location Guide for Ultramafic Rocks in California -- Areas More Likely to Contain Naturally Occurring Asbestos." 2000.
23. Nevada County. *Local Hazard Mitigation Plan Update*. August 2017.
<https://www.mynevadacounty.com/DocumentCenter/View/19365/Nevada-County-LHMP-Update-Complete-PDF?bidId=>
24. Nevada County. *Land Use and Development Code Section 5, Article 13, Grading*. Amended December 2016.
25. California Department of Toxic Substances Control. Accessed January 24, 2019:
<http://www.envirostor.dtsc.ca.gov/public/>
26. USDA Soil Conservation Service. "Soil Survey of Nevada County Area, California." Soil Survey, Reissued 1993.
27. California Department of Conservation, California Geological Survey. 2010. Accessed January 25, 2019. <https://www.conservation.ca.gov/cgs/Pages/Earthquakes/affected.aspx>
28. California Department of Transportation. *California Scenic Highway Mapping System*. September 7, 2011. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm



RESOLUTION NO. _____

OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NEVADA

A RESOLUTION AMENDING THE NEVADA COUNTY GENERAL PLAN CHAPTER 10, SAFETY ELEMENT (PLANNING FILE NO. GPT19-0002)

WHEREAS, the County of Nevada, acting by and through its Board of Supervisors, did on the fourteenth day of November 1995, adopt a General Plan for the County of Nevada, as evidenced by Resolution No. 95-530, pursuant to the provisions of Title 7, Chapter 3, Article 6 of the Government Code of the State of California, and,

WHEREAS, the County of Nevada has established a General Plan Amendment procedure; and,

WHEREAS, on September 15, 2008, the County of Nevada adopted amendments to the General Plan Safety Element in accordance with the established General Plan Amendment procedures as evidence by Resolution 08-452; and

WHEREAS, on October 10, 2014, the County of Nevada adopted amendments for a second time to the General Plan Safety Element in accordance with the established General Plan Amendment procedures as evidence by Resolution 14-503; and

WHEREAS, the third revision to the Nevada County General Plan Safety Element (Chapter 10), has been prepared pursuant to Government Code Section 65358(b) and according to adopted procedure and are attached to this Resolution; and

WHEREAS, on July 10, 2018, the County of Nevada adopted the updated 2017 Local Hazard Mitigation Plan by Resolution 18-361, which has been incorporated in the the Safety Element; and

WHEREAS, a notice of the draft Safety Element was sent to all agencies, homeowner associations and special interest groups on the Planning Department's distribution list, and has been made available on the County of Nevada's website and at local public libraries for public review and comment; and

WHEREAS, all State and local agencies requiring notice of proposed General Plan Amendments, including all local Native American tribes pursuant to Government Code Section 65352, were provided notice within the timelines established by said codes; and

WHEREAS, all State and local agencies requiring noticing of proposed amendments specific to the Safety Element, pursuant to Government Code Section 65302(g)(7), 65302.5(a), 65302.5(b), were provided notice within the timelines established by said codes; and

WHEREAS, on November 5, 2019, the draft Safety Element was reviewed by the State Board of Forestry and Fire Protection for requirements in Government Code Section 65302(g)(3)(A), and has found that the Safety Element update adequately addresses fire safety planning requirements with recommendations; and

WHEREAS, the Nevada County Planning Commission, after public notice, held a hearing on January 9, 2020, on the proposed amendments to the Nevada County General Plan Safety Element (Chapter 10); and,

WHEREAS, the Nevada County Planning Commission, after reviewing and considering the proposed amendments to the Nevada County General Plan Safety Element (Chapter 10), recommended on a 5-0 vote that the Nevada County Board of Supervisors adopt the proposed Negative Declaration and proposed amendments to the Nevada County General Plan Safety Element update; and,

WHEREAS, the Nevada County Board of Supervisors, after public notice, held a hearing on the proposed Negative Declaration and proposed amendments to the Nevada County General Plan Safety Element (Chapter 10); and,

WHEREAS, the Nevada County Board of Supervisors, after public notice, held a hearing on the proposed Project in which the Nevada County Board of Supervisors also reviewed Resolution No. _____ in which the Board reviewed the proposed Initial Study and Negative Declaration (Planning File No. EIS19-0005) together with all comments received during the public review period and recommended adoption of this same Initial Study and Negative Declaration; and,

WHEREAS, the Board of Supervisors, after reviewing and considering the recommendations of the Nevada County Planning Commission on the proposed amendments to the Nevada County General Plan Safety Element (Chapter 10), did consider the amendments to the General Plan Safety Element, Chapter 10.

NOW, THEREFORE, BE IT RESOLVED THAT BY THE COUNTY OF NEVADA, acting by and through its Board of Supervisors pursuant to the provisions of Section 65358 of the Government Code of California, that:

SAID BOARD OF SUPERVISORS does hereby approve and adopt said proposed amendment to the Nevada County General Plan Safety Element (Chapter 10); and,

RELATIVE to this amendment, said approval is based on the findings contained in the record and determined as follows:

1. The proposed amendment is consistent with and furthers the Goals, Objectives, Policies and Implementation Measures of the General Plan and the provisions of the Nevada County Land Use and Development Code.
2. The proposed amendment will not be detrimental to the public interest, health, safety, convenience, or welfare of the County.
3. The proposed amendment has been reviewed by the State Board of Forestry and has been found to adequately address fire safety planning requirements with recommendations.

PASSED AND ADOPTED by the Board of Supervisors of the County of Nevada at a regular meeting of said Board, held on the _____ day of _____ 2020, by the following vote of said Board:

Ayes: Supervisors

Noes:

ATTEST:

Absent:

JULIE PATTERSON HUNTER
Clerk of the Board of Supervisors

Abstain:

By: _____

_____ Chair

Chapter 10: Safety

DRAFT

Introduction and Setting

The purpose of the Safety Element is to reduce short and long-term 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. Other potential safety hazards, such as airport operations and the transportation of hazardous materials arise from the transport of goods and people. The Safety Element addresses hazards and hazardous materials of the present (transportation of hazardous materials, industrial spills, etc.) and historic remnants (legacy of historic mining; mineshafts and tailings). Each of these hazards has particular characteristics that affect future development of the County. Some safety hazards can be minimized with emergency planning, while other hazards are reduced by development standards and land use planning. The Safety Element identifies areas where private and public decisions on land use need to be responsive to potentially hazardous conditions. It also serves to inform individuals, firms and public agencies of Nevada County's policies regarding appropriate levels and locations of public services, such as Sheriff's and Fire protection.

The Safety Element addresses the potential and existing hazards recognized and experienced in Nevada County using the following categories:

- Emergency Preparedness (EP)
- Geologic Hazards/Seismic Activity (GH)
- Flood Hazards (FH)
- Airport and Military Airspace Hazards (AH)
- Hazardous Materials and Mining Hazards (HM)
- Public Safety Services and Facilities (SF)
- Fire Hazards and Protection (FP)
- Severe Weather Hazards (WH)
- Climate Change Resiliency and Mitigation (CC)
- Environmental Justice (EJ)

Additional discussion related to safety is contained within the following chapters of the Nevada County General Plan: Chapter 1, Land Use; Chapter 3, Public Facilities and Services; Chapter 4, Circulation; Chapter 6, Open Space; Chapter 8, Housing; Chapter 9, Noise; and Chapter 17, Mineral Management.

Statutory Requirements

The Governor's Office of Planning and Research

The primary responsibility of the Governor's Office of Planning and Research is working with local jurisdictions on topics related to land use planning. The Governor's Office of Planning and Research is designated in statute as the State's comprehensive planning agency and as such provides oversight on local general plan preparation.

In addition to containing the vision of the community, California law also requires General Plans address public safety as one of the eight mandatory elements. The Safety Element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peak load water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

Federal Emergency Management Agency

The Federal Emergency Management Agency 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. The Disaster Relief Act of 1974 created the system and the agency, the Federal Emergency Management Agency, by which a presidential disaster declaration of an emergency triggers financial and physical assistance. In order to be eligible for Federal disaster assistance from the Federal Emergency Management Agency under the Disaster Mitigation Act of 2000, Nevada County is required to periodically update both the Safety Element of the General Plan and the Local Hazard Mitigation Plan.

The Nevada County Office of Emergency Services

The Nevada County Office of Emergency Services is responsible for maintaining and updating Nevada County's Local Hazard Mitigation Plan. Hazard Mitigation Planning is the process used by State, local and tribal leaders to understand risks from natural and man-made hazards and develop long-term strategies to reduce the impacts of disasters on people, property, and the environment. The Local Hazard Mitigation Plan is a critical planning tool that identifies community risks based on historical experience and data, modeling of frequency and magnitude of disasters projected, and develops mitigation strategies to build resiliency, avoid impacts, adapt to or mitigate risks. The Local Hazard Mitigation Plan is the implementing tool of Nevada County's General Plan and specifically, the Safety Element. Whereas the Safety Element informs, guides and directs land use decisions to avoid or reduce risks from hazards, the Local Hazard Mitigation Plan provides the measures by which potential hazards and hazardous conditions are to be mitigated.

The Office of Emergency Services in coordination with local, County, State, Federal and non-profit partners have the responsibility to also prepare the Wildfire Hazard Reduction and Preparedness Plan. The objective of the plan is to identify and prioritize pre- and post-fire management strategies and tactics to reduce loss of life, property, and natural resources.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (Cal Fire) is responsible, in partnership with local jurisdiction, for fire planning in State Responsibility Areas. State Responsibility Areas is a legal term defining the area where the State has financial responsibility for wildland fire protection. Incorporated cities (Local Responsibility Areas) and Federal ownership (Federal Responsibility Areas) are not included. As part of the State's Fire and Resource Assessment Program, Cal Fire is responsible for mapping areas of significant fire hazards based on fuels, terrain, weather and other relevant factors. The areas, which are referred to as Fire Hazard Severity Zones, relate to the prescription of various mitigation strategies to reduce risk associated with wildland fires. The State Board of Forestry and Cal Fire are responsible for drafting a comprehensive document for wildland fire protection in California. Nevada County Fire Departments and Cal Fire are responsible for implementing the California Fire Plan in Nevada County. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative inter-dependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis. Nevada County is one of six contract counties that maintain a contractual relationship with Cal Fire.

Senate Bill 1241 revises the Safety Element requirements for State Responsibility Areas and Very High Fire Hazard Severity Zones. Local jurisdictions are required to review and update, as necessary, their Safety Element to address the risk of fire in State responsibility areas and Very High Fire Hazard Severity Zones. The draft Safety Element (or amendment of the Safety Element) of a County or city shall be submitted for review to the State Board of Forestry and Fire Protection at least 90-days prior to adoption or amendment. Cal Fire is responsible for reviewing the draft Safety Element or draft amendment to ensure that specific provisions found in the most recent Office of Planning and Research Fire Hazard Planning document are considered where appropriate, and that the Safety Element includes the following:

- Information regarding fire hazards, including, but not limited to all of the following:
 - Fire hazard severity zone maps;
 - Historical data on wildfires available from local agencies or reference to where the data can be found;
 - Information about wildfire hazard areas that may be available from the United States Geological Service;
 - General location and distribution of existing and planned uses of land in very high fire hazard severity zones; and
 - Local, State, and Federal agencies with responsibility for fire protection, including special districts and local offices of emergency services.
- A set of goals, policies, and objectives based on the information identified for the protection of the community from the unreasonable risk of wildfire.
- A set of feasible implementation measures designed to carry out the goals, policies, and objectives based on the information identified, including but not limited to:
 - Avoiding or minimizing the wildfire hazards associated with the new uses of land;
 - Locating, when feasible, new essential public facilities outside of high fire risk areas or identifying construction methods or other methods to minimize damage if

- these facilities are located in a State Responsibility Areas or Very High Fire Hazard Severity Zone;
- Designing adequate infrastructure if a new development is located in a State Responsibility Area or in a Very High Fire Hazard Severity Zone, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression; and
- Working cooperatively with public agencies with responsibility for fire protection.
- Upon each revision of the housing element, the planning agency shall review, and if necessary, revise the safety element to identify new information that was not available during the previous revision of the Safety Element.

California Geological Survey of the Department of Conservation

The California Geological Survey's 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 the California Geological Survey 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 California Geological Survey 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. At least 45-days prior to adoption or amendment of the Safety Element, each County or city shall submit to the California Geological Survey of the Department of Conservation one copy of a draft of the Safety Element or amendment and any technical studies used for developing the safety element. The California Geological Survey will review drafts and determine whether they incorporate known seismic and other geologic hazard information, and reports its findings to the planning agency.

Emergency Preparedness

Land Use Influences

The ability to prepare for, react to and recover from a major disaster is dependent upon many factors. Land Use is one of the most critical and often over-looked factors in emergency preparedness. Both existing land use and the future, planned land use directly influence the pattern of development across a landscape. Land use influences the distribution, location, density, intensity of development and it directs the type of uses whether it be residential, commercial, industrial, recreation or open space. How land uses are dispersed across the landscape directly effects the layout of roads, utility infrastructure, location of essential public facilities, population centers and areas to be protected in open space. Emergency preparedness should be a consideration when establishing land use and zoning designations and again when discretionary development permits are required of a new or modified development. To assure that development is not creating, for example, capacity issues for existing infrastructure that might affect water availability in a certain community sector for firefighting or capacity of roads to accommodate emergency vehicle ingress and evacuation egress. Section 2, Chapter 1 of the General Plan lays out goals, policies and maps that establish the desired land use pattern that balances future growth with other factors.

(Link of Nevada County GIS Land Use Maps: <https://gis.nevcounty.net/MyNeighborhood/> and Section 4.3.1 in the Local Hazard Mitigation Plan for the Land Use Map and Future Development Areas Map).

Emergency Plans and Guides

In the event of a major disaster, it is in the interest of the Federal government to ensure that local governments have made efforts toward minimizing 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 also requires the development of local or County plans for that particular County to be eligible for 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 Nevada County Office of Emergency Services (OES) has developed a Local Hazard Mitigation Plan (LHMP) for Nevada County to meet the requirements of the DMA on behalf of the County, its incorporated cities and towns and participating districts. Approved by the Nevada County Board of Supervisors, the LHMP enables Nevada County to be eligible for future post-disaster mitigation funding. The LHMP recognizes the threat of natural and man-made disasters and hazards that are posed to people and property within Nevada County, and that undertaking hazard mitigation actions delineated in the LHMP reduces the potential for harm to people and property from future disaster and hazardous incidents. The LHMP identifies a list of potential hazards, with each hazard evaluated for severity, vulnerability, and exposure, and then listed in order of perceived likely impact. The hazards listed in the LHMP are: Ag 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 Nevada County Operational Area Emergency Operations Plan (EOP) prepared by the OES and adopted by the Board of Supervisors, delineates responsibilities of First Responders and other response support organizations, e.g., Office of Emergency Services, Department of Public Health, Environmental Health., etc., for natural disasters and manmade incidents in or affecting Nevada County.

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. If government funds are utilized to develop such a guide, it must be coordinated and approved by the Nevada County Office of Emergency Services, the local fire district, and the local law enforcement agency.

Emergency Notification System

The Emergency Communications Network, CodeRed, used by Nevada County (and other Counties and Cities in California), is a mass notification system. The 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 activated the service via phone, email, text alerts
- Integration and geocoding of supplied 911 database

Evacuation Planning

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

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 Office of Emergency Services coordinates with the American Red Cross and the County Department of Social Services to establish temporary shelters, if requested to do so by the Incident Commander.

Evacuation plans 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 on Nevada County General Plan Land Use Maps 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 County and ingress for emergency personnel. Routes designated on the General Plan Land Use Maps as minor arterial and major collector routes are considered secondary evacuation routes. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities. Local roads are roads that primarily serve as access to and from individual properties. Local roads serve as the first leg of the evacuation route that many Nevada County residents will take. The majority of local road miles in Nevada County are privately owned and many of these roads pre-exist the current road and fire standards. Current standards that address width, slope, vegetation management and access road gates are found in Chapter XVII: Road Standards and Chapter XVI: Fire Safety Regulation of the Land Use and Development Code.

Nevada County Evacuation Notification Categories

Immediate Evacuation Order: Requires the immediate movement of people out of an affected area due to an imminent threat to life. Choosing to stay could result in loss of life. Staying may also

impede the work of emergency personnel. Due to the changing nature of the emergency, this Immediate Evacuation Order may be the only warning that people in the affected area(s) receive.

Evacuation Warning: Alerts people in an affected area(s) of potential threat to life and property. People who need additional time should consider evacuating at this time. An Evacuation Warning considers the probability that an area will be affected and prepares people for a potential Immediate Evacuation Order.

Shelter-In-Place: Advises people to stay secure at their current location by remaining in place as evacuation will cause a higher potential for loss of life.

Though not a specific evacuation notification category, rescue services are also performed by Nevada County first responders. Rescues include emergency actions taken within the affected area to recover and remove injured or trapped citizens. Responders have specific training and personal protective equipment necessary to accomplish the mission i.e., hazardous materials spill, swift-water and avalanche rescues, etc. Boundaries of the area(s) where rescue are planned are identified on the incident map, which includes a notification that entry is restricted to rescue workers only.

Geologic Hazards / Seismic Activity

Avalanches

Avalanche hazard areas are generally located on high, mountainous slopes and terrain at elevations above 7,000 feet. The most important factor necessary to release an avalanche is heavy snowfall. A rapidly increasing snow layer is unable to stabilize or bond with the old layer of snow or the ground below it, so that after a certain amount of time the new snow layer will simply slide off as an avalanche.

Four avalanche hazard zones are defined, ranging from no hazard to high hazard. High hazard areas are those where avalanches that could damage standard wood-frame structures and/or bury automobiles are expected to occur with a probability of one chance in twenty per year. Identified high hazard areas within Nevada County include portions of the Donner Lake, Tahoe-Donner, and Soda Springs areas.

Landslides, Debris and Mud Flows

Landslides, debris and mud flows can be defined as an event in which the surface mass of slope-forming earth move outward and downward from their underlying and stable floors in response to the force of gravity. Unstable or potentially unstable slopes are those areas susceptible to slides, falls, creeps, or flows. Topography, climate, geology, and hydrology are factors contributing to slope instability. The degree of severity of these factors and their interactions is what determines potential hazard. Although slope movements can occur in any type of rock material, certain bedrock formations exhibit a high susceptibility to such movement. This type is found in the central portion of the County. However, most of the County's soils are underlain with dense bedrock formations and lack the characteristics contributing to landslide susceptibility.

Triggers such as an earthquake, vegetation removal (potential results from a wildfire or development), heavy rainfall and human activities can set a landslide in motion. Mining is a human

activity that can greatly increase the potential of a landslide. Nevada County contains many historic hydraulic mining sites, one of which, located northeast of Nevada City, is an area of over 20,000 acres. Because of the extreme methods used in hydraulic mining to “wash away” hillsides in the mid to late nineteenth century, the remaining slopes are very steep and are capped by very expansive clay soils. The result is that these areas are extremely prone to damaging landslides. In addition to presenting risks to human life and property, landslides also present risks to the integrity of infrastructure such as water, sewer, gas lines and transportation corridors.

Earthquakes

According to the U.S. Geological Survey, Nevada County falls within all three “Maximum Expectable Earthquake Intensity” severity zones. The western half of the County is in the low intensity zone, the middle quarter is in the moderate zone and the eastern quarter is in the high intensity zone, as shown in Figure 8-4 of the Nevada County Master Environmental Inventory (1991). Western Nevada County does experience ground shaking from distant major to great earthquakes on faults to the west and east. For example, to the west, both the San Andreas Fault and the Hayward Fault have the potential for experiencing major events.

Lake of the Pines, Grass Valley, Nevada City, Penn Valley, Cedar Ridge, Lake Wildwood, Rough and Ready, and North San Juan are the communities located in the low intensity zone. Of these communities, Grass Valley, North San Juan, Rough and Ready and Nevada City are those which have structures of un-reinforced masonry buildings in their older neighborhoods and commercial districts. While possible, it is not expected that normal seismic activity in this area would result in significant damage. The Town of Truckee is the major community of Nevada County located in the high intensity zone. Truckee is similar to Nevada City and Grass Valley in terms of the location of un-reinforced masonry buildings being located in the historic portions of town and the commercial district. Historically, major earthquakes have not been an issue for Nevada County. Minor earthquakes have occurred locally, and major earthquakes have been felt locally; however, the previous earthquake history has not shown these structures to be at significant risk during normal events. (For more Nevada County Earthquake data please refer to the Nevada County Local Hazards Mitigation Plan, Sections 4.2.10 and 4.3.7).

Subsidence

Land Subsidence in Nevada County has not been quantified. However, the California Department of Conservation GIS data identifies 366 potential mine sites in Nevada County. These features may or may not be significant in the level of risk they pose (additional information on hazards posed by mining operation remnants can be found below under Mining Hazards).

In addition to mines, Nevada County is at risk to subsidence from karst, which are topographic features (surficial and/or subterranean) formed by the dissolution of rocks. Closed depressions, sinking streams and cavern openings are commonly referred to as karst. 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.

A cause for subsidence can also be related to the drawdown of groundwater through 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 (For more Nevada County Earthquake data please refer to the Nevada County Local Hazard Mitigation Plan 4.2.16 and 4.3.14).

**Flood Hazard
Flooding**

Flooding is the rising of and overflowing of a body of water onto normally dry land. Nevada County historical data reflects that floods are one of the most frequent natural hazards impacting Nevada County. Historically, portions of Nevada County have always been at risk to flooding because of its high annual percentage of rainfall, heavy snowfall in the winter, and the number of watercourses that traverse the County. Flooding events have caused severe damage in the very eastern and western portions of the County but are less of a threat within the center of the County. Primarily due to the significant east to west elevation change in the western part of the County, most of the heavy storm rainfall moves quickly out of the watershed. In general, flood hazard areas are generally confined to the areas adjacent to the County’s rivers and streams. Flooding affecting Nevada County normally occurs when heavy rainfall combines with unseasonably warm temperatures that begin a premature melt of the snow pack. Floods can cause losses to human life, structures and other improvements; natural and cultural resources; the quality and quantity of the water supply; assets such as timber, range and crop land, and recreational opportunities; and economic losses. Flooding is most dramatically seen on the Yuba River with its steep canyon walls, and the Truckee River with its smaller river channel. The Bear River, because of its lower elevations and shallow riverbed, tends to be impacted more by heavy rain over an extended period. The primary areas within Nevada County that are subject to localized flooding are shown below in Figure 10.1.

Figure 10.1: Primary Areas Subject to 100-Year Flooding Events

<i>Eastern County</i>	<i>Western County</i>
Truckee River*	South Fork Yuba River
South Fork Prosser Creek	Greenhorn Creek
North Fork Prosser Creek	Deer Creek
Summit Creek*	Wolf Creek
Trout Creek*	Little and South Forks of Wolf Creek*
Little Truckee River	Squirrel Creek (and tributaries) *
Donner Creek*	Clear Creek
South Fork Yuba River	Bear River

*Detailed flood hazard information is provided by the Flood Insurance Study for the unincorporated areas of Nevada County, California, Community Number -060210, by FEMA, revised February 5, 1997.

The Federal Emergency Management Agency provides guidance for floodplain management. The Federal Emergency Management Agency manages the National Flood Insurance Program, which

provides insurance to communities that participate in the program, and works with State and local agencies to adopt floodplain management policies and flood mitigation measures. Nevada County has been a participating community in the National Flood Insurance Program since January 1, 1983. Nevada County's Floodplain Management Regulations are contained in the Land Use and Development Code Chapter XII of the Nevada County Code, which was updated in 2009. Additionally, the Nevada County Local Hazard Mitigation Plan contains a completed assessment of flooding hazards, flood hazard mapping and recommended flood hazard mitigations.

A key element of the National Flood Insurance Program is the identification of floodplain boundaries which are depicted on the Federal Emergency Management Agency Flood Insurance Rate Maps. The concept that a 100-year flood determines a flood event is a central component in Flood Insurance Rate Maps mapping. The 100-year flood represents a flood event that is likely to occur once in every 100 years, or in other words, has a 1 percent chance of occurring in a given year. Areas prone to be impacted by 100-year flood events are identified on the National Flood Insurance Program as Special Flood Hazard Zones (Zones A, AE, AO and AH). Federal flood insurance is required for any structure within a Special Flood Hazard Zone and for any property that has a Federally insured loan.

Dam Failure

Dam failure is another form of flood hazard. Failure can occur as a result of manmade or natural causes. Such causes include improper siting, structural design flaws, erosion of the face or foundation, earthquakes, massive landslides, and rapidly rising flood waters due to a severe storm event(s). According to data from California Department of Resources Division of Safety of Dams there are forty-two (42) dams in Nevada County under their jurisdiction. The Division of Safety of Dams classifies four categories for Downstream Hazard Potential:

- Extremely High Hazard: Expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.
- High Hazard: Expected to cause loss of at least one human life.
- Significant Hazard: No probability of loss of human life, however, can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
- Low Hazard: No probability of loss of human life and low economic and environmental losses. Losses are expected to be principally to the owner's property.

Of the forty-two (42) jurisdictional dams in Nevada County, eight (8) are rated as Extremely High, five (5) are rated High, six (6) are rated as Significant and twenty-three (23) are rated as low.

Nevada County Extremely High (E) and High (H) Hazard Rated Dams

- Bowman (E)
- Combie (H)
- Deer Creek Diversion (E)
- Donner Lake (E)
- Jackson Meadows (E)
- Lake Angela (H)
- Lake Fordyce (E)
- Lake Spalding (E)

- Lake Van Norden (H)*
- Loma Rica Airport (H)
- Magnolia (H)
- Martis Creek Dam**
- Rollins (E)
- Scotts Flat (E)

(* Lake Van Norden Dam spillway is to be modified (lowered) Fall 2019, to no longer impound water, consistent with California Division of Water Rights. ** Martis Creek Dam, operated by the U.S. Army Corps of Engineers and not included in the Division of Safety of Dam's list, is being managed to significantly reduce dam failure risks. The measures taken include keeping the dam gates open in order to keep the reservoir at minimum pool.)

The California Department of Water Resources Division of Safety of Dams has jurisdiction over impoundments that meet certain capacity and height criteria. Embankments that are less than 6 feet high and impoundments that can store less than 15 acre-feet are non-jurisdictional. Additionally, dams that are less than 25 feet high and impound up to 50 acre-feet are non-jurisdictional.

Jurisdictional Dams have filed dam inundation plans with the State of California, the appropriate Federal agency and the County. There are populated areas within the inundation zone of several of these dams; others have public property (such as roads) located down creek. The area of Nevada County where most of these dams exist is not located within a historically seismically active zone. In fact, the western half of the County resides within the lowest earthquake intensity zones in California.

Within the eastern portion of Nevada County, classified in the high earthquake intensity zone, are three major dams: Prosser Creek Reservoir Dam, Stampede Reservoir Dam (located with Sierra County) and Boca Reservoir Dam. One of the two major faults believed to be potential seismic sources appears to be relatively active and of special significance due to its close proximity to the three dams noted above. However, the Truckee earthquake of 1966 had a magnitude of 5.4 but only relatively slight damage occurred to both Prosser and Boca earth fill dams.

In the western portion of the County, flooding in the event of failure of the Upper and Lower Scotts Flat Dams would inundate a wide area from east of Nevada City, through Nevada City and west to Lake Wildwood. The failure of such a dam would most likely be the result of a significant earthquake. Also, in western Nevada County is the Rollins Reservoir on the Bear River, which flows into Combie Lake. The Nevada Irrigation District owns both bodies of water and has inundation plans in place for both of them. It is predicted that a collapse of the Rollins Reservoir may impact Camp Far West reservoir in Yuba and Placer County. Two dams owned by PG&E in the Spaulding Lake complex (Spaulding and Fordyce) have a downstream hazard rating of Extremely High. Collapse of the two dams would cause significant flooding at the 2,700-foot level in the Town of Washington.

In the aftermath of the near failure of the Oroville Dam in Butte County, Senate Bill 92 was signed into law on June 17, 2017. The intent of Senate Bill 92 was to codify requirements that would

assist and guide local jurisdictions in their emergency planning for dam failure events and aid local, State, and Federal agencies to ensure effective dam incident emergency response procedures and planning. The bill requires owners of State regulated dams to submit their inundation maps for review and approval to the Department of Water Resources. Inundation maps are now required to be publicly available. After the approval of the inundation map, the dam owner is required to prepare an Emergency Action Plan, with the exception of low-hazard dams. Prior to Senate Bill 92, the State did not have the power to compel dam owners to prepare Emergency Action Plans. The Emergency Action Plans are also required to be updated no less than every 10 years or when significant changes occur at the dam or downstream.

The Emergency Action Plan is a written document that identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life, should those conditions occur. The plan contains procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities. The plan must also contain the approved inundation map(s) identifying critical areas for evacuation-related actions.

Downstream hazard classifications are based solely on potential downstream impacts to life and property should the dam fail when operating with a full reservoir. The definitions for downstream hazard classifications are based on the Federal Emergency Management Agency's *Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, July 2013)*. The Federal Emergency Management Agency categorizes the downstream hazard potential into three categories of increasing severity: Low, Significant, and High. The Division of Safety of Dams adds a fourth category of "Extremely High" to identify dams that may impact highly populated areas or critical infrastructure, or have short evacuation warning times. Additional information on dams in Nevada County, and their hazard profiles and vulnerability assessments can be found in Nevada County's Local Hazards Mitigation Plan in Sections 4.2.8 and 4.3.5.

Seiches

Seiches are seismically induced waves in bodies of water that can be particularly hazardous where lakes and reservoirs are bordered by campgrounds or other facilities on flat banks. Because of the large number of recreational lakes in Nevada County, seismically induced seiches could prove very damaging. However, most recorded seiches have not been of significant magnitude, and considering the overall seismic risk in this County, seiche risk should be considered only a moderate hazard.

Airport Hazards

Nevada County has within its boundaries several small private airports and two public airports—the Nevada County Airport and Truckee-Tahoe Airport. The Nevada County Airport lies within the foothills near Grass Valley and Nevada City, and the Truckee-Tahoe Airport is located east of the Town of Truckee, with portions of airport lands crossing the County line into Placer County. Safety issues arise as a result of compatible use and non-compatible land uses existing side-by-side with one another. The Federal Aviation Administration (FAA) defines the most critical areas as those that are immediately beyond the runway ends, the initial climb out, and final approach

sectors. It is within these approach/departure sectors that a concentration of aircraft accidents occurs. In addition, there are studies indicating that about half of all airport accidents occur on airport property and an additional 15 percent of accidents occur within one mile outside the airport property. This information suggests that those areas immediately off the ends of the runway and under the airport traffic pattern should be carefully evaluated for compatible future land use and development.

Airport Land Use Compatibility Planning

State law requires that any County with an airport operated for the benefit of the general public establish an Airport Land Use Commission (ALUC). ALUCs were first established under the California State Aeronautics Act in 1967 for the fundamental purpose to promote land use compatibility around airports. ALUCs have three primary functions under State law:

1. The adoption of land use standards that minimize the public's exposure to safety hazards and excessive levels of noise.
2. Prevent the encroachment of incompatible land uses around public-use airports.
3. The preparation of an Airport Land Use Compatibility Plan (ALUCP) for the area around each public use airport that defines compatible land uses for noise, safety, airspace protections, and overflight.

Government Code Section 65302.3 establishes that each County and city affected by an airport land use compatibility plan must make its general plan, any applicable specific plans and zoning ordinance consistent with the ALUCP. Alternatively, local agencies can take the series of steps listed in the Public Utilities Code to make specific findings to overrule the ALUCP policies or portions of it. While the ALUC has the sole authority to adopt the ALUCP and conduct compatibility reviews, the implementation of the compatibility policies rests with local governments.

Nevada County and Truckee Tahoe Airport Land Use Compatibility Plans

Through formal and informal consultation with the Nevada County Community Development Agency and the Town of Truckee, the *Nevada County and the Truckee Tahoe Airport Land Use Compatibility Plans (NCALUCP and TTALUCP)* have been adopted and are maintained by the Nevada County Airport Land Use Commission (NCALUC) and the Truckee Tahoe Land Use Commission (TTALUC). Guidelines and requirements for fulfilling the ALUC's duty to review airport and adjacent land use development proposals are set forth in these land use policy documents. The NCALUCP and TTALUCP identify the compatibility zones and sets the criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances, and to land owners in their design of a proposed project or new development. Land areas within the City of Grass Valley, the Town of Truckee and Nevada County are affected by the NCALUCP.

Military Airspace Compatibility

In guiding growth and development in Nevada County, it is important to consider the critical role of Military Operation Areas (MOAs) in support of national defense. A military operations area is a three-dimensional airspace designated for military training and transport activities that has a defined floor (minimum altitude) and ceiling (maximum altitude). In Nevada County the MOA

consists of a Military Training Route (MTR) which is a low-level high-speed route that is not only used for commutes between installations but allows the pilots to develop the skills necessary to avoid detection by enemy radar. There is one MOA located in the eastern portion of Nevada County that is used by military aircraft to practice high- and low-altitude training exercises and to traverse between military installations. Any development or new construction that seriously impacts or hinders the function and viability of a MOA is considered incompatible land use. As Nevada County's population and economic activity grow in the future, public safety within the MOA shall be coordinated with the military through compatible land use planning in accordance with California Government Code Sections 65352 (a)(5) and (6)(A), 65940, and 65944.

Hazardous Materials and Mining Hazards

The significance of hazardous materials to the environment, property, and human health depends on the type, location, and quantity of the material released. Certain areas of the County are at higher risk of encountering a hazardous material incident. Roadways, railways, waterways, and airways are frequently used for transporting hazardous materials. Areas with industrial facilities that use, store, or dispose of such materials all have an increased potential to exposure.

The County's pre-incident planning and preparedness for hazardous materials releases is contained in the Nevada County Hazardous Materials Plan. The Hazardous Materials Plan fulfills State law and is used as a resource document in conjunction with the Nevada County Emergency Operations Plan, and other local and State plans.

Stationary Sources of Hazardous Materials

The majority of the hazardous waste stream within Nevada County is generated by small quantity generators with the major contributor to the hazardous waste stream being waste oil. Miscellaneous waste, which includes types of waste such as asbestos, metal dust, and chemical toilet waste, is another major group. Other groups include non-halogenated solvents, dye and paint sludges, resins, and non-metallic inorganic liquids. The Nevada County Department of Environmental Health maintains a complaint site list of contaminated sites within Nevada County. The most commonly found form of groundwater contamination on this list occurs from hydrocarbons (gasoline, diesel, and other fuels).

Transport of Hazardous Materials

Interstate 80, the Union Pacific Railroad, and the Kinder Morgan petroleum pipeline are the three major transportation routes by which hazardous materials are transported through the County. Interstate 80 weaves in and out of the County from the State Route 20 interchange to the Nevada State line. It is within this corridor that the incident of an accidental release of hazardous material is most likely to occur. Traffic volumes, the winding character of the Interstate, and snow and ice make this corridor especially dangerous during the winter months. In addition to the character of the interstate, the remoteness of the County from outside help creates even a greater potential for a major incident. Assistance from areas outside the County would be unavailable for a period of one to four hours, in the event of a hazardous materials spill.

Mining

More than a century of placer and hardrock mining in Nevada County leaves a legacy of both physical and chemical hazards. Of the approximately 50 contaminated sites identified by the State Department of Toxic Substances Control (DTSC) in Nevada County, the most common contaminants are arsenic, lead, and mercury from past mining activities. The County is also home to Lava Cap Mine, a Federal Superfund site. Historic mining practices, processing techniques, and improper closures at hundreds of abandoned mine sites pose potentially hazardous conditions in both *Rural* and *Community Regions*. Potential hazards vary from one site to another. Mine waste cleanup is regulated by a number of Federal and State agencies, including the US Environmental Protection Agency, the Department of Toxic Substance Control, and the Regional Water Quality Control Board.

Given the extensive mining history in Nevada County, subsidence due to past mining operations is a concern when identifying appropriate land use and associated development. Past mining activities have created surface subsidence and the potential for subsidence in other areas. Hydraulic mining has significantly altered landscapes by relocating large volumes of sediment that has been carried downstream and redeposited. The hydraulic mine pits may continue to release sediment into surface flows and impact water quality during large precipitation events. Tailing piles and tailings ponds are also mining remnant surface features that can pose risks due to the potential presence of hazardous materials. According to the *Abandoned Mine Lands Preliminary Assessment Handbook* from the California Department of Toxic Substances Control, contaminated water, known as acid mine drainage, from a mine or mine waste pile can also pose risks to waterways, aquatic biota (plants and animals), and the surrounding environment. The pathways for potential human health threats from exposure of contaminants from abandoned mines may be from direct contact or from indirect exposure, such as through the consumption of food items. In addition to the potential presence of hazardous materials, when mines were abandoned, airshafts were left exposed or covered with wooden boards that have since rotted. Access shaft entrances were often quickly covered up with logs and/or boulders that are now gone or decayed and no longer serving the purpose of excluding entrance and protecting the public.

Fire Hazards and Protection

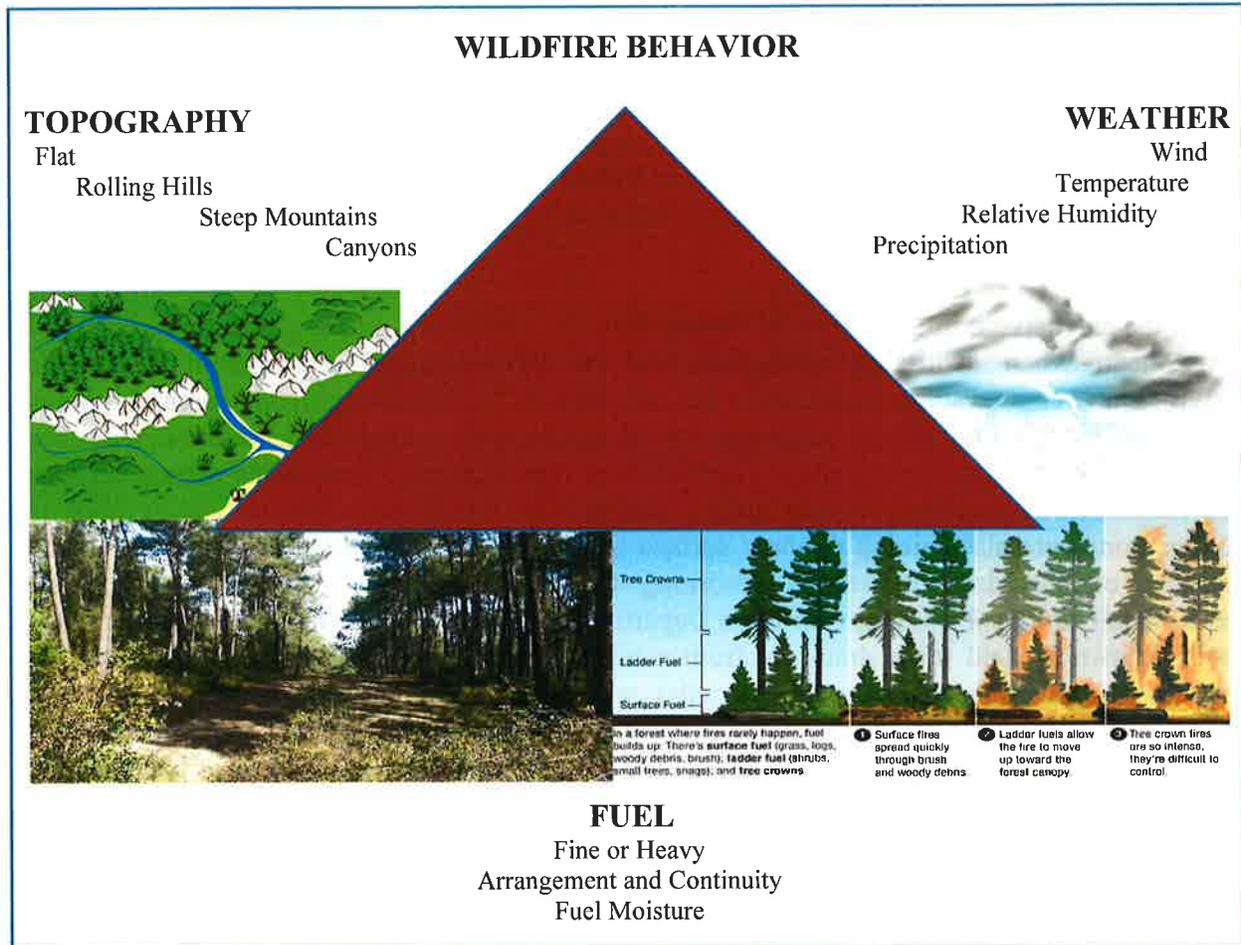
Wildland Fires

The number and severity of wildfires in California are projected to continue to face dramatic increases. Fifteen (15) of the twenty (20) most destructive wildfires in the State's history occurred between 2000 and 2019 and ten (10) of the most destructive fires have occurred since 2015.

Fire has been an integral part of the California landscape for thousands of years. The Mediterranean climate (cold and wet winters/spring and warm and dry summers/fall) supports very productive natural plant communities, and with the rugged terrain, it contributes to the one of the most extremely fire-prone and consequently fire-adapted landscapes in the world. The extreme fire behavior observed over the last twenty-years is a product of these three elements and the exponential influences of climate change. In addition to this formula, the fire management constraints due to the increasing population trends within and adjacent to forests and other highly flammable vegetated landscapes, which also correlates to increased human ignition sources,

establish conditions that have created circumstances that are most conducive to have large scale, extremely impactful wildfires. The diagram in Figure 10.2 highlights the elements that influence wildfire behavior.

Figure 10.2: Wildfire Behavior Diagram



Fire Behavior is “the manner in which fuel ignites, flame develops, and fire spreads and exhibits other related phenomena as determined by the interaction of **fuel, weather** and **topography.**” Climatic factors have increased the odds that these elements come together more often and produce extreme fire behavior.

Wildland fires, and in particular fires that impinge on the Wildland Urban Interface, have the potential to cost County residents the most financially. Wildland Urban Interface is a general term that applies to development interspersed or adjacent to landscapes that support wildland fire. Residential developments in and adjacent to the Wildland Urban Interface areas and limited forestland management resources have created and will continue to perpetuate an environment of dense fuel reserves with wildland fire risk to the County’s residents and their improvements. The best strategy to date has been to thin fuel sources at wildland urban interfaces, educate residents, and provide a rapid response to wildland fires when they start.

The extreme fire behavior experienced across California is the result of the long-term interruption of the natural fire cycle and the consequences of Climate Change. Facilitating the return of the natural fire cycle is not an option across many portions of Nevada County because of the fuel loads that exist today and the dispersed development pattern in the Wildland Urban Interface that continues to expand into areas previously not developed. However, with vegetation management (including prescribed/controlled burns), the reduction of fuels to the pre-settlement "natural" levels in targeted areas in and around communities will reduce the risks associated with wildfires.

Accepting Nevada County's terrain, climate, rainfall, and forest/urban mix, it is a certainty that significant wildland fires are going to continue as a threat. Where there is human access to wildland areas, such as the Sierra Nevada and foothills areas, the risk of fire increases due to the greater chance for human carelessness and human caused ignitions.

Historically, the fire season extended from late Spring to early Fall in the Sierra. Fire conditions arise from a combination of hot weather, an accumulation of vegetation, and low moisture content in the air and the vegetation. Climatic changes have given rise to warmer average temperatures beginning earlier in the Spring and continuing through the Fall which is resulting in a longer fire season. The wildfire risk is predominantly associated with Wildland Urban Interface areas. Wildland Urban Interface areas have been a major focus of California Department of Forestry and Fire Protection's (Cal Fire) fire management strategy since at least 1972. A fire along this wildland/urban interface can result in major losses of property and structures. Potential losses from wildfire include: human life, structures and other improvements; natural and cultural resources; the quality and quantity of the water supply; assets such as timber, range and crop land, and recreational opportunities; and economic losses. In addition, catastrophic wildfire can lead to secondary impacts or losses such as future flooding and landslides during the rainy season.

Since the passing of the Bates Bill (Senate Bill 337) in 1992, Cal Fire has worked with local governments to identify high hazard severity zones within local and State responsibility areas. The Hazard Severity Zones map identifies the level of fire hazard geographically based on the physical conditions and the likelihood that an area will burn over a 30 to 50-year period. The Map is used to direct policy as it pertains to how buildings are constructed and property is protected (e.g.; defensible space, availability of water, building codes, driveway and road standards) to reduce risks (the potential damage a fire can do) associated with wildland fires. A map with fire hazard severity zones within the State Responsibility Areas can be found on the Nevada County GIS site at: <https://gis.nevcounty.net/MyNeighborhood/>. For a map showing the fire hazard severity zones across the County in State, Local and Federal Responsibility Areas to provide a complete picture of the level of fire hazard severity that exists across all jurisdictions in Nevada County, please refer to the Nevada County Local Hazard Mitigation Plan, Section 4.3.15.

Factors contributing to the wildfire hazard risks and vulnerabilities in Nevada County include:

Hazards:

- Overstocked forests, severely overgrown vegetation, lack of vegetation management by some absentee property owners, and lack of defensible space around structures;

- Excessive vegetation along roadsides (both publicly owned and private) and hanging over roads that can impede emergency access, and emergency evacuation;
- Conditions such as drought and overstocked forests stress and weaken trees making them susceptible to beetle infestations that kill trees in small to very large swaths of land across the landscape;
- Topography; steep canyons accommodating wind corridors; and
- Nature and frequency of lightning ignitions.

Vulnerabilities:

- Narrow and often one lane and/or dead-end roads complicating evacuation and emergency response as well as subdivisions that have only one means of ingress/egress;
- Locked gates across private roads that serve more than one property impairing or eliminating a second means of emergency ingress/egress that may or may not have previously been available;
- Inadequate or missing street signs on private roads and absent or poorly placed house address signs;
- Inadequate water storage and fire-flow infrastructure in some portions of the County;
- Increasing residential development in the Wildland Urban Interface and older legacy residential development that does not meet today's development and fire codes; and Mobility limitations of certain populations such as seniors, non-drivers and one-car households.

In an effort to prevent fires, the electrical services provider for western Nevada County—Pacific Gas and Electric Company (PG&E)—initiated public safety power shutoff (PSPS) events in 2019, which may continue in subsequent years until fire risks associated with power lines are decreased. PSPS events involve PG&E turning off electrical service during times when the weather is predicted to have a heightened fire risk from gusty winds and dry conditions. Dependent on the fire risks, the power outage events may occur in specific areas or for all PG&E customers across the County. The PSPS events that occurred in Nevada County for 2019 impacted a majority of the western portion of the County, including Nevada City and the City of Grass Valley. The widespread PSPS events in the County brings additional risks to the residents in the County, to include 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 the PSPS events, emergency services in Nevada County remain functional with back-up power supplies, but many businesses and agencies are not operational. The PSPS events pose health and safety risks to all impacted businesses and residents to Nevada County, with an elevated risk to more vulnerable communities with less resources available during and after power outages.

Fire-Safe Infrastructure

Fire-Safe Circulation

Roads are critical infrastructure supports 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.

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. Nearly 75% of the roads are private roads, which equates to approximately 1,800 miles of roadway. The quality and conditions of these roads are variable. Most private roads do not meet the minimum fire safety standards established in the Nevada County Land Use and Development Code because they predate the current code. More detailed information on circulation is provided in the Nevada County General Plan, Chapter 4: Circulation Element.

Roadside Vegetation Management

The width of roads and clearance around roads is a primary factor affecting firefighting operations. The County maintains approximately 560 miles of public roads, including vegetation management along the roads to reduce fuels in conjunction with road maintenance, which generally consists of repaving or chip sealing. This vegetation management occurs under the Nevada County Public Works Department's Roadside Vegetation Management Program. The program treats approximately 50 miles, or approximately 9% of the County road system on an annual basis. This figure equates to rotational roadside treatment of approximately 11 years for each mile of roadside vegetation.

Emergency Water Storage Systems

Emergency water storage throughout the County involves a mixture of systems. A hydrant system is the dominant source in cities, towns, and major subdivisions. Rural areas of the County depend on a mixture of individual water tanks, pools, ponds, lakes, and ditches. The Nevada County Land Use and Development Code specifies the minimum size for individual water tanks for proposed subdivisions and other applicable projects. The placement of emergency water storage has been incremental, resulting in small storage tanks on development sites. Given the development patterns, densities, and locations of existing water storage tanks, fire experts recognize the need for improving the emergency water storage system, the maintenance of the facilities and assurance the tanks are maintained as full.

Critical Facilities and Populations at Risk

The Local Hazard Mitigation Plan includes an inventory of critical facilities at risk, in consideration of the fire hazard severity zones across all jurisdictions. The inventory identified a total of 282 critical facilities in the Very High Fire Hazard Severity Zone, 109 facilities in the High Fire Hazard Severity Zone, and thirty-seven (37) facilities in the Moderate Fire Hazard Severity Zone. The following lists types of facilities that provide essential services and/or house at-risk

populations that were included in the inventory (the entire list and mapped locations can be found in the Nevada County Local Hazard Mitigation Plan, Section 4.3):

- Airports
- Bridges
- Churches
- Fire Stations
- Government Buildings
- Hospitals
- Schools
- Shelters

Fire Agencies and Support Organizations

The County is protected by multiple fire protection agencies, including eight local fire districts, one water district, two City fire departments, CAL FIRE, the Bureau of Land Management (BLM), and the US Forest Service (USFS). In Eastern Nevada County, the Truckee Fire Protection District provides fire protection services. In Western Nevada County, the following fire districts and departments provide fire protection services for the cities and unincorporated areas of the County:

- Grass Valley City Fire Department
- Higgins Fire Protection District
- Nevada City Fire Department
- Nevada County Consolidated Fire District
- North San Juan Fire Protection District
- Ophir Hill Fire Protection District
- Peardale-Chicago Park Fire Protection District
- Penn Valley Fire Protection District
- Rough and Ready Fire Protection District
- Washington County Water District (Washington Fire)

Fire protection services are determined by jurisdiction and responsibilities. In general, local fire districts and city departments provide emergency medical services, other emergency responses, and fire protection for structures within their respective jurisdictions. Some fire districts are staffed with volunteers. Cal Fire provides wildland fire protection services within those areas mapped State Responsibility Areas on non-Federal lands for the purpose of life, property and resource protection. USFS and BLM provide wildland fire protection services on Federal lands in Federal Responsibility Areas for watershed and resource protection. Some areas are also identified as Local Responsibility Areas, including those within the cities of Grass Valley and Nevada City, as well as the area under the jurisdiction of the Truckee Fire Protection District.

Master Mutual Aid and California Mutual Aid agreements between the fire protection agencies that serve Nevada County enable cooperative fire protection and the dispatch of the appropriate level of emergency response from the cooperating agencies, providing the most effectual fire protection, regardless of the responsibility area. The Grass Valley Emergency Command Center, located at the Nevada County Airport in Grass Valley, is an interagency-agency cooperative

facility between the United States Forest Service (Tahoe National Forest) and Cal Fire (Nevada-Yuba-Placer Unit). Cal Fire dispatch personnel provide emergency dispatch services through cooperative agreements with all the fire districts and cities within Nevada County, a dozen County Offices of Emergency Services in the Sierra Nevada, and private contractors delivering air and ground medical services.

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. Cal Fire maintains two planes and the Forest Service maintains one plane. Two retardant air tankers are also based during the fire season at the air attack base. The strategic location of the Grass Valley air base assists Cal Fire in achieving its goal of twenty-minute response times anywhere in California.

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 five fire-fighting hand crews with up to eighteen individuals in each crew. The crews are a year-round resource providing fuel reduction assistance within Nevada County communities when they are not fighting wildfires.

The Nevada County Fire Marshal enforces, inspects and reviews County projects based on fire safety codes and regulations, unless the project is located within the jurisdiction of a local fire protection district with Fire Prevention staff. The Fire Marshal also reviews and recommends changes to the County fire safety regulations. The Nevada County Fire Chief's Association also participates in the review of community, County, and State fire safety codes and regulations.

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 wildfire in our communities and adjacent forestland. 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.

The Firewise Communities/USA[®] program is an opportunity available to fire-prone neighborhoods and communities in Nevada County. The goal of Firewise Community organizations is to encourage and acknowledge action that minimizes home loss to wildfire. Neighborhood and community chapters teach their residents how to prepare for a wildfire before

it occurs. The program is scalable to communities large and small, developments and neighborhoods of all types. The Fire Safe Council of Nevada County has assisted a number of communities in Nevada County to become designated Firewise Community chapters.

Fire Protection Regulations

Fire science research indicates the area around a home and other buildings requires at least 100 to 200 feet of reduced and modified vegetation to minimize structure ignition from radiation and convection heat, and/or firebrands landing and accumulating directly on and immediately adjacent to the home. Fire science also indicates that structure fires can produce sufficient amounts of heat and firebrand to ignite wildland vegetation.

Nevada County Land Use and Development Code Chapter XVI requires new projects and construction to meet fire safety standards described in PRC 4290, and establishes requirements for fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards. New structures built in Nevada County must also comply with fire safety building regulations. These building codes require the use of ignition-resistant building materials and establish design standards to improve the ability of a building to survive a wildfire.

State-mandated PRC 4291 requires the management of flammable vegetation around buildings or structures as a firebreak within a certain distance of the structure's footprint. This regulation applies 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 the SRA and high or very high fire hazard severity zones.

Fire Protection Plans and Programs

Federal and State Plans

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.

The Nevada County Fire Safe Council has developed a Community Wildfire Protection Plan based on the requirements of the Healthy Forest Restoration Act of 2003, which identifies measures that protect and restore forestland. The Community Wildfire Protection Plan coordinates with the Local Hazard Mitigation Plan on wildfire issues. The Community Wildfire Protection Plan provides educational opportunities for the public to understand the complex issues of fire and fuels and to engage in the decision-making process for community safety.

The Local Hazards Mitigation Plan in Sections 4.2.18 and 4.3.15 provide information pertaining to the specific hazards and vulnerabilities in Nevada County that wildfire poses. The plan includes

wildfire history in Nevada County, values at risk, critical facilities in high and very high fire hazard severity zones and maps that geographically reflect the hazards and risks.

Severe Weather Hazards

Wind, Lightning, Snow (Blizzards), Freezing, Heavy Rain, Drought

Severe weather is generally defined as any destructive weather event and usually occurs in Nevada County as localized storms that bring power outages, isolation of vulnerable regions (single access road closures), and white-out conditions on roadways. Deep snow, strong winds and severe cold have also created unsafe living conditions for vulnerable members of our community. Rain, snow, lightning and high winds are likely to continue as one of the natural threats to Nevada County. More recently, extreme heat has been identified as a form of severe weather that needs to be addressed. Temperature extremes are likely to continue to occur annually in Nevada County. Though less likely to occur in the Eastern portion of the County at higher elevations, temperatures at or above 90°F are common most summer days in the western portion of the County.

The California Climate Adaptation Strategy, citing a California Energy commission study, States that “over the past 15 years, heat waves have claimed more lives in California than all other declared disaster events combined.” This study shows that California is getting warmer, leading to an increased frequency, magnitude, and duration of heat waves.

Storms in Nevada County are generally characterized by heavy rain and strong winds. 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. Some storms that cross Nevada County’s diverse landscapes 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 and crop damage, threaten public safety, and have adverse economic impacts from business closures and power loss. Nevada County 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. (For more information, historical data, and maps please refer to the Local Hazard Mitigation Plan Sections 4.2.2, 4.2.3, 4.2.4, 4.3.12, and 4.3.13.)

Not specifically mentioned above were blizzards, which are the combination of wind and blowing snow. Closure of roads and highways due to blowing snow is a common and annual event above elevations of 5,000 feet in the Sierra Nevada.

A drought is an event of prolonged shortages in the water supply, whether atmospheric (below-average precipitation), surface water or ground water. A drought can last for months or years and it can have a substantial impact on the ecosystem and agriculture of the affected region and harm

to the local economy. In the case of environmental effects drought can cause lower surface and subterranean water-levels, lower flow-levels, increased pollution of surface water, the drying out of wetlands, more and larger fires, loss of biodiversity, worse health of trees and the appearance of pests and dendroid diseases. Economic losses include lower agricultural, forests, game and fishing output, higher food-production costs, lower energy-production levels in hydro plants, problems with water supply for the energy sector, disruption of water supplies for residential and agricultural use. Social costs include the negative effect on the health of people directly exposed to this phenomenon (heat waves), possible limitation of water supplies, increased pollution levels, high food-costs, and stress caused by failed harvests.

Climate Change Resiliency and Mitigation

An important factor affecting public safety and disaster management functions is climate change. The impacts of climate change pose an immediate and growing threat to California's economy, environmental and public health. From the north coast of California through the Sierra Nevada to the Mojave Desert, all of California will continue to experience effects of climate change in different ways, including increased likelihood of drought, flooding, wildfires, heat waves, severe weather and sea level rise. Climate change effects from drought can cause changes in rainfall, which may also impact ground water supply. When rainfall is less than normal for several weeks or more, the flow of surface water declines and water levels in lakes and reservoirs fall, and the depth to water in wells increases. Drought and severe weather events caused by climate change can also impact food production from crops, which may lead to food security issues.

With the passing of Senate Bill 379, local jurisdictions are required to review and update as necessary their Safety Element to address climate adaptation and resiliency strategies applicable to that city or county. Senate Bill 379 requires the update 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.

Climate change is the change in measures of weather patterns over long periods, from decades to millions of years. More specifically, it may be a change in average weather conditions such as temperature, rainfall, snow, snowline elevation, ocean and atmospheric circulation or in the distribution of the weather around the average. While the Earth's climate has cycled over its 4.5-billion-year age, these natural cycles have taken place gradually over millennia, and the Holocene, the most recent epoch in which human civilization developed, has been characterized by a highly stable climate, until recently. Human-induced climate change has been rapidly warming the Earth at rates unprecedented in the last 1,000 years.

Since industrialization began in the 19th century, the burning of fossil fuels (coal, oil and natural gas) at escalating quantities has released vast amounts of carbon dioxide and other greenhouse gases responsible for trapping heat in the atmosphere, increasing the average temperature of the Earth. Secondary impacts include changes to precipitation patterns, global water cycles, melting glaciers, melting ice caps and rising sea levels. Climate change will increase the severity of existing natural hazards such as wildfire, flooding, and extreme weather conditions affecting people and landscapes.

To provide a clearer picture of the effects of climate change on the diverse regional landscapes, California's Adaptation Planning Guide has divided California into eleven different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors and regional designations. Nevada County falls within the North Sierra Region characterized as a sparsely settled mountainous region where the region's economy is primarily tourism-based. The region is rich in natural resources, biodiversity, and is the source for the majority of water used by the rest of the State. In the North Sierra Region and Nevada County Planning Area average temperatures for January are projected to increase by 2.5°F to 4°F by 2050 and July temperatures are projected to increase by 4°F to 5°F by 2050. Average precipitation declines are projected for the region and will vary north to south from 3 to 6 inches by 2050. By 2050, the annual number of heatwaves per year is expected to increase by two. Snowpack levels are projected to decline dramatically, and wildfires are projected to increase up to 10.5 times throughout the region, with the highest risks expected in the northern and southern parts of the region. Climate change may lead to an increase in the frequency and severity of existing natural hazards, which may also lead to an increase in the frequency of events that may pose risks and call for evacuations. Over the long-term, reducing greenhouse gases can help make these changes less severe, but the changes cannot be avoided entirely.

The following is a list of how climate change and its impacts may exacerbate natural hazards in Nevada County in the future:

- Frequency, intensity, and 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, and those who work outdoors.
- Higher temperatures will melt the Sierra snowpack and drive the snowline higher, resulting in less snowpack water storage for water supply later in the season.
- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect Nevada County with more frequent and /or more extensive flooding. Flooding projections for 100 and 500-year events reflect higher frequencies.
- Storms and snowmelt may coincide and produce higher winter and/or spring runoff initiating downstream flooding.
- Warmer temperatures, reduced snowpack, and earlier snowmelt can be expected to increase wildfire and wildfire intensity potential through increased plant moisture stress (grasses drying sooner, tree and shrub water content decreased), increased insect populations; both of which affect forest health and reduce forest resilience to wildfires. An increase in 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, and the ability to hold ground water in the upper watersheds.
- With the increase in wildfire risks that leave slopes bare of vegetation, and severe weather events in the form of heavy rain, landslides and or debris/mudflows are also a potential exasperated safety hazard.

- Warmer temperatures have the potential for increasing both the species and quantities of insect pests that can significantly impact agricultural operations and production. 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.
- Long periods of drought can adversely impact the environment and agriculture through lowered water tables and reduced water supplies affecting crop yields and forest resources. The availability, access and stability of food resources and production could be negatively affected impacting Nevada County agricultural operations during prolonged drought periods.

Nevada County's Local Hazard Mitigation Plan includes a hazard identification assessment that lists the County's potential hazards, along with each hazards' geographic extent of influence, probability of future occurrences, magnitude of severity, significance (minimal potential to widespread potential impact), and the potential influence climate change may have on the specific hazard. Based on the assessment results, mitigation strategies have been developed for reducing the County's risks and vulnerabilities to these hazards. (See the Local Hazard Mitigation Plan, Sections 4.1 and Chapter 5).

In addition to the mitigation strategies identified in the Local Hazard Mitigation Plan to reduce climate change impacts, the County has adopted an Energy Action Plan (EAP) that provides an analysis of the energy use in the unincorporated area of the County, and a roadmap for accelerating energy efficiency, water efficiency, and renewable energy efforts that are already underway in Nevada County. Community members and the County have opportunities to save energy by addressing inefficiencies of current energy-consuming systems, operations, and behaviors. The EAP was developed to provide a broad view of energy use in the County, to set energy and water-energy saving goals, to recommend actions that result in short and long-term energy savings, and to educate the community on existing resources designed to save utility customers energy. Efforts to implement the EAP are in place by working groups.

Environmental Justice and Vulnerable Populations

In 2016, Senate Bill 1000 was signed into law requiring cities and counties that have disadvantaged communities to incorporate environmental justice policies into their General Plans, either in a separate environmental justice element or by integrating related goals, policies, and objectives throughout other elements of the General Plan. The California Department of Environmental Protection defines Environmental Justice in the following text: *“The principles of environmental justice call for fairness, regardless of race, color, national origin or income, in the development of laws and regulations that affect every community’s natural surroundings, and the places people live, work, play and learn.”*

The concept of environmental justice encompasses different aspects of land use, safety, housing, conservation and recreation planning. Most often environmental justice goals and policies addresses inequitable exposure to pollutant and the siting of locally unwanted land uses. More broadly, environmental justice addresses land-use patterns such as the location of industrial and commercial land uses that have the potential to adversely impact vulnerable populations and communities. Environmental justice also addresses the lack of certain land uses, amenities and social and physical infrastructure to serve vulnerable populations and communities. These populations tend to be affected disproportionately, in the ability to keep their homes cool during an extreme heat event, or the ability to recover after a wildfire or flood event that damages or destroys their home. Vulnerable populations may also face additional challenges of not having resources available to assist with hazardous conditions, such as being able to evacuate, or to adapt to public safety power shutoff (PSPS) events by finding alternative practices or power sources.

The 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
- 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.

As Stated in the introduction of this chapter, the purpose of the Safety Element is to reduce short and long-term 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. The Safety 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 Nevada County, it is imperative to address responses to the safety needs of vulnerable populations and communities.

Goals, Policies, and Programs

The following sections identify the eight primary types of goals, policies and programs of the Safety Element, which are grouped by subject categories as follows:

- Emergency Preparedness (EP)
- Geologic Hazards/Seismic Activity (GH)
- Flood Hazards (FH)
- Airport and Military Airspace Hazards (AH)
- Hazardous Materials and Mining Hazards (HM)
- Public Safety Services and Facilities (SF)
- Fire Hazards and Protection (FP)
- Severe Weather Hazards (WH)
- Climate Change Resiliency and Mitigation (CC)
- Environmental Justice (EJ)

Emergency Preparedness (EP)

GOAL EP-10.1

Provide a coordinated approach to hazard and disaster response preparedness.

Policy EP-10.1.1 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. (also see; Local Hazard Mitigation Plan 5.4 Mitigation and Action Plan)

Policy EP-10.1.2 The Local Hazard Mitigation Plan, adopted by the County and periodically reviewed and updated in accordance with the Federal Disaster Mitigation Act of 2000 and Government Code 65302.6, shall serve as the implementation program for the coordination of hazard planning and disaster response efforts within the County.

The Local Hazard Mitigation Plan, which is incorporated into this Safety Element by reference and includes mitigation strategies for wildland fire hazards, shall be reviewed, along with the County's mutual aid agreements and existing wildland fire-related codes and ordinances to address the hazards of development in the wildland urban interface annually, or as necessary, to ensure compliance with the Federal Disaster Mitigation Act of 2000 and State Fire Code, as it exists or as may be amended.

Policy EP-10.1.3 The local earthquake preparedness plan shall be coordinated with regional plans for earthquake preparedness through the local and State Office of Emergency Services.

- Policy EP-10.1.4*** Provide for adequate evacuation routes in areas of high fire hazard, high potential for dam failure, earthquake, seiches, avalanche, flooding or other natural disaster.
- Policy EP-10.1.5*** Sustain the continued efforts in building public awareness of the Nevada County Operational Area Emergency Operations Plan, and Community Emergency Preparedness and Evacuation Guides, through the local Office of Emergency Services, as the focus for planning for emergency evacuation of threatened populations.
- Policy EP-10.1.6*** Transportation routes that are designated on the General Plan Land Use Maps as interstates, freeways, highways, and other principal arterial routes shall be considered primary evacuation routes on a Countywide basis. Such routes provide the highest levels of capacity and contiguity and serve as the primary means for egress from the County.
- The routes designated on the General Plan Land Use Maps as minor arterial or major collector routes shall be considered secondary evacuation routes on a Countywide basis. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities.
- Policy EP-10.1.7*** Prioritize the creation and maintenance of private road districts on existing private roads to ensure emergency ingress and egress meets Nevada County and Cal Fire road and driveway standards and maintains these standards. Private road districts shall include the assurance that emergency ingress and egress will be maintained.
- Policy EP-10.1.8*** Support the development and maintenance of Countywide and local emergency evacuation plans.
- Policy EP-10.1.9*** Support the development of Community Emergency Preparedness and Evacuation Guides by local community members in collaboration with the County Office of Emergency Services.
- Policy EP-10.1.10*** Emergency preparedness planning shall include recovery plans to support the people, services and environments affected by the emergency event.
- Policy EP-10.1.11*** Mitigate development in areas of High and Very High Fire Hazard Severity Zones by incorporating into conditions of approval the most current data in order to assure appropriate fuel modification around the development and emergency ingress and egress for residents, visitors and emergency services.

Policy EP-10.1.12 Continue to work with Cal Fire, California Office of Emergency Services and Nevada County Office of Emergency Services to adopt by ordinance the most current Fire Hazard Severity Zones Map, adopt the most appropriate fire-resistant building material standards and fuel modification/vegetation management requirements for each zone as a basis for project review in accordance with Federal, State and local standards.

Policy EP-10.1.13 Nevada County shall develop policies and provide updates, as appropriate, that address recovery and redevelopment after a large fire with the intent to address the reduction of future vulnerabilities to fire hazard risks through site preparation, redevelopment layout design, fire resistant landscape planning, and fire retarding building design and materials.

Geologic Hazards / Seismic Activity (GH)

GOAL GH-10.2

Minimize injury and property damage due to geologic and seismic hazards.

Policy GH-10.2.1 Ensure that new construction meets current structural and safety standards.

Policy GH-10.2.2 Continue to cooperate with the State Department of Conservation – California Geological Survey, the State Office of Emergency Services and other appropriate Federal, State and local agencies and incorporate the most current data concerning the following as the basis for the County's Site Development Standards, and project site plan review:

- a. geologic hazards; and
- b. seismic hazard data for sensitive land uses such as schools, medical facilities, high-density residential uses, and intensive commercial uses.

The project review shall consider the need to mitigate development in such areas in accordance with Federal, State and local standards.

As part of the project site review process, require sufficient soils and geologic investigations to identify and evaluate the various geologic and seismic hazards that may exist for all proposed development, including subdivisions. Such investigations shall be required within an area determined to be seismically active by the State Department of Conservation – California Geological Survey, or within an area

having potential geologic hazards, including slope instability and excessive erosion.

Flood Hazards (FH)

GOAL FH-10.3

Reduce the potential for injury, property damage, and environmental damage from flooding.

Policy FH-10.3.1 Implement development standards to ensure new construction does not result in increased peak run-off or flood potential.

Policy FH-10.3.2 Avoid increases in downstream flooding potential by protecting natural drainage and vegetative patterns through project site plan review, application of Comprehensive Site Development Standards, use of clustered development and project subdivision design. The Comprehensive Site Development Standards shall include measures applicable to all discretionary and ministerial projects to avoid downstream flooding resulting from new development. Such measures, shall include, but not be limited to:

- a. Avoidance of stream channel modifications;
- b. Avoidance of excessive areas of impervious surfaces; and
- c. Use of on-site retention or detention of storm water.

Policy FH-10.3.3 Nevada County shall continue to work with appropriate local, State and Federal agencies, and in particular, the Federal Emergency Management Agency and the National Flood Insurance Program in maintaining the most current flood hazard and flood plain information as a basis for project review in such areas in accordance with Federal, State and local standards.

Policy FH-10.3.4 Owners of dams under State jurisdiction shall submit their Emergency Action Plans including the Inundation Map and subsequent updates to the Nevada County Office of Emergency Services at the time of the Local Hazard Mitigation Plan's next update and with each 5-year update thereafter.

Airport Hazards (AH)

GOAL AH-10.4

Ensure the safety and compatibility of land uses in the vicinity of airports and military airspace

Policy AH-10.4.1 Maintain land use and development patterns in the vicinity of airports that reflect and are consistent with policies for the different airport land use compatibility zones within the defined Airport

Influence Areas as set forth by the Nevada County and Truckee Tahoe Airport Land Use Compatibility Plans (ALUCPs).

Policy AH-10.4.2 Through appropriate zoning regulations, the County shall enforce airport ground and height safety areas, and land use compatibility standards, consistent with the ALUCPs adopted by Nevada County and Truckee Tahoe Airport Land Use Commissions, as those plans are currently in effect.

Policy AH-10.4.3 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.

Hazardous Materials (HM)

GOAL HM-10.5

Protect public health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.

Policy HM-10.5.1 Provide means for the identification, safe use, storage, transport, and disposal of hazardous materials, including household hazardous waste.

Policy HM-10.5.2 When siting new on and off-site hazardous waste management facilities, the County 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-10.5.3 The Nevada County Hazardous Materials Area Plan (Area Plan) shall provide direction and establish the policies, responsibilities and procedures required to protect the health and safety of Nevada 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-10.5.4 The County will encourage the cleanup of sites contaminated by mine wastes or other hazardous materials.

Policy HM-10.5.5 The County will actively promote prompt clean-up or remediation of properties contaminated by mine waste or other hazardous materials and shall not grant any discretionary or ministerial land use approvals to develop or change boundaries or reconfigure parcels believed 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 Nevada County standards or State regulations.

Public Safety Services and Facilities (SF)

GOAL SF-10.6

Ensure adequate public safety services and facilities through development standards, development fees, and land use patterns.

Policy SF-10.6.1 Maintain appropriate levels of safety and protection services and facilities on land and water for both *Community* and *Rural Regions*.

Policy SF-10.6.2 The following shall be included in the adopted Comprehensive Site Development Standards as the basis for site plan review:

- a. Standards to enhance the ability of the County 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-10.6.3 Land use patterns and development standards shall minimize hazards resulting from wildfire, flooding, earthquake, slope failure, avalanche, and other natural occurrences.

Policy SF 10.6.4 Encourage appropriate levels of consolidated services to provide for efficiency and cost containment.

Policy SF-10.6.5 The County will encourage joint service agreements and consolidation of police, fire, and emergency services between the County, cities, and service districts.

Program SF-10.6.1 The County shall inventory and identify public and private facilities that provide or can be improved to provide temporary safety zones in times of emergencies.

Program SF-10.6.2 The County emergency service organizations shall participate with other local, State and Federal emergency services entities to inventory and identify public and private facilities that provide or can be improved to provide temporary safety zones in times of emergencies.

Fire Hazards and Protection (FP)

GOAL FP-10.7

Enhance fire safety and improve fire protection effectiveness through infrastructure and service improvements.

Policy FP-10.7.1 Ensure County-maintained roads meet design standards for current or anticipated uses, as designated on the General Plan Land Use Map. Maintain and update Nevada County road standards for both public and private roads to adequately address emergency ingress and egress.

Policy FP-10.7.2 As a condition of development, require long-term maintenance of private roads to meet current standards, including roadside vegetation management, as part of a formal private road association or similar entity.

Policy FP-10.7.3 Projects requiring a traffic study shall include in such study an assessment of the current emergency evacuation capacity of the public and/or private roads that serve the proposed project, and recommended mitigation that will increase the evacuation capacity, if needed.

Policy FP-10.7.4 Encourage fire protection agencies to determine appropriate levels of fire protection facilities and services for both *Community* and *Rural Regions*.

Policy FP-10.7.5 Encourage the upgrading of facilities within existing fire protection districts, and encourage the expansion of existing districts where warranted by the population density allowed under the General Plan.

Policy FP-10.7.6 Locate new critical facilities outside of High and Very High Fire Hazard Severity Zones, unless alternatives are not available or feasible. (Refer to Fire Hazard Severity Zone Map and Critical Facilities in Section 4.3.15 in the Local Hazard Mitigation Plan).

Policy FP-10.7.7 The County shall support community or County-wide water supply systems and the ongoing maintenance of water supply infrastructure for fire protection.

GOAL FP-10.8

Reduce fire risk to life and property through land use planning, ordinances, and compliance programs.

Policy FP-10.8.1 Nevada County shall apply and enforce State of California Public Resource Code 4290 and 4291 through County-adopted ordinances, which includes minimum fire safety standards related to defensible space that are applicable to State responsibility area lands and lands classified and designated as very high fire hazard severity zones as reflected on current and future maps defined in subdivision (i) of Section 51177 of the California State Government Code. Nevada County shall continue to adopt revisions to the California Fire and Building Codes and other standards, which address fire safety, as they are approved by inspection organizations and the State of California. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices.

Policy FP-10.8.2 Review wildfire safety policies, codes, and ordinances, and report the findings to the Board of Supervisors with OES review of the Local Hazard Mitigation Plan (also see EP-10.1.2).

Policy FP-10.8.3 Recognize the value of the “same practical effect” or “exception” process when the letter of the law may not be practically applied, but the intent of the law may be achieved through application of other measures. Develop a public information sheet to increase public awareness and understanding regarding the application of these processes.

Policy FP-10.8.4 New development and subdivisions shall include adequate emergency infrastructure that includes but is not limited to, emergency water facilities to assist and support wildfire suppression, and adequate ingress and egress routes to facilitate emergency responders’ access and the evacuation of inhabitants. Provisions shall be made on applicable projects to require the maintenance of emergency infrastructure and facilities.

- Policy FP-10.8.5*** Land use patterns and development standards shall minimize fire hazards, and shall be reviewed and revised, as needed, consistent with the five-year update of the Safety Element.
- Policy FP-10.8.6*** Fire safe measures shall be commensurate with the response time for emergency services (e.g. longer distance to a fire department requires more stringent mitigation measures).
- Policy FP-10.8.7*** As part of the coordinated and centralized fire safe reviews, the following shall be included in the Comprehensive Site Development Standards as the basis for site plan review:
- a. Standards for roads and private driveways, which will enhance the ability of emergency service providers to respond to structural and wildland fires, and calls 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. Each property outside of a developed water system shall maintain sufficient usable water storage to provide wildfire and structure protection on the property;
 - c. Sign and address standards, which will provide for easy identification of roads, streets, driveways and buildings by emergency service providers; and
 - d. 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.
- Policy FP-10.8.8*** In those areas outside *Community Regions*, which are identified as having a high to very high fire hazard severity and/or lack adequate year-round fire protection facilities, maintain low-density land use designations (Rural or Forest) in order to minimize the potential fire hazard.
- Policy FP-10.8.9*** The County shall consult the fire hazard severity zones map during the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures

that may include development clustering, fire breaks, and fire-resistant building design and materials.

GOAL FP-10.9

Encourage fire safety education and support programs to promote participation, voluntary compliance, and community awareness of fire safety issues.

- Policy FP-10.9.1* Make available educational materials 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 shall be available to members of the public at the County.
- Policy FP-10.9.2* Increase public education and outreach on wildfire safety issues through the Nevada County Office of Emergency Services and the Fire Safe Council, and by collaborating with community and business associations.
- Policy FP-10.9.3* Support the Nevada County Office of Emergency Services and the Fire Safe Council's public education efforts to inform and create a better understanding with the public and with the architectural and building industry, about the benefits of reducing vulnerabilities to wildfire risks through site design, defensible space and building material/design options available with ignition-resistant building materials.
- Policy FP-10.9.4* Encourage and support the effort for local neighborhoods and communities to become certified under the Firewise Communities USA[®] certification program through the Fire Safe Council.
- Policy FP-10.9.5* Create incentives to encourage voluntary compliance with fire safe regulations.
- Policy FP-10.9.6* The County shall work with the California Department of Insurance to obtain recognition that Nevada County has developed fire safety programs that promote compliance with fire safety regulations, which may help to address homeowner fire insurance challenges.
- Policy FP-10.9.7* The County shall 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.

GOAL FP-10.10

Reduce fire severity and intensity through fuels management.

- Policy FP-10.10.1*** The County shall encourage the use of prescribed burning as a management tool for hazardous fuels reduction, timber management, livestock forage production and enhancement of wildlife habitat, consistent with seasonal State and local regulations.
- Policy FP-10.10.2*** Consistent with Senate Bill 1122 (2012) and Senate Bill 859 (2016), Nevada County shall facilitate public and or private entities' efforts to establish bio-mass facilities in the County, with the goal of reducing forest fuel loads, reducing the wildfire hazard risk and creating electrical power.
- Policy FP-10.10.3*** The County shall cooperate with Federal, State, community fire safety groups and other fire protection entities in fire hazard risk reduction projects in zones of high and very high fire hazard severity zones, either prior to or as a component of the project review.
- Policy FP-10.10.4*** The County shall support fuel modification across public and private forestlands to reduce the potential for catastrophic wildfires, with the highest priority directed toward reducing hazardous fuel levels in the WUI. The County shall, in coordination with other agencies, identify, create and maintain fuel breaks, such as the Ponderosa West Grass Valley Defense Zone.
- Policy FP-10.10.5*** The County shall be supportive of programs for affordable, residential green waste disposal opportunities to encourage vegetation management on private property.

GOAL FP-10.11

As desirable and as funding becomes available, the County should consider Programs FP-10.12.1 through FP-10.12.16, prioritized by the order in which they appear.

- Program FP-10.11.1 Maintain the cooperative relationship between the Nevada County Community Development Agency and the Nevada County Fire Marshal, and provide funding for the appropriate staffing of the County Fire Marshal services to provide oversight and implement fire protection policies.
- Program FP-10.11.2 Support the Nevada County Office of Emergency Services and the Fire Safe Council as significant contributors of providing fire safe education and information to the residents of the County by assisting in funding their services and programs.
- Program FP-10.11.3 Coordinate with the Nevada County Office of Emergency Services and the Fire Safe Council in their efforts to update

and maintain the Countywide Community Wildfire Protection Plan. These efforts include:

- a. Identifying areas within the County that potentially could be the source of large and damaging wildfires; and
- b. Prioritizing those potentially hazardous areas for grant funds to reduce the fire hazard and risk.

Program FP-10.11.4

Provide a permanent funding mechanism for the Fire Safe Council's chipping program and services.

Program FP-10.11.5

Sponsor workshops that develop cooperative efforts between businesses, professional services, and governmental agencies in the fuel and resource management industry, including those that provide fire-safe operations, fuel management services, and environmental compliance services.

Program FP-10.11.6

Develop a compliance program for future development to ensure that proposed roads are maintained over the long-term to the same standard as they were originally approved and conditioned.

Program FP-10.11.7

Encourage the Board of Supervisors to reconvene a Fire Safety Committee at least every five years for a comprehensive review of the effectiveness of the fire protection policies, codes, and ordinances, along with the Office of Emergency Services review and update of the Local Hazard Mitigation Plan.

Program FP-10.11.8

Support the Fire Safe Council's and other public and private entities in their effort to create biomass reutilization opportunities.

Program FP-10.11.9

Conduct on-going workshops for landowners on defensible space, vegetation management and home-hardening techniques based upon current science, management guidelines, and policies to reduce wildfire hazards.

Program FP-10.11.10

Increase the County roadside vegetation management program treatment rate from the current rate of 9% to a minimum of 10% of County-maintained road miles, thus decreasing the rotational period from an estimated 11-year return interval to a 10-year return interval.

Severe Weather Hazards (WH)

GOAL WH-10.12

Minimize injury and property damage due to severe weather hazards (rain, snow, lightning, and high winds).

- Policy WH-10.12.1* Ensure a coordinated, multi-jurisdictional preparedness program that will educate residents of Nevada County on how to best prepare for the hazards that severe weather can cause.
- Policy WH-10.12.2* Continue to promote public awareness of emergency preparedness for potential severe weather hazards by:
- a. Providing education opportunities to local community groups; and
 - b. Distributing the latest educational documents on emergency preparedness.
- Policy WH-10.12.3* Continue to maintain qualification as a National Weather Service StormReady® County.

Climate Change Resiliency and Mitigation (CC)

GOAL CC-10.13

Build Climate-Resilient Communities and Protect Neighborhoods, Public Infrastructure and Natural Resources Through Mitigating Climate Change.

- Policy CC-10.13.1* While the impacts of climate change on local communities are difficult to quantify, to the extent possible, Nevada County will prepare to address environmental hazards and vulnerabilities that climate change is currently influencing and will influence in the future.
- Policy CC-10.13.2* Nevada County shall identify within the existing safety hazards and vulnerabilities discussed in the Safety Element and the Local Hazard Mitigation Plan, which ones are likely to be exasperated by climate change and have the potential to negatively affect the people and the environment of Nevada County. During the periodic future updates of the Safety Element, the hazards and vulnerabilities shall be reviewed, updated and new policies adopted to reflect the most current information available regarding climate change and strategies to reduce hazard risks compounded by climate change.
- Policy CC-10.13.3* Nevada County shall identify, based on current and updated science, strategies to foster resiliency to climate change influences in both the built and undeveloped lands, including mitigation measures to

reduce climate change causes and adaptation plans to decrease the effects of climate change, and to protect residents and businesses from increased risks of natural disasters, such as flooding, drought, severe weather events and wildfire. The mitigation measures will be implemented as feasible.

Policy CC-10.13.4 Require new discretionary development to include an analysis of potential affects to climate change impacts and water resources in the project review process. Projects shall reduce or limit impacts as feasible.

Policy CC-10.13.5 The County shall work with State agencies on adaptation strategies to address climate change impacts.

Policy CC-10.13.6 The County adopted Energy Action Plan shall be implemented through the support and collaboration of working groups.

Program CC-10.13.1 The County shall research funding, financing and partnership opportunities that would offset costs for energy efficiency appliances and infrastructure.

Environmental Justice (EJ)

GOAL CC-10.14

Reduce the exposure to, increase preparedness for and reduce recovery times from natural and human-caused safety risks for all populations and communities in Nevada County.

Policy EJ-10.14.1 Ensure that public emergency operations' (including evacuation routes) educational materials are available via different platforms and in formats that are understandable by Nevada County residents, including non-English readers.

Policy EJ-10.14.2 Ensure that emergency preparedness planning efforts inventory and consider vulnerable communities and populations, such as seniors, daycare facilities, health care facilities, latch key kids, and other populations where mobility is a constraint that creates additional vulnerability in emergency evacuation situations.

Policy EJ-10.14.3 Ensure that Nevada County emergency facilities and services are located and/or can respond equitably to the emergency needs of vulnerable populations and communities (also see FP-10.9.7).

Chapter 10: Safety

Introduction and Setting

The purpose of the Safety Element is to reduce short and long-term 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. The interface of the natural and manmade environments creates potential safety hazards associated with avalanches, landslides, earthquakes, floods, and wildfires. Other potential safety hazards, such as airport operations and the transportation of hazardous materials arise from the transport of goods and people. The Safety Element addresses hazards and hazardous materials of the present (transportation of hazardous materials, industrial spills, etc.) and historic remnants (legacy of historic mining; mineshafts and tailings). Each of these hazards has particular characteristics that affect the future of development of the countyCounty. Some safety hazards can be minimized with emergency planning, while other hazards are reduced by development standards and land use planning. The Safety Element identifies areas where private and public decisions on land use need to be responsive to potentially hazardous conditions. It also serves to inform individuals, firms and public agencies of Nevada County's policies regarding appropriate levels and locations of public services such as Sheriff's and Fire protection.

A complete list of acronyms used in the Safety Element is located at the end of this chapter. The Safety Element addresses the potential and existing hazards recognized and experienced in Nevada County using the following categories:

- Emergency Preparedness (EP)
- Geologic Hazards/Seismic Activity (GH)
- Flood Hazards (FH)
- Airport and Military Airspace Hazards (AH)
- Hazardous Materials and Mining Hazards (HM)
- Public Safety Services and Facilities (SF)
- Fire Hazards and Protection (FP)
- Severe Weather Hazards (WH)
- Climate Change Resiliency and Mitigation (CC)
- Environmental Justice (EJ)

Additional discussion related to safety is contained within the following chapters of the Nevada County General Plan: Chapter 1, Land Use; Chapter 3, Public Facilities and Services; Chapter 4,

Circulation; Chapter 6, Open Space; Chapter 8, Housing; Chapter 9, Noise; and Chapter 17, Mineral Management.

Statutory Requirements

The Governor's Office of Planning and Research

The primary responsibility of the Governor's Office of Planning and Research is working with local jurisdictions on topics related to land use planning. The Governor's Office of Planning and Research is designated in statute as the State's comprehensive planning agency and as such provides oversight on local general plan preparation.

In addition to containing the vision of the community, California law also requires General Plans address public safety as one of the eight mandatory elements. The Safety Element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peak load water supply requirements, and minimum road widths and clearances around structures as those items relate to identified fire and geologic hazards.

Federal Emergency Management Agency

The Federal Emergency Management Agency 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. The Disaster Relief Act of 1974 created the system and the agency, Federal Emergency Management Agency, by which a presidential disaster declaration of an emergency triggers financial and physical assistance. In order to be eligible for Federal disaster assistance from Federal Emergency Management Agency under the Disaster Mitigation Act of 2000, Nevada County is required to periodically update both the Safety Element of the General Plan and the Local Hazard Mitigation Plan.

The Nevada County Office of Emergency Services

The Nevada County Office of Emergency Services is responsible for maintaining and updating Nevada County's Local Hazard Mitigation Plan. Hazard Mitigation Planning is the process used by State, local and tribal leaders to understand risks from natural and man-made hazards and develop long-term strategies to reduce the impacts of disasters on people, property, and the environment. The Local Hazard Mitigation Plan is a critical planning tool that identifies community risks based on historical experience and data, modeling of frequency and magnitude of disasters projected, and develops mitigation strategies to build resiliency, avoid impacts, adapt to or mitigate risks. The Local Hazard Mitigation Plan is the implementing tool of Nevada County's General Plan and specifically the Safety Element. Whereas the Safety Element informs, guides and directs land use decisions to avoid or reduce risks from hazards, the Local Hazard Mitigation Plan provides the measures by which potential hazards and hazardous conditions are to be mitigated.

The Office of Emergency Services in coordination with local, County, State, Federal and non-profit partners has the responsibility to also prepare the Wildfire Hazard Reduction and Preparedness Plan. The objective of the plan is to identify and prioritize pre- and post-fire management strategies and tactics to reduce loss of life, property, and natural resources.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (Cal Fire) is responsible, in partnership with local jurisdiction, for fire planning in State Responsibility Areas. State Responsibility Areas is a legal term defining the area where the State has financial responsibility for wildland fire protection. Incorporated cities (Local Responsibility Areas) and Federal ownership (Federal Responsibility Areas) are not included. As part of the State's Fire and Resource Assessment Program, Cal Fire is responsible for mapping areas of significant fire hazards based on fuels, terrain, weather and other relevant factors. The areas, which are referred to as Fire Hazard Severity Zones, relate to the prescription of various mitigation strategies to reduce risk associated with wildland fires. The State Board of Forestry and Cal Fire are responsible for drafting a comprehensive document for wildland fire protection in California. Nevada County Fire Departments and Cal Fire are responsible for implementing the California Fire Plan in Nevada County. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative inter-dependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis. Nevada County is one of six contract counties that maintain a contractual relationship with Cal Fire.

Senate Bill 1241 revises the Safety Element requirements for State Responsibility Areas and Very High Fire Hazard Severity Zones. Local jurisdictions are required to review and update, as necessary, their Safety Element to address that risk of fire in State responsibility areas and Very High Fire Hazard Severity Zones. The draft Safety Element (or amendment of the Safety Element) of a County or city shall be submitted for review to the State Board of Forestry and Fire Protection at least 90-days prior to adoption or amendment. Cal Fire is responsible for reviewing the draft Safety Element or draft amendment to insure that specific provisions found in the most recent Office of Planning and Research Fire Hazard Planning document are considered where appropriate and the Safety Element includes the following:

- Information regarding fire hazards, including, but not limited to all of the following:
 - Fire hazard severity zone maps;
 - Historical data on wildfires available from local agencies or reference to where the data can be found;
 - Information about wildfire hazard areas that may be available from the United States Geological Service;
 - General location and distribution of existing and planned uses of land in very high fire hazard severity zones; and
 - Local, State, and Federal agencies with responsibility for fire protection, including special districts and local offices of emergency services.
- A set of goals, policies, and objectives based on the information identified for the protection of the community from the unreasonable risk of wildfire.
- A set of feasible implementation measures designed to carry out the goals, policies, and objectives based on the information identified, including but not limited to:
 - Avoiding or minimizing the wildfire hazards associated with the new uses of land;
 - Locating, when feasible, new essential public facilities outside of high fire risk areas or identifying construction methods or other methods to minimize damage if

these facilities are located in a State Responsibility Areas or very high fire hazard severity zone;

- Designing adequate infrastructure if a new development is located in a State responsibility area or in a very high hazard severity zone, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression; and
- Working cooperatively with public agencies with responsibility for fire protection.
- Upon each revision of the housing element, the planning agency shall review, and if necessary, revise the safety element to identify new information that was not available during the previous revision of the Safety Element.

California Geological Survey of the Department of Conservation

The California Geological Survey's 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 the California Geological Survey 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 California Geological Survey 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. At least 45-days prior to adoption or amendment of the Safety Element, each County or city shall submit to the California Geological Survey of the Department of Conservation one copy of a draft of the Safety Element or amendment and any technical studies used for developing the safety element. The California Geological Survey will review drafts submitted to it to determine whether they incorporate known seismic and other geologic hazard information and reports its findings to the planning agency.

Emergency Preparedness

Land Use Influences

The ability to prepare for, react to and recover from a major disaster is dependent upon many factors. Land Use is one of the most critical and often over-looked factors in emergency preparedness. Both existing land use and the future, planned land use directly influence the pattern of development across a landscape. Land use influences the distribution, location, density, intensity of development and it directs the type of uses whether it be residential, commercial, industrial, recreation or open space. How land uses are dispersed across the landscape directly effects the layout of roads, utility infrastructure, location of essential public facilities, population centers and areas to be protected in open space. Emergency preparedness should be a consideration when establishing land use and zoning designations and again when discretionary development permits are required of a new or modified development. To assure that development is not creating, for example, capacity issues for existing infrastructure that might affect water availability in a certain community sector for firefighting or capacity of roads to accommodate emergency vehicle ingress and evacuation egress. Section 2, Chapter 1 of the General Plan lays out goals, policies and maps that establish the desired land use pattern that balances future growth with other

factors. (Link f Nevada County GIS Land Use Maps: <https://gis.nevcounty.net/MyNeighborhood/> and Section 4.3.1 in the Local Hazard Mitigation Plan for the Land Use Map and Future Development Areas Map).

Emergency Plans and Guides

In the event of a major disaster, it is in the interest of the ~~federal~~Federal government to ensure that local governments have made efforts toward minimizing 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 also requires the development of local or ~~county~~County plans for that particular ~~county~~County to be eligible for 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 Nevada County Office of Emergency Services (OES), ~~in coordination with the Nevada County Operational Area Emergency Services Council,~~ has developed a Local Hazard Mitigation Plan (LHMP) for Nevada County to meet the requirements of the DMA on behalf of the County, its incorporated cities and towns and participating districts. Approved by the Nevada County Board of Supervisors, ~~in July 2012 and by FEMA in August of 2012,~~ the LHMP enables Nevada County to be eligible for future post-disaster mitigation funding. ~~The current LHMP is a required 5-year written update of the Multi-Hazard Mitigation Plan approved in 2006.~~ The LHMP recognizes the threat of natural and man-made disasters and hazards pose to people and property within Nevada County and that undertaking hazard mitigation action delineated in the LHMP reduces the potential for harm to people and property from future disaster and hazardous incidents. The LHMP identified a list of potential hazards each evaluated for severity of hazard, vulnerability and exposure and then listed in order of perceived likely impact. The ~~top five~~ hazards listed in the LHMP are: Ag Hazards (severe weather, insects pests), Avalanche, Climate Change, Dam Failure, Drought and Water Shortage, Earthquake, Flood, Hazardous Materials Transportation, Landslide/Mud Flow, Levee Failure, urban and wildland fire, severe Severe weatherWeather (extreme cold, extreme heat, extreme storms), flood, drought, dam failure, Subsidence, Volcano, and Wildfire (smoke, tree mortality, and conflagration).

The Nevada County and ~~Nevada~~ Operational Area Emergency Operations Plan (EOP) prepared by the OES and adopted by the Board of Supervisors ~~in June 2011,~~ delineates responsibilities of First Responders and other response support organizations, e.g., Office of Emergency Services, Department of Public Health, Environmental Health, etc., for natural disasters and manmade incidents in or affecting Nevada County.

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. If government funds are utilized to develop such a guide, it must be coordinated and approved by the Nevada County Office of Emergency Services, the local fire district, and the local law enforcement agency.

Emergency Notification System

~~In June of 2014, the~~ The Emergency Communications Network, CodeRed, completed a transition to the CodeRED used by Nevada County (and other Counties and Cities in California), is a mass notification system, ~~which allows access to patented technologies that were not previously available.~~ The current service agreement includes this 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 activated the service via phone, email, text alerts or web
- Integration and geocoding of supplied 911 database
- ~~50,000 minutes of actual service usage~~
- ~~Unlimited SMTP texting~~

Evacuation Planning

Evacuations normally occur due to incidents or disasters that cause large numbers of people to flee the area in all types of vehicles over all roads regardless of sized or legal restrictions. The evacuation is marked by a sense of panic among the evacuees as stress and ~~the~~ 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, ~~and possibly, shelter~~ or Right-of-Entry (ROE) form (to allow for recovery activities to occur on private property).

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 Office of Emergency Services coordinates with the American Red Cross and the County Department of Social Services to establish temporary shelters if requested to do so by the Incident Commander.

Evacuation plans during an incident are developed ~~on-site 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, and internet; and/or activation of the emergency alert notification system.

Routes designated on the Nevada County General Plan Land Use Maps as ~~interstates~~ 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 County and ingress for emergency personnel. Routes designated on the General Plan Land Use Maps as minor arterial and major collector routes are considered secondary evacuation routes. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities. Local roads are roads that primarily serve as access to and from individual properties. Local roads serve as the first leg of the evacuation route that many Nevada County residents will take. The majority of local road miles in Nevada County are privately owned and many of these roads pre-exist the current road and fire standards. Current standards that address width, slope, vegetation management and access road gates are

found in Chapter XVII: Road Standards and Chapter XVI: Fire Safety Regulation of the Land Use and Development Code.

Nevada County Evacuation Notification Categories

Immediate Evacuation Order: Requires the immediate movement of people out of an affected area due to an imminent threat to life. Choosing to stay could result in loss of life. Staying may also impede the work of emergency personnel. Due to the changing nature of the emergency, this Immediate Evacuation Order may be the only warning that people in the affected area (s) receive.

Evacuation Warning: Alerts people in an affected area(s) of potential threat to life and property. People who need additional time should consider evacuating at this time. An Evacuation Warning considers the probability that an area will be affected and prepares people for a potential Immediate Evacuation Order.

Shelter-In-Place: Advises people to stay secure at their current location by remaining in place as evacuation will cause a higher potential for loss of life.

Though not a specific evacuation notification category, rescue services are also performed by Nevada County first responders. Rescues include emergency actions taken within the affected area to recover and remove injured or trapped citizens. Responders have specific training and personal protective equipment necessary to accomplish the mission i.e., hazard material spill, swift-water and avalanche rescues, etc. Boundaries of the area(s) where rescue is planned is identified on the incident map with and includes a notification that entry is restricted to rescue workers only.

Geologic Hazards / Seismic Activity

Avalanches

Avalanche hazard areas are generally located on high, mountainous slopes and terrain at elevations above 7,000 feet. The most important factor necessary to release an avalanche is heavy snowfall. A rapidly increasing snow layer is unable to stabilize or bond with the old layer of snow or the ground below it, so that after a certain amount of time the new snow layer will simply slide off as an avalanche.

Four avalanche hazard zones are defined, ranging from no hazard to high hazard. High hazard areas are those where avalanches that could damage standard wood-frame structures and/or bury automobiles are expected to occur with a probability of one chance in twenty per year. Identified high hazard areas within Nevada County include portions of the Donner Lake, Tahoe-Donner, and Soda Springs areas.

Landslides, Debris and Mud Flows

A landslide, debris and mud flows can be defined as an event in which the surface masses of slope-forming earth move outward and downward from their underlying and stable floors in response to the force of gravity. Unstable or potentially unstable slopes are those areas susceptible to slides, falls, creeps, or flows. Topography, climate, geology, and hydrology are factors contributing to slope instability. The degree of severity of these factors and their interactions is what determines potential hazard. Although slope movements can occur in any type of rock

material, certain bedrock formations exhibit a high susceptibility to such movement. This type is found in the central portion of the County. However, most of the County's soils are underlain with dense bedrock formations and lack the characteristics contributing to landslide susceptibility.

Triggers such as an earthquake, vegetation removal (potential results from a wildfire or development), heavy rainfall and human activities can set a landslide in motion. Mining is a human activity that can greatly increase the potential of a landslide. Nevada County contains many historic hydraulic mining sites, one of which, located northeast of Nevada City, ~~and is~~ an area of over 20,000 acres. Because of the extreme methods used in hydraulic mining to “wash away” hillsides in the mid to late nineteenth century, the remaining slopes are very steep and are capped by very expansive clay soils. The result is that these areas are extremely prone to damaging slope failure resulting in landslides. In addition to presenting risks to human life and property, landslides also present risks to the integrity of infrastructure such as water, sewer, gas lines and transportation corridors.

Earthquakes

According to the U.S. Geological Service ~~Survey~~, Nevada County falls within ~~five all three~~ “Maximum Expectable Earthquake Intensity” earthquake ~~ground movement intensity severity~~ zones. The western half of the County is in the lower-intensity zones (~~5-20 %gravity~~), the middle ~~portion quarter~~ is in the moderate zone (~~21-30%gravity~~) and the eastern edge ~~quarter~~ is in the ~~31-40%high intensity gravity zone~~ (Figure XX, Maximum Expectable Earthquake Intensity). ~~No part of Nevada County is exposed to an earthquake probability of gravity 40 or more. Western Nevada County does experience ground shaking from distant major to great earthquakes on faults to the west and east. For example, to the west, both the San Andreas Fault and the Hayward Fault have the potential for experiencing major events.~~

~~Lake of the Pines, is the primary community developed in the 8-10% peak ground acceleration zone of Nevada County. Developed primarily since the 1960's, Lake of the Pines would not be expected to suffer significant damage during a normal earthquake event for this area. Grass Valley, Nevada City, Penn Valley, Cedar Ridge, Lake Wildwood, Rough and Ready, and North San Juan are the communities primarily in the 10-15% peak ground acceleration located in the low intensity zone. Of these communities, Grass Valley, North San Juan, Rough and Ready and Nevada City are those, which have structures of un-reinforced masonry buildings in their older neighborhoods and commercial districts. While possible, it is not expected that normal seismic activity in this area would result in significant damage. The Town of Truckee is the major community of Nevada County located in the 30-40% peak ground acceleration high intensity zone. Truckee is similar to Nevada City and Grass Valley in terms of the location of un-reinforced masonry buildings being located in the historic portions of town and the commercial district. Historically, major earthquakes have not been an issue for Nevada County. Minor earthquakes have occurred locally and major earthquakes have been felt locally, however, Previous the previous local earthquake history has not shown these structures to be at significant risk during normal events. (For more Nevada County Earthquake data please refer to the Nevada County Local Hazards Mitigation Plan 4.2.10 and 4.3.7).~~

Subsidence

Chapter 10: Safety Element

Land Subsidence in Nevada County has not been quantified. However, the California Department of Conservation GIS data identifies 366 potential mine sites in Nevada County. These features may or may not be significant in the level of risk they pose (additional information on hazards posed by mining operation remnants can be found below under Mining Hazards).

In addition to mines, Nevada County is at risk to subsidence from karst, which are topographic features (surficial and/or subterranean) formed by the dissolution of rocks. Closed depressions, sinking streams and cavern openings are commonly referred to as karst. 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.

A cause for subsidence can also be related to the drawdown of groundwater through 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 (For more Nevada County Earthquake data please refer to the Nevada County Local Hazard Mitigation Plan 4.2.16 and 4.3.14).

Flood Hazards

Flooding

Flooding is the rising of and overflowing of a body of water onto normally dry land. Nevada County historical data reflects that floods are one of the most frequent natural hazards impacting Nevada County. Historically, portions of Nevada County have always been at risk to flooding because of its high annual percentage of rainfall, heavy snowfall in the winter, and the number of watercourses that traverse the County. has reported 13 flooding disasters since 1950 the most recent being in 2008. Fortunately these events have not resulted in loss of life or catastrophic property damage in Nevada County. Flooding events have caused severe damage in the very eastern and western portions of the County, but are less of a threat within the center of the County. Primarily due to the significant east to west elevation change in the western part of the countyCounty, most of the heavy storm rainfall moves quickly out of the watershed. In the eastern part of the County, higher elevation causes most precipitation to fall as snow during the first 4 months of the winter season. In general, flood hazard areas are generally confined to the areas adjacent to the County's rivers and streams. Flooding affecting Nevada County normally occurs when heavy rainfall combines with unseasonably warm temperatures that begin a premature melt of the snow pack. Floods can cause losses to human life, structures and other improvements; natural and cultural resources; the quality and quantity of the water supply; assets such as timber, range and crop land, and recreational opportunities; and economic losses. FloodingThis phenomenon is most dramatically seen on the Yuba River with its steep canyon walls and the Truckee River with its smaller river channel. The Bear River because of its lower elevations and shallow riverbed tends to be impacted more by heavy rain over an extended period. The primary

areas within Nevada County that are subject to localized flooding are shown below in Table Figure 10.12.

TABLE 10.1

PRIMARY AREAS
SUBJECT TO 100-YEAR
FLOODING

<i>Nevada County</i>	<i>Nevada County</i>
Truckee River*	South Fork Yuba River
South Fork Prosser Creek	Greenhorn Creek
North Fork Prosser Creek	Deer Creek
Summit Creek*	Wolf Creek
Trout Creek*	Little and South Forks of Wolf Creek*
Little Truckee River	Squirrel Creek (and tributaries)*
Donner Creek*	Clear Creek
South Fork Yuba River	Bear River

*Detailed flood hazard information is provided by the Flood Insurance Study for the unincorporated areas of Nevada County, California, Community Number -060210, by FEMA, revised February 5, 1997.

<i>Nevada County</i>	<i>Nevada County</i>
Truckee River*	South Fork Yuba River
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Donner Creek*	Clear Creek
South Fork Yuba River	Bear River

*Detailed flood hazard information is provided by the Flood Insurance Study for the unincorporated areas of Nevada County, California, Community Number -060210, by FEMA, revised February 5, 1997.

Figure 10.2: Primary Areas Subject to 100-Year Flooding Events

The Federal Emergency Management Agency (FEMA) provides guidance for floodplain management. The Federal Emergency Management Agency FEMA manages the National Flood Insurance Program (NFIP), which provides insurance to communities that participate in the program, and works with State and local agencies to adopt floodplain management policies and flood mitigation measures. Nevada County has been a participating community in the National Flood Insurance Program NFIP program since January 1, 1983. Nevada County’s Floodplain Management Regulations are contained in the Land Use and Development Code Chapter XII of the Nevada County Code which was updated in 2009. Additionally, the Nevada County Local Hazard Mitigation Plan contains a completed assessment of flooding hazards, flood hazard mapping and recommended flood hazard mitigations.

A key element of the National Flood Insurance Program NFIP is the identification of floodplain boundaries which are depicted on the Federal Emergency Management Agency FEMA Flood Insurance Rate Maps (FIRM). The concept of ~~thethat~~ a 100-year flood represents ~~determines~~ a flood event is a central component in Flood Insurance Rate Maps FIRM-Mapping. The 100-year flood represents a flood event that is likely to occur once in every 100 years or, in other words, has a 1 percent chance of occurring in a given year. Areas prone to be impacted by 100-year flood events are identified on the National Flood Insurance Program FIRM as Special Flood Hazard

Zones (Zones A, AE, AO and AH). Federal flood insurance is required for any structure within a Special Flood Hazard Zone and; for any property that has a federal Federally insured loan.

Dam Failure

Dam failure is another form of flood hazard. Failure can occur as a result of manmade or natural causes. Such causes include improper siting, structural design flaws, and erosion of the face of or foundation, earthquakes, massive landslides, and rapidly rising flood waters due to a severe storm event(s). Nevada County has identified 21 regulated and non-regulated privately owned dams in Western Nevada County and 25 such dams in eastern Nevada County. According to data from California Department of Resources Division of Safety of Dams there are 42 dams in Nevada County under their jurisdiction. The Division of Safety of Dams classifies four categories for Downstream Hazard Potential:

- Extremely High Hazard: Expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.
- High Hazard: Expected to cause loss of at least one human life.
- Significant Hazard: No probability of loss of human life, however, can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
- Low Hazard: No probability of loss of human life and low economic and environmental losses. Losses are expected to be principally to the owner's property.

Twelve of the 46 dams are regulated and owned by organizations such as the Nevada Irrigation District, Pacific Gas and Electric, the Army Corps of Engineers or other organizations. Of the 42 jurisdictional dams in Nevada County, 8 are rated as Extremely High, 5 are rated High, 6 are rated as Significant and 23 are rated as low.

Nevada County Extremely High and High Hazard Rated Dams

- Bowman (E)
- Combie (H)
- Deer Creek Diversion (E)
- Donner Lake (E)
- Jackson Meadows (E)
- Lake Angela (H)
- Lake Fordyce (E)
- Lake Spalding (E)
- Lake Van Norden (H)*
- Loma Rica Airport (H)
- Magnolia (H)
- Martis Creek Dam**
- Rollins (E)
- Scotts Flat (E)

(* Lake Van Norden Dam spillway to be modified (lowered) Fall 2019, to no longer impound water, consistent with California Division of Water Rights. ** Martis Creek Dam, operated by the U.S. Army Corps of Engineers and not included in the Division of Safety of Dam's list, is being managed to significantly reduce dam failure risks. The measures taken include keeping the dam gates open in order to keep the reservoir at minimum pool.)

The California Department of Water Resources Division of Safety of Dams has jurisdiction over impoundments that meet certain capacity and height criteria. Embankments that are less than 6 feet high and impoundments that can store less than 15 acre-feet are non-jurisdictional. Additionally, dams that are less than 25 feet high and impound up to 50 acre-feet are non-jurisdictional.

Regulated-Jurisdictional Dams have filed dam inundation plans with the State of California, the appropriate federal/Federal agency and the County. There are populated areas within the inundation zone of several of these dams; others have public property (such as roads) located down creek. However, the-The area of Nevada County where most of these dams exist is not located within a historically seismically active zone. In fact, the western half of the County resides within the lowest earthquake intensity zones in California.

Within the eastern portion of Nevada County, classified in a-the higher earthquake intensity zone, are three major dams: Prosser Creek Reservoir Dam, Stampede Reservoir Dam (located with Sierra County) and Boca Reservoir Dam. One of the two major faults believed to be potential seismic sources appears to be relatively active and of special significance due to its close proximity to the three dams noted above. However, the Truckee earthquake of 1966 had a magnitude of 5.4 but only relatively slight damage occurred to both Prosser and Boca earth fill dams.

In the western portion of the County, flooding in the event of failure of the Upper and Lower Scotts Flat Dams would inundate a wide area from east of Nevada City, through Nevada City and west to Lake Wildwood. The failure of such a dam would most likely be the result of a significant earthquake. Also in western Nevada County is the Rollins Reservoir on the Bear River, which flows into Combie Lake. The Nevada Irrigation District owns both. Inundation plans are in place for both bodies of water. It is predicted that a collapse of the Rollins Reservoir may impact Camp Far West reservoir in Yuba County. ~~Three-Two~~ dams are owned by PG&E in the Spaulding Lake complex (Spaulding and Fordyce) have a downstream hazard rating of Extremely High. Collapse of the ~~three-two~~ dams would cause significant flooding at the 2,700 foot level in the Town of Washington.

In the aftermath of the near failure of the Oroville Dam, in Butte County, Senate Bill 92 was signed into law on June 17, 2017. The intent of Senate Bill 92, was to codify requirements that would assist and guide local jurisdictions in their emergency planning for dam failure events and aid local, State, and Federal agencies to ensure effective dam incident emergency response procedures and planning. The bill requires owners of State regulated dams to submit their Inundation Maps for review and approval to the Department of Water Resources. Inundation Maps are now required to be publicly available. After the the approval of the Inundation Map, the dam owner is required to prepare an Emergency Action Plan, with the exception of low-hazard dams. Prior to Senate Bill 92, the State did not have the power to compel dam owners to prepare Emergency Action Plans. The Emergency Action Plans are also required to be updated no less than every 10 years or when significant changes occur at the dam or downstream.

The Emergency Action Plan is a written document that identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life should

those conditions occur. The plan contains procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities. The plan must also contain the approved inundation map(s) identifying critical areas for evacuation-related actions.

Downstream hazard classifications are based solely on potential downstream impacts to life and property should the dam fail when operating with a full reservoir. The definitions for downstream hazard classifications are based on the Federal Emergency Management Agency's *Federal Guidelines for Inundation Mapping of Flood Risks Associate with Dam Incidents and Failures (FEMA P-946, July 2013)*. Federal Emergency Management Agency categorizes the downstream hazard potential into three categories in increasing severity: Low, Significant, and High. Division of Safety of Dams adds a fourth category of "Extremely High" to identify dams that may impact highly populated areas or critical infrastructure, or have short evacuation warning times. Additional information on dams in Nevada County, and their hazard profiles and vulnerability assessments can be found in Nevada County's Local Hazards Mitigation Plan in Sections 4.2.8 and 4.3.5.

Seiches

Seiches are seismically induced waves in bodies of water that can be particularly hazardous where lakes and reservoirs are bordered by campgrounds or other facilities on flat banks. Because of the large number of recreational lakes in Nevada County, seismically induced seiches could prove very damaging. However, most recorded seiches have not been of significant magnitude, and considering the overall seismic risk in this County, seiche risk should be considered only a moderate hazard.

Airport Hazards

Nevada County has within its boundaries several small private airports and two public airports, the Nevada County Airport and Truckee-Tahoe Airport. The Nevada County Airport lies within the foothills near Grass Valley and Nevada City, and the Truckee-Tahoe Airport is located east of the Town of Truckee, with portions of airport lands crossing the County line into Placer County. Safety issues arise as a result of compatible use and non-compatible land uses existing side by side with one another. The Federal Aviation Administration (FAA) defines the most critical areas as those that are immediately beyond the runway ends, the initial climb out and final approach sectors. It is within these approach/departure sectors that a concentration of aircraft accidents occurs. In addition, there are studies indicating that about half of all airport accidents occur on airport property and an additional 15 percent of accidents occur within one mile outside the airport property. This information suggests that those areas immediately off the ends of the runway and under the airport traffic pattern should be carefully evaluated for compatible future land use and development.

Airport Land Use Compatibility Planning

State law requires that any ~~county~~County with an airport operated for the benefit of the general public establish an ~~airport~~Airport land-Land use-Use ~~commission~~Commission (ALUC). ALUCs were first established under the California State Aeronautics Act in 1967 for the fundamental

purpose to promote land use compatibility around airports. ALUCs have three primary functions under state law:

1. The adoption of land use standards that minimize the public's exposure to safety hazards and excessive levels of noise.
2. Prevent the encroachment of incompatible land uses around public-use airports.
3. The preparation of an Airport Land Use Compatibility Plan (ALUCP) for the area around each public use airport that defines compatible land uses for noise, safety, airspace protections, and overflight.

Government Code Section 65302.3 establishes that each county and city affected by an airport land use compatibility plan must make its general plan, any applicable specific plans and zoning ordinance consistent with the ALUCP. Alternatively, local agencies can take the series of steps listed in the Public Utilities Code to make specific findings to overrule the ALUCP policies or portions of it. While the ALUC has the sole authority to adopt the ALUCP and conduct compatibility reviews, the implementation of the compatibility policies rests with local governments.

Nevada County and Truckee Tahoe Airport Land Use Compatibility Plans

Through formal and informal consultation with the Nevada County Community Development Agency and the Town of Truckee, the Nevada County and the Truckee Tahoe Airport Land Use Compatibility Plans (NCALUCP and TTALUCP) have been adopted and are maintained by the Nevada County Airport Land Use Commission (NCALUC) and the ALUC Truckee Tahoe Land Use Commission (TTALUC) on September 21, 2011. Guidelines and requirements for fulfilling the ALUC's duty to review airport and adjacent land use development proposals are set forth in these land use policy documents. The NCALUCP and TTALUCP identify the compatibility zones and sets the criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances and to land owners in their design of a proposed project or new development. Land areas within both the City of Grass Valley, the Town of Truckee and Nevada County are affected by the NCALUCP.

Military Airspace Compatibility

In guiding growth and development in Nevada County, it is important to consider the critical role of Military Operation Areas (MOAs) in support of national defense. A military operations area is a three dimensional airspace designated for military training and transport activities that has a defined floor (minimum altitude) and ceiling (maximum altitude). In Nevada County the MOA consists of a Military Training Route (MTR) which is a low-level high speed route that is not only used for commutes between installations but allows the pilots to develop the skills necessary to avoid detection by enemy radar. There is one MOA located in the eastern portion of Nevada County that is used by military aircraft to practice high- and low-altitude training exercises and to traverse between military installations. Any development or new construction that seriously impacts or hinders the function and viability of a MOA is considered incompatible land use. As Nevada County's population and economic activity grow in the future, public safety within the MOA shall be coordinated with the military through compatible land use planning in accordance with California Government Code Sections 65352 (a)(5) and (6)(A), 65940, and 65944.

Hazardous Materials and Mining Hazards

The significance of hazardous materials to the environment, property, and human health depends on the type, location, and quantity of the material released. Certain areas of the County are at higher risk of encountering a hazardous material incident. Roadways, railways, waterways, and airways are frequently used for transporting hazardous materials. Areas with industrial facilities that use, store, or dispose of such materials all have an increased potential to exposure.

The County's pre-incident planning and preparedness for hazardous materials releases is contained in the Nevada County Hazardous Materials Plan, ~~that was approved in July 2010.~~ The Hazardous Materials Plan fulfills ~~state~~State law and is used as a resource document in conjunction with the Nevada County Emergency Operations Plan, and other local and ~~state~~State plans.

Stationary Sources of Hazardous Materials

The majority of the hazardous waste stream within Nevada County is generated by small quantity generators with the major contributor to the hazardous waste stream being waste oil. Miscellaneous waste, which includes types of waste such as asbestos, metal dust, ~~and~~ chemical toilet waste, ~~and photo processing waste,~~ is another major group. Other groups include non-halogenated solvents, dye and paint sludges, resins, and non-metallic inorganic liquids. The Nevada County Department of Environmental Health maintains a complaint site list of contaminated sites within Nevada County. The most commonly found form of groundwater contamination on this list occurs from hydrocarbons (gasoline, diesel, and other fuels).

Transport of Hazardous Materials

Interstate~~State~~ 80, the Union Pacific Railroad, and the Kinder Morgan petroleum pipeline are the three major transportation routes by which ~~tens of~~ hazardous materials are transported through the County. Interstate~~State~~ 80 weaves in and out of the County from the State Route 20 interchange to the Nevada ~~state~~State line. It is within this corridor that the incident of an accidental release of hazardous material is most likely to occur. Traffic volumes, the winding character of the Interstate~~State~~, and snow and ice make this corridor especially dangerous during the winter months. In addition to the character of the interstate~~State~~, the remoteness of the County from outside help creates even a greater potential for a major incident. Assistance from areas outside the County would be unavailable for a period of one to four hours in the event of a hazardous materials spill.

Mining

More than a century of placer and hardrock mining in Nevada County leaves a legacy of both physical and chemical hazards. Of the approximately 50 contaminated sites identified by the ~~state~~State Department of Toxic Substances Control (DTSC) in Nevada County, the most common contaminants are arsenic, lead, and mercury from past mining activities. The County is also home to Lava Cap Mine, a Federal Superfund site. Historic mining practices, processing techniques, and improper closures at hundreds of abandoned mine sites pose potentially hazardous conditions in both *Rural* and *Community Regions*. Potential hazards vary from one site to another. Mine waste cleanup is regulated by a number of federal~~Federal~~ and ~~state~~State agencies, including the

US Environmental Protection Agency, the Department of Toxic Substance Control, and the Regional Water Quality Control Board.

Given the extensive mining history in Nevada County, subsidence due to past mining operations is a concern when identifying appropriate land use and associated development. Past mining activities have created surface subsidence and the potential for subsidence in other areas. Hydraulic mining has significantly altered landscapes by relocating large volumes of sediment that has been carried downstream and redeposited. The hydraulic mine pits may continue to release sediment into surface flows and impact water quality during large precipitation events. Tailing piles and tailings ponds are also mining remnant surface features that can pose risks due to the potential presence of hazardous materials. According to the *Abandoned Mine Lands Preliminary Assessment Handbook* from the California Department of Toxic Substances Control, contaminated water, known as acid mine drainage, from a mine or mine waste pile can also pose risks to waterways, aquatic biota (plants and animals), and the surrounding environment. The pathways for potential human health threats from exposure of contaminants from abandoned mines may be from direct contact or from indirect exposure, such as through the consumption of food items. In addition to the potential presence of hazardous materials, w-When mines were abandoned airshafts were left exposed or covered with wooden boards that have since rotted. Access shaft entrances were often quickly covered up with logs and or boulders that are now gone or decayed and no longer serving the purpose of excluding entrance and protecting the public.

Fire Hazards and Protection

Wildland Fires

The number and severity of wildfires in California are projected to continue to face dramatic increases. Fifteen of the 20 most destructive wildfires in the State's history occurred between 2000 and 2019 and 10 of the most destructive fires have occurred since 2015.

Fire has been an integral part of the California landscape for thousands of years. The Mediterranean climate (cold and wet winters/spring and warm and dry summers/fall) supports very productive natural plant communities, and with the rugged terrain contribute to the one of the most extremely fire-prone and consequently fire-adapted landscapes in the world. The extreme fire behavior observed over the last twenty-years is a product of these three elements and the exponential influences of climate change. Add to this formula the fire management constraints due to the increasing population trends within and adjacent to forests and other highly flammable vegetated landscapes, which correlates to increased human ignition sources, in total these conditions have created circumstances most conducive to large scale, extremely impactful wildfires. Figure XX diagram highlights the elements that influence wildfire behavior.

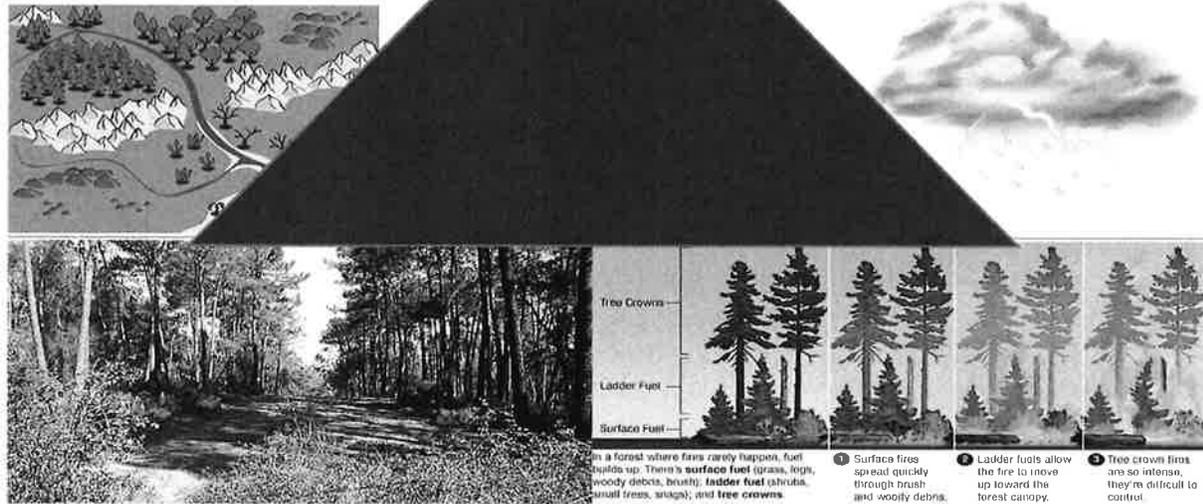
WILDFIRE BEHAVIOR

TOPOGRAPHY

Flat
Rolling Hills
Steep Mountains
Canyons

WEATHER

Wind
Temperature
Relative Humidity
Precipitation



FUEL

Fine or Heavy
Arrangement and Continuity
Fuel Moisture

Figure 10.3: Wildfire Behavior Diagram

Fire Behavior is “the manner in which fuel ignites, flame develops, and fire spreads and exhibits other related phenomena as determined by the interaction of **fuel, weather and topography.**” Climatic factors have increased the odds that these elements come together more often and produce extreme fire behavior.

The County's single largest risk for human life and financial loss is fire. Wildland fires, and, in particular, fires that impinge on the wildland-Urban Interface, have the potential to cost County residents the most financially, and in loss of life. The combined efforts of all involved parties maintain a tapestry of vigilance, preventative efforts and rapid response to the wildland fires threat. Residential developments in and adjacent to the wildland-Urban Interface areas and limited forestland management resources have created and will continue to perpetuate an environment of dense fuel reserves with seasonal wildland fire risk to the County's residents and their improvements. Our The best strategy to date has been to thin fuel sources at wildland urban interfaces, educate residents, and provide a rapid response to wildland fires when they start.

Today, people in Nevada County are attracted to live and build their homes in remote areas, on hillsides, and in and among the native woodlands. There is a misconception held by many of us that today's grasslands, oak woodlands, and forests are “natural” and as such, think if we just keep suppressing fires, these vegetation types will remain the same. This is a grave error. All of our fire-

adapted ecosystems are complex entities. They are not like a photograph and non-changing over time; they are constantly changing. There is a tremendous amount of growth and in-growth every year. As a result, without periodic fire or treatment, these vegetation types have ever-increasing unnaturally high fuel loads that, over time, have created hazardous fire conditions.

We now understand that the extreme fire behavior we are witnessing experienced across California is a the result of the long-term interruption of the natural fire cycle and the consequences of Climate Change. The combination of our topography, climate, and present-day fuel conditions produces large, high-severity and intense wildland fires; e.g., the Forty-niner fire in September 1988, (33,500 ac/185 homes); the Martis fire, June 2001, (14,500 ac/4 structures); the Trauner fire, August 1994 (500 ac/12 homes); and the Cottonwood, fire, August 1994, (46,800 ac). The Forty-niner fire, the Martis fire and the Trauner fire resulted in over 33 million dollars damage and more than 27 million dollars in suppression cost. The Cottonwood fire cost 12.5 million dollars to suppress.

Facilitating the return of the natural fire cycle is not an option across many portions of Nevada County because of the fuel loads that exist today and the dispersed development pattern in the Wildland Urban Interface that continues to expand into areas previously not developed. We can never go back to the natural fire cycles as land use has changed dramatically since the mid-1800's and we now have life and property intermixed within the wildland environment. However, we can, with vegetation management (including prescribed/controlled burns), the reduce reduction of fuels to those the pre-settlement "natural" levels in targeted areas in and around our communities will reduce the risks associated with wildfires.

Accepting Nevada County's terrain, climate, rainfall, and forest land/urban mix, it is a certainty that significant wildland fires are going to continue as a threat. Contributing to the threat over the last 75 years have been the fire suppression techniques and policies that have allowed a large fuel load to accumulate. Where there is human access to wildland areas, such as the Sierra Nevada and foothills areas, the risk of fire increases due to the greater chance for human carelessness and human caused ignitions.

Generally Historically, the fire season extended from early-late spring-Spring to late-early fall-Fall in the Sierra. Fire conditions arise from a combination of hot weather, an accumulation of vegetation, and low moisture content in the air and the vegetation. These conditions, when combined with high winds and years of drought, increase the potential for wildfire to occur. Climatic changes have given rise to warmer average temperatures beginning earlier in the Spring and continuing through the Fall which is resulting in a longer fire season. The wildfire risk is predominantly associated with Wildland Urban Interface areas. WUI Wildland Urban Interface is a general term that applies to development interspersed or adjacent to landscapes that support wildland fire. Wildland Urban Interface WUI areas have been a major focus of California Department of Forestry and Fire Protection's (CAL FIRE) fire management strategy since at least 1972. A fire along this wildland/urban interface can result in major losses of property and structures. Potential losses from wildfire include: human life, structures and other improvements; natural and cultural resources; the quality and quantity of the water supply; other assets such as timber, range and crop land, and recreational opportunities; and economic losses. In addition, catastrophic wildfire can lead to secondary impacts or losses such as future flooding and landslides during the rainy season.

Since the passing of the Bates Bill (Senate Bill 337) in 1992, Cal Fire has worked with local governments to identify high hazard severity zones within local and State responsibility areas. The Hazard Severity Zones map identifies the level of fire hazard geographically based on the physical conditions and the likelihood that an area will burn over a 30 to 50-year period. The Map is used to direct policy as it pertains to how buildings are constructed and property is protected (e.g.: defensible space, availability of water, building codes, driveway and road standards) to reduce risks (the potential damage a fire can do) associated with wildland fires. A map with fire hazard severity zones within the State Responsibility Areas can be found on the Nevada County GIS site at: <https://gis.nevcounty.net/MyNeighborhood/>. For a map showing the fire hazard severity zones across the County in State, Local and Federal Responsibility Areas to provide a complete picture of the level of fire hazard severity that exists across all jurisdictions in Nevada County, please refer to the Nevada County Local Hazard Mitigation Plan, Section 4.3.15.

~~**Fuel**— Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and by volume. Fuel sources are diverse and include everything from dead tree needles and leaves, twigs, and branches to dead standing trees, live trees, brush, and cured grasses. Also to be considered as a fuel source, are man-made structures, such as homes, and other associated combustibles. The type of prevalent fuel directly influences the behavior of wildfire. Light fuels such as grasses burn quickly and serve as a catalyst for fire spread. In addition, “ladder fuels” can spread a ground fire up through brush and into trees, leading to a devastating crown fire. The volume of available fuel is described in terms of Fuel Loading. Certain areas in and surrounding Nevada County are extremely vulnerable to fires as a result of dense grassy vegetation combined with a growing number of structures being built near and within rural lands. The presence of fine fuels, 1000hr fuels, and needle cast combined with the cumulative effects of previous drought years, heavy vegetation mortality, tree mortality and lowdown of timber across Nevada County has added to the fuel loading in the area. Fuel is the only factor that is under human control.~~

~~**Topography**— An area’s terrain and land slopes affect its susceptibility to wildfire spread. Fire intensities and rates of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The natural arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes.~~

~~**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 the fuels that feed the wildfire creating a situation where fuel will more readily ignite and burn more intensely. Wind is the most treacherous weather factor. 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. North winds in Nevada County are especially conducive to hot, dry conditions, which can lead to “red flag” days indicating extreme fire danger. Winds coming from the southeast have also been noted as a concern in the western third of the County. 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.~~

~~Related to weather is the issue of recent drought conditions contributing to concerns about wildfire vulnerability. During periods of drought, the threat of wildfire increases.~~

~~Other factors—~~Factors contributing to the wildfire problem—hazard risks and vulnerabilities in Nevada County include:

Hazards:

- Overstocked forests, severely overgrown vegetation, lack of vegetation management by some absentee property owners, and lack of defensible space around structures;
- Excessive vegetation along roadsides (both publicly owned and private) and hanging over roads that can impede, fire engine emergency access, and emergency evacuation routes;
- Conditions such as drought and overstocked forests stress and weaken trees making them susceptible to contribute to increased beetle kill infestations that kill trees in small to very large swaths of land across the landscape; in weakened and stressed trees;
- Topography; steep canyons accommodating wind corridors; and
- Nature and frequency of lightning ignitions.

Vulnerabilities:

- Narrow and often one lane and/or dead end roads complicating evacuation and emergency response as well as subdivisions that have only one means of ingress/egress;
- Locked gates across private roads that serve more than one property impairing or eliminating a second means of emergency ingress/egress that may or may not have previously been available;
- Inadequate or missing street signs on private roads and absent or poorly placed house address signs;
- Nature and frequency of lightning ignitions; and inadequate water storage and fire-flow infrastructure in some portions of the County;
- Increasing population density leading to more ignitions. Increasing residential development in the Wildland Urban Interface and older legacy residential development that does not meet today's development and fire codes; and
- Mobility limitations of certain populations such as seniors, non-drivers and one-car households.

~~Three other organizations have also been very active. The Fire Safe Council of Nevada County has been active in providing free public information and education for County residents as well as a free wood debris-chipping program on site for property owners. The Nevada County Resource and Development Council and the Nevada County Resource Conservation District have been sponsoring shaded fire breaks in conjunction with Tahoe National Forest in the area around Scotts Flat Lake. Tahoe National Forest has been working on strategically placed fire control points using thinning processes. Additional projects are proposed in this plan's mitigation measures.~~

In an effort to prevent fires, the electrical services provider for western Nevada County—Pacific Gas and Electric Company (PG&E)—initiated public safety power shutoff (PSPS) events in 2019,

which may continue in subsequent years until fire risks associated with power lines are decreased. PSPS events involve PG&E turning off electrical service during times when the weather is predicted to have a heightened fire risk from gusty winds and dry conditions. Dependent on the fire risks, the power outage events may occur in specific areas or for all PG&E customers across the County. The PSPS events that occurred in Nevada County for 2019 impacted a majority of the western portion of the County, including Nevada City and the City of Grass Valley. The widespread PSPS events in the County brings additional risks to the residents in the County, to include 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 the PSPS events, emergency services in Nevada County remain functional with back-up power supplies, but many businesses and agencies are not operational. The PSPS events pose health and safety risks to all impacted businesses and residents to Nevada County, with an elevated risk to more vulnerable communities with less resources available during and after power outages.

Fire-Safe Infrastructure

Fire-Safe Circulation

Roads are critical infrastructure supports 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 as-at roadside locations to coordinate with incoming fire equipment.

Private roads, which network between residences and public roads, provide another avenue for firefighting operations and evacuation. The Nevada County road system consists of ~~3,000~~2,360 miles of public and private roads, of which nearly ~~60~~75% are private roads, which equates to approximately 1,800 miles of roadway. The quality and conditions of these roads are variable. ~~Some~~Most private roads ~~fail-do not to~~ meet the minimum fire safety standards established in the Nevada County Land Use and Development Code because they predate the current code.

More detailed information on circulation is provided in the Nevada County General Plan, Chapter 4: Circulation Element.

Roadside Vegetation Management

The width of and clearance around roads is a primary factor affecting firefighting operations. ~~Only 585 miles of the~~ The County's County maintains approximately ~~1,200~~560 miles of public roads are ~~treated for fire fuel, and then only~~including vegetation management to reduce fuels in conjunction with road maintenance, generally repaving or chip sealing. This vegetation management occurs under the Nevada County Public Works Department's Roadside Vegetation Management Program, which currently treats approximately ~~35~~50 miles or approximately ~~69~~9% of the County road system on an annual basis. This figure equates to rotational roadside treatment of approximately ~~7~~11 years for each mile of roadside vegetation.

Emergency Water Storage Systems

Emergency water storage throughout the County involves a mixture of systems. A hydrant system is the dominant source in cities, towns, and major subdivisions. Rural areas of the County depend on a mixture of individual water tanks, pools, ponds, lakes, and ditches. The Nevada County Land Use and Development Code specifies the minimum size for individual water tanks for proposed subdivisions and other applicable projects. The placement of emergency water storage has been incremental, resulting in small storage tanks on development sites. Given the development patterns, densities, and locations of existing water storage tanks, fire experts recognize the need for improving the emergency water storage system, the maintenance of the facilities and assurance the tanks are maintained as full.

Critical Facilities and Populations at Risk

The Local Hazard Mitigation Plan included an inventory of critical facilities at risk. That is, the inventory accounted for all critical facilities and the Fire Hazard Severity Zones across all jurisdictions. The Inventory identified a total 282 critical facilities in the Very High Fire Hazard Severity Zone, 109 facilities in the High Fire Hazard Severity Zone, and 37 facilities in the Moderate Fire Hazard Severity Zone. The following lists types of facilities that provide essential services and/or house at-risk populations that were included in the inventory (the entire list and mapped locations can be found in the Nevada County Local Hazard Mitigation Plan, Section 4.3):

- Airports
- Bridges
- Churches
- Fire Stations
- Government Buildings
- Hospitals
- Schools
- Shelters

Fire Agencies and Support Organizations

~~Fire Protection Agencies and Services~~

The County is protected by multiple fire protection agencies, including eight local fire districts, one water district, two City fire departments, CAL FIRE, the Bureau of Land Management (BLM), and the US Forest Service (USFS). In Eastern Nevada County, the Truckee Fire Protection District provides fire protection services. In Western Nevada County, the following fire districts and departments provide fire protection services for the cities and unincorporated areas of the County:

- Grass Valley City Fire Department
- Higgins Fire Protection District
- Nevada City Fire Department
- Nevada County Consolidated Fire District
- North San Juan Fire Protection District
- Ophir Hill Fire Protection District
- Peardale-Chicago Park Fire Protection District
- Penn Valley Fire Protection District

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- Rough and Ready Fire Protection District
- Washington County Water District

Fire protection services are determined by jurisdiction and responsibilities. In general, local fire districts and city departments provide emergency medical services, other emergency responses, and fire protection for structures within their respective jurisdictions. Many ~~Some~~ fire districts are staffed with volunteers. ~~CAL FIRE~~ Cal Fire provides wildland fire protection services on ~~private, non-~~within those areas mapped State Responsibility Areas on ~~non-federal~~ Federal lands for the purpose of life, property and resource protection. USFS and BLM provide wildland fire protection services on ~~federal~~ Federal lands in Federal Responsibility Areas for watershed and resource protection. Some areas are also identified as Local Responsibility Areas, including those within the cities of Grass Valley and Nevada City, as well as the area under the jurisdiction of the Truckee Fire Protection District. ~~Various~~

Master Mutual Aid and California Mutual Aid agreements between the fire protection agencies serving Nevada County enable cooperative fire protection services and the dispatch of appropriate level emergency response from the cooperating agencies, providing the most effectual fire protection regardless of the responsibility area. The Grass Valley Emergency Command Center, located at the Nevada County Airport in Grass Valley, is an interagency-agency cooperative facility between the USFS-United States Forest Service (Tahoe National Forest) and CAL FIRE Cal Fire, (Nevada-Yuba-Placer Unit). Cal Fire dispatch personnel provide provides emergency emergency dispatching services through cooperative agreements with all the fire districts and cities within Nevada County, a dozen County Offices of Emergency Services in the Sierra Nevada and private contractors delivering air and ground medical services.

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. One of only 13 wildfire air attack bases in California, our local Wildfire Air Attack Base is one of three Interagency Wildfire Air Attack Bases in the State (Redding and Porterville are the other two). 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. Cal Fire maintains two planes and the Forest Service maintains one plane. Two retardant air tankers are also based during the fire season at the air attack base. The strategic location of the Grass Valley air base assists Cal Fire in achieving its goal of 20-minute response times anywhere in California.

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 5 fire-fighting hand crews with up to 18 individuals in each crew. The crews are a year round resource providing fuel reduction assistance within Nevada County communities when they are not fighting wildfires.

Fire Safety Support Staff and Organizations

The Nevada County Fire Marshal enforces, inspects and reviews County projects based on fire safety codes and regulations, unless the project is located within the jurisdiction of a local fire protection district with Fire Prevention staff. The Fire Marshal also reviews and recommends

changes to the County fire safety regulations. The Nevada County Fire Chief's Association also participates in the review of community, County, and ~~state~~State fire safety codes and regulations.

The Fire Safe Council (FSC) 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 wildfire in our communities and adjacent forestland. The mission of the Fire Safe Council FSC is: ~~“To~~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 fire-wise education and programs to enhance emergency preparedness for catastrophic wildfire; ~~to all citizens in Nevada County in order to reduce the loss of life, property and natural resources and 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.”

The Firewise Communities/USA® program is an unique opportunity available to fire-prone neighborhoods and communities in Nevada County. ~~Its~~The goal is of Firewise Community organizations is to encourage and acknowledge action that minimizes home loss to wildfire. It Neighborhood and community chapters teach their residents how you to prepare for a wildfire before it occurs. The program adapts is scalable will to small communities large and small, developments and residential neighborhoods associations of all types. The Fire Safe Council FSC of Nevada County has assisted a number of communities in Nevada County to become designated Firewise Community chapters.

Fire Protection Regulations

Fire science research indicates the area around a home or other buildings requires at least 100 to 200 feet of reduced and modified vegetation to minimize structure ignition from radiation and convection heat, and/or firebrands landing and accumulating directly on and immediately adjacent to the home. Fire science also indicates that structure fires can produce sufficient amounts of heat and firebrand to ignite wildland vegetation.

Nevada County Land Use and Development Code Chapter XVI requires new projects and construction meet fire safety standards described in PRC 4290, and establishes requirements for fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards. New structures built in Nevada County must also comply with fire safety building regulations. These building codes require the use of ignition-resistant building materials and establish design standards to improve the ability of a building to survive a wildfire.

State-mandated PRC 4291 requires the management of flammable vegetation around buildings or structures as a firebreak within a certain distance of the structures footprint. ~~30 feet or to the property line from a structure, and as a fuelbreak, within 30 to 100 feet or to the property line from the structure.~~ This regulation applies 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 the SRA and high or very high Fire Hazard Severity Zones.

Fire Protection Plans and Programs

Federal and State Plans

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.

The Nevada County Fire Safe Council (FSC) 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 forest land. The CWPP coordinates with the Local Hazard Mitigation Plan on wildfire issues as required by the DMA. The CWPP provides educational opportunities for the public to understand the complex issues of fire and fuels and to engage in the decision-making process for community safety. An adopted CWPP increases opportunities for pre-disaster funding to the County from the USFS and BLM.

The Local Hazards Mitigation Plan in Sections 4.2.18 and 4.3.15 provide information pertaining to the specific hazards and vulnerabilities in Nevada County wildfire poses. Included in the plan is wildfire history in Nevada County, values at risk, critical facilities in high and very high fire hazard severity zones and maps that geographically reflect the hazards and risks. The Nevada County LHMP provides a risk assessment of all potential natural and selected human-caused hazards, and identifies all potential types of disaster likely to occur in Nevada County, including wildland fire. One purpose of the LHMP is to minimize the magnitude of potential wildfire disasters.

Community / Area Plans

Two communities within the unincorporated areas of the County, Lake Wildwood and Lake of the Pines, have localized defensible space/fire safety regulations. These fire safety regulations require fuels treatment around homes and vacant parcels. Additionally, the Nevada County Consolidated Fire District may enforce hazard abatement requirements on vacant parcels pursuant to Health and Safety Codes.

The South Yuba River Comprehensive Management Plan provides strategies for the management of public lands in Nevada County's Lower South Yuba River area, including support of existing fire suppression and fuel reduction strategies developed by public resource agencies, FSCs, fire districts, and others for the Yuba River watershed.

The Lake Vera Round Mountain Fire Safe Plan applies to an area north of Nevada City and south of the South Yuba River, generally identified as the Lake Vera Round Mountain area. The Plan identifies actions to reduce fire hazard, including a determination of circulation, emergency road access, fuels modification and use of cluster and building setbacks. The 550 parcels within the

Plan area are zoned by the County with a restrictive “SP” zoning that requires development to comply with the specific fire safe standards contained within the Plan.

The Community Fire Plan for the North San Juan Fire Protection District area provides for brush thinning, evacuation route clearing, and other related assistance to reduce fuel loads, decrease the intensity of wildfire, and limit fire danger to structures and life. The plan promotes safe evacuation and citizen protection in the event of wildfire, ongoing public education, training of cooperative citizen teams, improvement of neighborhood fire safety, and professional assessment of fire-related infrastructure needs throughout the District.

Fire Prevention Programs

Nevada County’s Fire Prevention Assistance Program provides annual wildland fire safety inspections based on the requirements of PRC 4291. Each fire season, temporary County employees typically complete approximately 2,000 fire safety inspections. The primary focus of the program is to provide education through fire safety inspections and helpful brochures.

The Nevada County Roadside Vegetation Management Program treats vegetation in conjunction with road maintenance such as repaving or chip sealing. This program includes protocols for fuels treatment, herbicide use, and other issues related to maintaining roadside vegetation.

The Nevada County FSC has numerous grant-funded fire protection programs that are active as grant funds become available. All programs and services offered by the FSC are free of charge to the residents of Nevada County and provide education and assistance to those living in the wildfire prone environment. These programs include the following:

The Defensible Space Advisory Visit Program brings a qualified volunteer to private homes to help property owners understand and implement effective defensible space clearing

The Defensible Space Chipping Program provides free chipping of brush and other hazardous vegetation that has been cleared 100 feet from any permanent structure and/or 30 feet from any roadside or driveway used for evacuation purposes

Community Green Waste Drops at various locations throughout the County offer another method of disposal

The Special Needs Assistance Program provides defensible space clearing for property owners who are unable to clear their property due to age, physical disability, or financial need; have no other person to assist in the clearance; and cannot afford to hire a contractor to do the work

The Scotch Broom Challenge provides methods of controlling the invasive non-native plant Scotch broom, a highly flammable ladder fuel, including a weed wrench loan program to remove the invasive weed from your property

The FSC also works to implement community fuel reduction projects such as roadside evacuation clearing and fire fuel breaks as defined in the Nevada County CWPP.

Severe Weather Hazards

Wind, Lightning, Snow (Blizzards), Freezing, Heavy Rain, Drought

Severe weather across the County routinely leads to regionalis generally defined as any destructive weather event and usually occurs in Nevada County as localized storms that bring power outages, isolation of vulnerable regions (single access road closures), and white-out conditions on roadways. Deep snow, strong winds and severe cold have also created unsafe living conditions for vulnerable members of our community. Rain, snow, lightning and high winds are likely to

continue as one of the natural threats to Nevada County. More recently extreme heat has been identified as form of severe weather that needs to be addressed. Temperature extremes are likely to continue to occur annually in Nevada County. Though less likely to occur in the Eastern portion of the County at higher elevations, temperatures at or above 90 F are common most summer days in the western portion of the County.

The California Climate Adaptation Strategy, citing a California Energy commission study, States that “over the past 15 years, heat waves have claimed more lives in California than all other declared disaster events combined.” This study shows that California is getting warmer, leading to an increased frequency, magnitude, and duration of heat waves.

Storms in Nevada County are generally characterized by heavy rain and often strong winds. 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, cause landslides and other slope failures. Some storms that cross Nevada County’s diverse landscapes are accompanied by thunder and lightning. Lightning is a concern when it is cloud-to-ground type which 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 and crop damage, threaten public safety and have adverse economic impacts from business closures and power loss. Nevada County is subject to significant, non-tornadic, winds. High winds are defined as sustained wind speeds of 40 mph or greater lasting for 1 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. (For more information, historical data and maps please refer to the Local Hazard Mitigation Plan sections 4.2.2, 4.2.3, 4.2.4, 4.3.12, and 4.3.13.)

Numerous ~~severe weather incidents~~ affecting Nevada County were ~~documented~~ in the period from 1960 to 2013:

- ~~33 incidents related to high wind~~
- ~~8 incidents related to freezing or extreme cold~~
- ~~6 incidents related to lightning~~
- ~~27 incidents were reported as heavy rain~~
- ~~26 incidents related to winter storms or snow~~
- ~~1 incident tornado~~

(Note: some incidents included more than one cited cause)

Blizzards

Not specifically mentioned above were blizzards, which are the combination of wind and blowing snow. Closure of roads and highways due to blowing snow is a common and annual event above elevations of 5,000 feet in the Sierra Nevada.

A drought is an event of prolonged shortages in the water supply, whether atmospheric (below-average precipitation), surface water or ground water. A drought can last for months or years and it can have a substantial impact on the ecosystem and agriculture of the affected region and harm to the local economy. In the case of environmental effects drought can cause lower surface and subterranean water-levels, lower flow-levels, increase pollution of surface water, the drying out of wetlands, more and larger fires, loss of biodiversity, it can worsen the health of trees and the appearance of pests and dendroid diseases. Economic losses include lower agricultural, forests, game and fishing output, higher food-production costs, lower energy-production levels in hydro plants, problems with water supply for the energy sector, disruption of water supplies for residential and agricultural use. Social costs include the negative effect on the health of people directly exposed to this phenomenon (heat waves), possible limitation of water supplies, increased pollution levels, high food-costs, and stress caused by failed harvests.

Climate Change Resiliency and Mitigation

An important factor affecting public safety and disaster management functions is climate change. The impacts of climate change pose an immediate and growing threat to California's economy, environmental and public health. From the north coast of California through the Sierra Nevada to the Mojave Desert, all of California will continue to experience effects of climate change in different ways, including increased likelihood of drought, flooding, wildfires, heat waves, severe weather and sea level rise. Climate change effects from drought can cause changes in rainfall, which may also impact ground water supply. When rainfall is less than normal for several weeks or more, the flow of surface water declines and water levels in lakes and reservoirs fall, and the depth to water in wells increases. Drought and severe weather events caused by climate change can also impact food production from crops, which may lead to food security issues.

With the passing of Senate Bill 379, local jurisdictions are required to review and update as necessary their Safety Element to address climate adaptation and resiliency strategies applicable to that city or County. Senate Bill 379, requires the update 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.

Climate change is the change in measures of weather patterns over long periods, from decades to millions of years. More specifically, it may be a change in average weather conditions such as temperature, rainfall, snow, snowline elevation, ocean and atmospheric circulation or in the distribution of the weather around the average. While the Earth's climate has cycled over its 4.5 billion year age, these natural cycles have taken place gradually over millennia, and the Holocene, the most recent epoch in which human civilization developed, has been characterized by a highly stable climate, until recently. Human-induced climate change has been rapidly warming the Earth at rates unprecedented in the last 1,000 years.

Since industrialization began in the 19th century, the burning of fossil fuels (coal, oil and natural gas) at escalating quantities has released vast amounts of carbon dioxide and other greenhouse gases responsible for trapping heat in the atmosphere, increasing the average temperature of the Earth. Secondary impacts include changes to precipitation patterns, global water cycles, melting glaciers, melting ice caps and rising sea levels. Climate change will increase the severity of existing

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natural hazards such as wildfire, flooding, and extreme weather conditions affecting people and landscapes.

To provide a clearer picture of the effects of climate change on the diverse regional landscapes, California's Adaptation Planning Guide has divided California into 11 different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors and regional designations. Nevada County falls within the North Sierra Region characterized as a sparsely settled mountainous region where the region's economy is primarily tourism-based. The region is rich in natural resources, biodiversity, and is the source for the majority of water used by the rest of the State. In the North Sierra Region and Nevada County Planning Area average temperatures for January are projected to increase by 2.5°F to 4°F by 2050 and July temperatures are projected to increase by 4°F to 5°F by 2050. Average precipitation declines are projected for the region and will vary north to south from 3 to 6 inches 2050. By 2050, the annual number of heatwaves per year is expected to increase by two. Snowpack levels are projected to decline dramatically and wildfires are projected to increase up to 10.5 times throughout the region with the highest risks expected in the northern and southern parts of the region. Climate change may lead to an increase in the frequency and severity of existing natural hazards, which may also lead to an increase in the frequency of events that may pose risks and call for evacuations. Over the long-term, reducing greenhouse gases can help make these changes less severe, but the changes cannot be avoided entirely.

The following is a list of how climate change and its impacts may exacerbate natural hazards in Nevada County in the future:

- Frequency, intensity, and 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, and those who work outdoors.
- Higher temperatures will melt the Sierra snowpack and drive the snowline higher, resulting in less snowpack water storage for water supply later in the season.
- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect Nevada County with more frequent and /or more extensive flooding. Flooding projections for 100 and 500-year events reflect higher frequencies.
- Storms and snowmelt may coincide and produce higher winter and/or spring runoff initiating downstream flooding.
- Warmer temperatures, reduced snowpack, and earlier snowmelt can be expected to increase wildfire and wildfire intensity potential through increased plant moisture stress (grasses drying sooner, tree and shrub water content decreased), increased insect populations; both of which affect forest health and reduce forest resilience to wildfires. An increase in 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, and the ability to hold ground water in the upper watersheds.

- With the increase in wildfire risks that leave slopes bare of vegetation and severe weather events in the form of heavy rain, landslides and or debris/mudflows are also a potential exasperated safety hazard.
- Warmer temperatures have the potential for increasing both the species and quantities of insect pests that can significantly impact agricultural operations and production. 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.
- Long periods of drought can adversely impact the environment and agriculture through lowered water tables and reduced water supplies affecting crop yields and forest resources. The availability, access and stability of food resources and production could be negatively affected, impacting Nevada County agricultural operations during prolonged drought periods.

Nevada County’s Local Hazard Mitigation Plan includes a hazard identification assessment that lists the County’s potential hazards, along with each hazards’ geographic extent of influence, probability of future occurrences, magnitude of severity, significance (minimal potential to widespread potential impact), and the potential influence climate change may have on the specific hazard. Based on the assessment results, mitigation strategies have been developed for reducing the County’s risks and vulnerabilities to these hazards. (See the Local Hazard Mitigation Plan, Sections 4.1 and Chapter 5).

In addition to the mitigation strategies identified in the Local Hazard Mitigation Plan to reduce climate change impacts, the County has adopted an Energy Action Plan (EAP) that provides an analysis of the energy use in the unincorporated area of the County, and a roadmap for accelerating energy efficiency, water efficiency, and renewable energy efforts that are already underway in Nevada County. Community members and the County have opportunities to save energy by addressing inefficiencies of current energy-consuming systems, operations, and behaviors. The EAP was developed to provide a broad view of energy use in the County, to set energy and water-energy saving goals, to recommend actions that result in short and long-term energy savings, and to educate the community on existing resources designed to save utility customers energy. Efforts to implement the EAP are in place by working groups.

Environmental Justice and Vulnerable Populations

In 2016, Senate Bill 1000 was signed into law requiring cities and counties that have disadvantaged communities to incorporate environmental justice policies into their General Plans, either in a separate environmental justice element or by integrating related goals, policies, and objectives throughout other elements of the General Plan. The California Department of Environmental Protection defines Environmental Justice in the following text: “*The principles of environmental justice call for fairness, regardless of race, color, national origin or income, in the development of laws and regulations that affect every community’s natural surroundings, and the places people live, work, play and learn*”.

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The concept of environmental justice encompasses different aspects of land use, safety, housing, conservation and recreation planning. Most often environmental justice goals and policies addresses inequitable exposure to pollutant and the siting of locally unwanted land uses. More broadly, environmental justice addresses land-use patterns such as the location of industrial and commercial land uses that have the potential to adversely impact vulnerable populations and communities. Environmental justice also addresses the lack of certain land uses, amenities and social and physical infrastructure to serve vulnerable populations and communities. These populations tend to be affected disproportionately, be it the ability to keep their homes cool during an extreme heat event or the ability to recover after a wildfire or flood event that damages or destroys their home. Vulnerable populations may also face additional challenges of not having resources available to assist with hazardous conditions, such as being able to evacuate, or to adapt to public safety power shutoff (PSPS) events by finding alternative practices or power sources.

The 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
- 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.

As Stated in the introduction of this chapter, the purpose of the Safety Element is to reduce short and long-term 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. The Safety 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 Nevada County it is imperative to address responses to the safety needs of vulnerable populations and communities.

Goals, Policies, and Programs

The following sections identify the eight primary types of goals, policies and programs of the Safety Element, which are grouped by subject categories as follows:

- Emergency Preparedness (EP)
- Geologic Hazards/Seismic Activity (GH)

- Flood Hazards (FH)
- Airport and Military Airspace Hazards (AH)
- Hazardous Materials and Mining Hazards (HM)
- Public Safety Services and Facilities (SF)
- Fire Hazards and Protection (FP)
- Severe Weather Hazards (WH)
- Climate Change Resiliency and Mitigation (CC)
- Environmental Justice (EJ)

Emergency Preparedness (EP)

GOAL EP-10.1

Provide a coordinated approach to hazard and disaster response preparedness.

Policy EP-10.1.1 Ensure a coordinated, interagency program for disaster preparedness that will facilitate ~~federal~~Federal and ~~state~~State disaster assistance by planning for the reduction of the effects of natural hazards and training for disaster management, (also see; Local Hazard Mitigation Plan 5.4 Mitigation and Action Plan)

Policy EP-10.1.2 The Local Hazard Mitigation Plan ~~(LHMP)~~, adopted by the County ~~on July 17, 2012,~~ and periodically reviewed and updated in accordance with the Federal Disaster Mitigation Act of 2000 and Government Code 65302.6, shall serve as the implementation program for the coordination of hazard planning and disaster response efforts within the County.

The Local Hazard Mitigation Plan LHMP, which is incorporated into this Safety Element by reference and includes mitigation strategies for wildland fire hazards, shall be reviewed, along with the County's mutual aid agreements and existing wildland fire-related codes and ordinances to address the hazards of development in the wildland urban interface annually, or as by the County Office of Emergency Services and updated as necessary, to ensure compliance with the Federal Disaster Mitigation Act of 2000 and State Fire Code, as it exists or as may be amended.

Policy EP-10.1.3 ~~Coordinate with the State Office of Emergency Services for wildfire, awareness of implementation of state~~State programs. The local earthquake preparedness plan shall be coordinated with regional plans for earthquake preparedness through the local and State Office of Emergency Services.

- Policy EP-10.1.4*** Provide for adequate evacuation routes in areas of high fire hazard, high potential for dam failure, earthquake, seiches, avalanche, flooding or other natural disaster.
- Policy EP-10.1.5*** ~~Promote~~ Sustain the continued effectiveness and efforts in building public awareness of the Nevada County ~~and Nevada~~ Operational Area Emergency Operations Plan, and Community Emergency Preparedness and Evacuation Guides, through the local Office of Emergency Services, as the focus for planning for emergency evacuation of threatened populations. -
- Policy EP-10.1.6*** Transportation routes that are designated on the General Plan Land Use Maps as Interstate~~States~~, freeways, highways, and other principal arterial routes shall be considered primary evacuation routes on a ~~county~~Countywide basis. Such routes provide the highest levels of capacity and contiguity and serve as the primary means for egress from the County.
- The routes designated on the General Plan Land Use Maps as minor arterial or major collector routes shall be considered secondary evacuation routes on a ~~county~~Countywide basis. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities.
- Policy EP-10.1.7*** Prioritize the creation and maintenance of private road districts on existing private roads to insure emergency ingress and egress meets Nevada County and Cal Fire road and driveway standards and maintains these standards. Private road districts shall include the assurance that emergency ingress and egress will be maintained.
- Policy EP-10.1.8*** Support the development and maintenance of ~~county~~Countywide and local emergency evacuation plans.
- Policy EP-10.1.8*** ~~Recognize that the Emergency Preparedness and Evacuation Guides will be developed as supporting plans to the Nevada County and Nevada Operational Area Emergency Operations Plan.~~
- Policy EP-10.1.109*** Support the development of Community Emergency Preparedness and Evacuation Guides by local community members in collaboration with the County Office of Emergency Services.
- Policy EP-10.1.10*** Emergency preparedness planning shall include recovery plans to support the people, services and environments affected by the emergency event. (EH)

Policy EP-10.1.11 Mitigate development in areas of High and Very High Fire Hazard Severity Zones by incorporating into conditions of approval the most current data in order to assure appropriate fuel modification around the development and emergency ingress and egress for residents, visitors and emergency services.

Policy EP-10.1.12 Continue to work with Cal Fire, California Office of Emergency Services and Nevada County Office of Emergency Services to adopt by ordinance the most current Fire Hazard Severity Zones Map, adopt the most appropriate fire-resistant building material standards and fuel modification/vegetation management requirements for each zone as a basis for project review in accordance with Federal, State and local standards.

Policy EP-10.1.13 Nevada County shall develop policies and provide updates, as appropriate, that address recovery and redevelopment after a large fire with the intent to address the reduction of future vulnerabilities to fire hazard risks through site preparation, redevelopment layout design, fire resistant landscape planning, and fire retarding building design and materials.

Geologic Hazards / Seismic Activity (GH)

GOAL GH-10.2

Minimize injury and property damage due to geologic and seismic hazards.

Policy GH-10.2.1 Ensure that new construction meets current structural and safety standards.

Policy GH-10.2.2 Continue to cooperate with the State Department of Conservation – California Geological Survey, the State Office of Emergency Services and other appropriate federal, state and local agencies and incorporate the most current data concerning the following as the basis for the County's Site Development Standards, and project site plan review:

- a. geologic hazards; and
- b. seismic hazard data for sensitive land uses such as schools, medical facilities, high-density residential uses, and intensive commercial uses.

The project review shall consider the need to mitigate development in such areas in accordance with federal, state and local standards.

As part of the project site review process, require sufficient soils and geologic investigations to identify and evaluate the various geologic and seismic hazards that may exist for all proposed development, including subdivisions. Such investigations shall be required within an area determined to be seismically active by the State Department of Conservation – California Geological Survey, or within an area having potential geologic hazards, including slope instability and excessive erosion.

~~*Policy GH-10.2.1.3* Carry out the requirements of the California Building Code, particularly with regard to seismic design. Redundant~~

~~*Policy GH-10.2.1.4* Require that underground utility lines, particularly water and natural gas mains, be designed to withstand seismic forces. Not practical (DPW)~~

Flood Hazards (FH)

GOAL FH-10.3

Reduce the potential for injury, property damage, and environmental damage from flooding.

Policy FH-10.3.1 Implement development standards to ensure new construction does not result in increased peak run-off or flood potential.

Policy FH-10.3.2 Avoid potential increases in downstream flooding potential by protecting natural drainage and vegetative patterns through project site plan review, application of Comprehensive Site Development Standards, use of clustered development and project subdivision design. The Comprehensive Site Development Standards shall include measures applicable to all discretionary and ministerial projects to avoid downstream flooding resulting from new development. Such measures, shall include, but not be limited to:

- a. Avoidance of stream channel modifications;
- b. Avoidance of excessive areas of impervious surfaces; and
- c. Use of on-site retention or detention of storm water.

~~*Policy FH-10.3.3* Participate in County flood studies and programs.~~

Policy FH-10.3.3 Nevada County shall continue to work with appropriate local, state and federal agencies, and, in particular, (particularly FEMA) the Federal Emergency Management Agency and the National Flood Insurance Program in maintaining the most current flood hazard and flood plain information as a basis for project review in such areas in accordance with federal, state and local standards.

- ~~*Policy FH-10.3.5* Continue to participate in the National Flood Insurance Program.~~
~~*Policy FH-10.3.4* Owners of dams under State jurisdiction shall submit their Emergency Action Plans including the Inundation Map and subsequent updates to the Nevada County Office of Emergency Services at the time of the Local Hazard Mitigation Plan's next update and with each 5-year update thereafter.~~

Airport Hazards (AH)

GOAL AH-10.4

Ensure the safety and compatibility of land uses in the vicinity of airports and military airspace

- Policy AH-10.4.1* Maintain land use and development patterns in the vicinity of airports that reflect and are consistent with policies for the different airport land use compatibility zones within the defined Airport Influence Areas as set forth by the Nevada County and Truckee Tahoe Airport Land Use Compatibility Plans (ALUCPs).
- Policy AH-10.4.2* Through appropriate zoning regulations, the County shall enforce airport ground and height safety areas, and land use compatibility standards, consistent with the ALUCPs adopted by Nevada County and Truckee Tahoe Airport Land Use Commissions, as those plans are currently in effect.
- Policy AH-10.4.3* 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.

- ~~Program AH-10.4.1 Identify the airspace used by the military in Nevada County and develop procedures to coordinate with the military the review of new development to ensure that it is compatible with military air operations.~~

Hazardous Materials (HM)

GOAL HM-10.5

Protect public health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.

- Policy HM-10.5.1* Provide means for the identification, safe use, storage, transport, and disposal of hazardous materials including household hazardous waste.

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Policy HM-10.5.2 ~~In-s~~When siting new on and off-site hazardous waste management facilities, the County shall follow the criteria and mitigation measures ~~procedures~~ set forth in the Nevada County Hazardous Waste Management Plan, and attendant Final Environmental Impact Report ~~California State Health and Safety Code Division 20, Chapter 6.5, Article 8.7 Procedures for the Approval of New Facilities,~~ in with the objective ~~order to~~ of minimizing safety hazards associated with hazardous material and hazardous waste incidents.

Policy HM-10.5.3 The Nevada County Hazardous Materials Area Plan (Area Plan) shall provide direction and establish the policies, responsibilities and procedures required to protect the health and safety of Nevada 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), the framework for incident management within which 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-10.5.34 The County will encourage the cleanup of sites contaminated by mine wastes or other hazardous materials.

Policy HM-10.5.5 The County will actively promote prompt clean-up or remediation of properties contaminated by mine waste or other hazardous materials and shall not grant any discretionary or ministerial land use approvals to develop or change boundaries or reconfigure parcels believed 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 Nevada County standards or state ~~State~~ regulations.

Public Safety Services and Facilities (SF)

GOAL SF-10.6

Ensure adequate public safety services and facilities through development standards, development fees, and land use patterns.

Policy SF-10.6.1 Maintain appropriate levels of safety and protection services and facilities on land and water for both *Community* and *Rural Regions*.

Policy SF-10.6.2 ~~County public safety facilities shall be included in the County's development impact fee program, as provided in Policy 3.8 to~~

~~provide for new facilities or upgrading of existing facilities necessary to serve new development.~~

Policy SF-10.6.32

The following shall be included in the adopted Comprehensive Site Development Standards as the basis for site plan review:

- a. Standards to enhance the ability of the County 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 lighting; and
 - (2) trimming and maintenance of on-site vegetation management to provide adequate view of parking areas, building entrances, and 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-10.6.3

Land use patterns and development standards shall minimize hazards resulting from wildfire, flooding, earthquake, slope failure, avalanche, and other natural occurrences.

Policy SF 10.6.54

Encourage appropriate levels of consolidated services to provide for efficiency and cost containment.

Policy SF-10.6.65

The County will encourage joint service agreements and consolidation of police, fire, and emergency services between the County, cities, and service districts.

Program SF-10.6.1 The County shall inventory and identify public and private facilities that provide or can be improved to provide temporary safety zones in times of emergencies.

Program SF-10.6.2 The County emergency service organizations shall participate with other local, state and federal emergency services entities to inventory and identify public and private facilities that provide or can be improved to provide temporary safety zones in times of emergencies.

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Fire Hazards and Protection (FP)

GOAL FP-10.7

Enhance fire safety and improve fire protection effectiveness through infrastructure and service improvements.

- Policy FP-10.7.1*** ~~Identify existing~~ Ensure County-maintained roads not meeting design standards for current or anticipated use as designated on the General Plan Land Use Map. Maintain and update Nevada County road standards for both public and private roads to adequately address emergency ingress and egress.
- ~~***Policy FP-10.7.2*** Ensure that proposed private roads are maintained.~~
- Policy FP-10.7.3~~2~~*** As a condition of development, require long-term maintenance of private roads to meet current the standards of the original improvements, including roadside vegetation management, as part of a formal private road association or similar entity.
- ~~***Policy FP-10.7.3*** Projects requiring a traffic study shall include in such study an assessment of the current emergency evacuation capacity of the pubic and/or private roads that serve the proposed project and recommended mitigation that will increase the evacuation capacity, if so needed.~~
- ~~***Policy FP-10.7.4*** Research the feasibility of a countywide rural fire protection water system that provides a cost-effective, adequate water supply.~~
- Policy FP-10.7.5~~4~~*** Encourage fire protection agencies to determine appropriate levels of fire protection facilities and services for both *Community* and *Rural Regions*.
- Policy FP-10.7.6~~5~~*** Encourage the upgrading of facilities within existing fire protection districts, and encourage the expansion of existing districts where warranted by the population density allowed under the General Plan.
- ~~***Policy FP-10.7.7*** Cooperate with CAL FIRE, US Forest Service, local fire districts, and the Nevada County Fire Safe Council in fire prevention programs.~~
- ~~***Policy FP-10.7.6*** Locate new critical facilities outside of High and Very High Fire Hazard Severity Zones, unless alternative is available or feasible. (Refer to Figures 10.4 and 10.5, Fire Hazard Severity Zone Maps and Section 4.3.1 in the Local Hazard Mitigation Plan for the Critical Facilities Map).~~

Policy FP-10.7.7 The County shall support community or County-wide water supply systems and the ongoing maintenance of water supply infrastructure for fire protection.

GOAL FP-10.8

Reduce fire risk to life and property through land use planning, ordinances, and compliance programs.

~~Policy FP-10.8.1~~ As needed, review and revise existing wildland fire-related codes and ordinances to address the recognized hazards of development in the wildland-urban interface.

Policy FP-10.8.1 Nevada County shall apply and enforce State of California Public Resource Code 4290 and 4291 **through County-adopted ordinances**, which includes minimum fire safety standards related to defensible space that are applicable to State responsibility area lands and lands classified and designated as very high fire hazard severity zones as reflected on current and future maps defined in subdivision (i) of Section 51177 of the California State Government Code. Nevada County shall continue to adopt revisions to the California Fire and Building Codes and other standards which address fire safety as they are approved by inspection organizations and the State of California. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices.

~~Policy FP-10.8.2~~ Recognize the ignition-resistant building standards in Land Use and Development Code Chapter V, Building.

~~Policy FP-10.8.3~~ Comply with air quality regulations by encouraging alternatives to debris burning.

~~Policy FP-10.8.4~~ Support removal of fuels and chipping and onsite distribution of chipped material as preferred alternatives to burning.

~~Policy FP-10.8.5~~ Consider new wildfire safety codes and ordinances to meet the County's fire safe needs.

Policy FP-10.8.62 Review wildfire safety policies, codes, and ordinances, and report the findings to the Board of Supervisors at least every three years with OES review of the Local Hazard Mitigation Plan (see EP-10.1.2).

~~Policy FP-10.8.7~~ Review and recommend improvement of the "same practical effect" process for meeting the intent of the fire safety regulations.

Policy FP-10.8.83 Recognize the value of the “same practical effect” or “exception” process when the letter of the law may not be practically applied, but the intent of the law may be achieved through application of other measures. Develop a public information sheet to increase public awareness and understanding regarding the application of these processes.

~~***Policy FP-10-8.4*** New development and subdivisions shall include adequate emergency infrastructure that includes but is not limited to, emergency water facilities to assist and support wildfire suppression and adequate ingress and egress routes to facilitate emergency responders’ access and the evacuation of inhabitants. Provisions shall be made on applicable projects to require the maintenance of emergency infrastructure and facilities.~~

Policy FP-10.8.95 Land use patterns and development standards shall minimize fire hazard and shall be reviewed and revised, as needed, consistent with the five year update of the Safety Element.

~~***Policy FP-10-.8.6*** Fire safe measures shall be commensurate with the response time for emergency services (e.g. longer distance to a fire department requires more stringent mitigation measures).~~

~~***Policy FP-10.8.10*** The County shall coordinate and centralize firesafe reviews which will include coordination of development with respect to fire prevention and safety, and implementation of Nevada County fire safety programs, standards and procedures.~~

~~***Policy FP-10.8.117*** The As part of the coordinated and centralized fire safe reviews, the following shall be included in the Comprehensive Site Development Standards as the basis for site plan review:~~

- a. Standards for roads and private driveways which will enhance the ability of emergency service providers to respond to structural and wildland fires, and calls 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. ~~Water supply standards which will provide necessary on-site water supply for fire protection~~Each property outside of a developed water system shall maintain sufficient usable water storage to provide wildfire and structure protection on the property;

- c. Sign and address standards which will provide for easy identification of roads, streets, driveways and buildings by emergency service providers; and
- d. 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 ~~of for~~ residents, and firefighting, medical and police personnel; and
 - (3) Building setbacks.

Policy FP-10.8.128 In those areas outside *Community Regions*, which are identified as having a high to very high fire hazard severity, and/or lack adequate year-round fire protection facilities, maintain low-density land use designations (Rural or Forest) in order to minimize the potential fire hazard.

Policy FP-10.8.9 The County shall consult the Fire Hazard Severity Zones map during the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures that may include development clustering, fire breaks and fire resistant building design and materials.

GOAL FP-10.9

Encourage fire safety education and support programs to promote participation, voluntary compliance, and community awareness of fire safety issues.

Policy FP-10.9.1 ~~Inform the public how to undertake fuels management activities in accordance with environmental regulations and guidelines.~~

Policy FP-10.9.21 Make available educational materials 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 shall be available to members of the public at the County.

Policy FP-10.9.32 Increase public education and outreach on wildfire safety issues through the Nevada County Office of Emergency Services and by utilizing the Fire Safe Council, and by collaborating with community and business associations.

- Policy FP-10.9.3*** Support the Nevada County Office of Emergency Services and the Fire Safe Council's public education efforts to inform and create Provide a better understanding to with the public and to with the architectural and building industry about the benefits of reducing vulnerabilities to wildfire risks through site design, defensible space and building material/design options available with ignition-resistant building materials.
- Policy FP-10.9.5*** Support the development of a fuels management consulting and technical service contact list for private property owners by the appropriate fire agency.
- Policy FP-10.9.63*** Encourage the development and organization of a property owner assistance program for fuels treatment.
- Policy FP-10.9.74*** Encourage and support the effort for local neighborhoods and communities to become certified under the Firewise Communities USA® certification program through the Fire Safe Council.
- Policy FP-10.9.8*** Create a cooperative business environment that encourages business, professional services, and governmental agencies to provide landowners with prudent, safe, economical, and environmentally sensitive services.
- Policy FP-10.9.95*** Create incentives to encourage voluntary compliance with fire safe regulations.
- Policy FP-10.9.106*** The County shall work with the California Department of Insurance to obtain recognition that Nevada County has developed fire safety programs that promote compliance with fire safety regulations which may help to address homeowner fire insurance challenges.
- Policy FP-10.9.7*** The County shall 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 FP-10.9.11*** Assist the Fire Safe Council with identifying fuel reduction priorities for grant-funded projects.
- Policy FP-10.9.12*** Support the Fire Safe Council's public education efforts in order to ensure projects are consistent with County policies, resource standards, and ordinances.

Policy FP-10.9.13 — Improve public awareness regarding Nevada County’s ecosystem and fire history.

Policy FP-10.9.14 — Encourage landowners to obtain fire safety educational information from the appropriate fire and resource agencies.

Policy FP-10.9.15 — Support collaboration among CAL FIRE, the US Forest Service, the Bureau of Land Management, the Nevada County Superintendent of Schools, and other interested groups to develop a school curriculum based upon the role of cyclical historic fire in Sierra Nevada forests.

Policy FP-10.9.16 — Explore the feasibility of a forest school within the Tahoe National Forest to provide students a laboratory in which to study and understand the dynamics of the Sierra Nevada forests.

GOAL FP-10.10

Involve all stakeholders in collaborating on countywide fire safety goals and plans to consistently and efficiently implement fire safety-related best management practices.

Policy FP-10.10.1 — Create a collaborative process for integration of countywide common goals into each fire agency’s fire prevention program.

Policy FP-10.10.2 — Facilitate a collaborative process with public and private land managers for integrated wildland-urban interface fuels management.

GOAL FP-10.11

Reduce fire severity and intensity through fuels management.

Policy FP-10.11.1 — Recognize Public Resources Codes 4290 and 4291, and other defensible space standards and guidelines in order to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for people and firefighters.

Policy FP-10.11.2 — Recognize the Nevada County Defensible Space Standard as described in this policy. The Defensible Space Standard provides the basic protection measures for life and property from encroaching wildfire, and minimizes structure fires or other fires which may threaten to spread into the wildlands. The standard utilizes Public Resources Code 4291 and includes one component of Public Resources Code 4290, fuels treatment next to driveways, as the minimum fire safety standard in Nevada County.

The following definitions apply to the Nevada County Defensible Space Standard:

- a. ~~Flammable vegetation: Any live or dead vegetation that is combustible during normal summer weather. Vegetation which is pruned, limbed, cultivated, or considered ornamental shrubbery or plants, provided they are maintained and/or irrigated and they do not form a means of rapidly transmitting a fire from the surrounding wildlands, is not considered flammable vegetation and is permissible to be retained;~~
- b. ~~Firebreak: An area where flammable vegetation and other combustible growth are removed and cleared to create a condition that avoids the spreads of fire to other vegetation or to a building or structure;~~
- c. ~~Fuelbreak: An area that has been changed from dense, heavy vegetation to lower fuel volumes with tree pruning, intermediate shrub, brush, and dead fuel removed, and grasses and forbs replacing the shrub species;~~
- d. ~~Structure Ignition Zone: A firebreak area free of flammable vegetation and other combustible growth around any structure.~~
- e. ~~Reduced Fuel Zone: A fuelbreak area of separated vegetation, both vertically and horizontally, which extends beyond the Structure Ignition Zone;~~
- f. ~~Extended Reduced Fuel Zone: An extension of the Reduced Fuel Zone on downslope areas that varies depending on slopes and vegetation characteristics, as shown in the table below; and~~
- g. ~~Safe Access Route: A fuelbreak of spatially separated vegetation, both vertically and horizontally, adjacent to driveways that connect homes with roadways.~~

**TABLE 10.2
DEFENSIBLE SPACE EXTENDED REDUCED FUEL ZONES**

Grass-Oak Woodlands	100 feet	100 feet	100 feet
Montane Brush	100 feet	150 feet	200 feet
Mixed Conifer Forest	100 feet	150 feet	200 feet
Eastside Pine w/Sage	100 feet	125 feet	150 feet

The defensible space zones listed above are shown in Figure 10.1 below.

The following criteria, in items *a* through *c* below, comprise the Nevada County Defensible Space Standard, which should apply to property within the unincorporated portions of Nevada County:

- a. ~~Vegetation may only be maintained and treated on one's own property. Fuel modification is limited to the property line;~~
- b. ~~Defensible space should be maintained; and~~
- c. ~~The recommended guidelines in Policies FP-10.11.3 and 10.11.5 should be observed when undertaking fuels treatment in the Extended Reduced Fuel Zone.~~

~~**Policy FP-10.11.3** Recognize the following fuels treatment guidelines, which serve as recommendations for appropriate spatial arrangement, width, depth, and pruning/limbing height of vegetation in the Extended Reduced Fuel Zone during declared fire season. The guidelines also distinguish appropriate fuels treatment for the various vegetation types in the County: grass-oak woodlands, montane brush, mixed conifer forest and eastside pine with sage. These guidelines supplement the Extended Reduced Fuel Zone standards in Policy FP-10.11.2.~~

- a. ~~**Guidelines for grass-oak woodlands:** Grass and oak trees dominate the western lower foothills of Nevada County. This vegetation type primarily consists of blue oaks, valley oaks and interior live oaks with brush and occasional conifer species. Fuel loadings are typically low to moderate with low fire resistance, and fire burns very fast. Fire Hazard Severity Rating ranges from moderate to high depending on slope and aspect.~~

~~Montane brush lands are generally localized areas in the western lower foothills of Nevada County. This vegetation type primarily consists of brush species such as manzanita, deer brush, and scrub oak, with occasional oaks and pines in the overstory. Fuel loadings are typically moderate to high with moderate fire resistance time, and fire burns very fast. Fire Hazard Severity Ratings range from high to very high depending on slope and aspect.~~

~~Fuels treatment guidelines for grass-oak woodlands and montane brush lands are as follows:~~

~~Grass vegetation: A height of 3 inches or irrigated greenbelt should be maintained.~~

- (2) ~~Brush plants: Dead or dying brush species should be removed at least 30 feet from the structure and gradually extending out to 100 feet. Individual plants or groups of plants can be retained, based on species, size, and slope conditions, with the following conditions:~~
 - (a) ~~Plants should be healthy and free of dead branches and leaves;~~
 - (b) ~~Plants should be 10 feet or less in canopy width;~~

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- (c) ————— Brush plant canopies should be horizontally separated at 3 times their height;
 - (d) ————— The lower branches of plants should be vertically separated from understory vegetation; and
 - (e) ————— For grass-oak woodlands, a break in the ladder fuels should be created between grass, brush, and tree species, retaining spatially separated healthy plants.
- (3) ————— Oak and conifer tree species: Dead or dying oaks or conifers should be removed, along with suppressed conifer species. Individual trees or groups of trees can be retained, based on species, size, and slope conditions, with the following conditions:
- (a) ————— Heritage oak trees and landmark oak groves should be retained;
 - (b) ————— Trees should be healthy and generally free of dead branches and leaves;
 - (c) ————— Trees should be horizontally separated a distance of 10 to 30 feet between trunk of trees; and
 - (d) ————— The lower canopy of trees should be vertically separated from the understory, with limbing or pruning to a height of 8 feet in order to prevent canopy fires.
- (4) ————— Dead and down woody vegetation: Dead and down woody vegetation that is 8 or fewer inches in diameter and 2 or more feet in length should be removed. Dead material can be incorporated into the soil.
- b. ————— **Guidelines for mixed conifer forest and eastside pine with sage:** Conifer forest dominates the mid-elevation on the west side and east side of the Sierra Nevada Range with pines, cedars, firs and deciduous oak trees in the canopy, and brush species in the understory. Fuel loadings are typically moderate to very high and have very high fire resistance time, and fire burns moderately fast. Fire Hazard Severity Ratings range from high to very high on most aspects and slopes.

Eastside pine dominates the mid-elevations on the east side of the Sierra Nevada Range with pines and sagebrush species in the understory. Fuel loadings are moderate and have moderately to high fire resistance time, and fire burns moderately to very fast. Fire Hazard Severity Ratings range from high to very high on most aspects and slopes.

Fuels treatment guidelines for mixed conifer forest and eastside pine with sage are as follows:

Pine needles and leaves: Pine needles and leaves should be raked to a height of 3 inches or less.

- (2) ~~Brush plants: Flammable brush plants should be removed. Individual plants or groups of plants are acceptable, based on species, size, and slope conditions, with the following conditions:~~
 - (a) ~~Plants should be healthy and free of dead branches and leaves;~~
 - (b) ~~Plants should be 5 feet or less in canopy width;~~
 - (c) ~~Brush plant canopies should be horizontally separated at 3 times their height; and~~
 - (d) ~~The lower branches of plants should be vertically separated from understory vegetation.~~

- (3) ~~Oak and conifer tree species: Remove dead or dying trees. Remove suppressed conifer species. Individual trees or groups of trees can be retained, based on species, size, and slope conditions, with the following conditions:~~
 - (a) ~~Trees should be healthy and free of dead branches and leaves;~~
 - (b) ~~Trees should be horizontally separated a distance of 10 to 30 feet between trunk of trees; and~~
 - (c) ~~The lower canopy should be vertically separated from the understory, with limbing and pruning to 8 feet in height in order to prevent canopy fires.~~

- (4) ~~Dead and down woody vegetation: Dead and down woody vegetation that is 8 or fewer inches in diameter and 2 or more feet in length should be removed. Dead material can be incorporated into the soil.~~

~~*Policy FP-10.11.4* Recognize a stewardship program focusing on the management of flammable, hazardous vegetation in and around community areas to effectively reduce wildfire intensity and severity, while considering other valuable resources and public interest.~~

~~*Policy FP-10.11.5* Support the Nevada County Wildland Stewardship Program, which provides flexible guidelines for managing hazardous vegetation and promotes property owners' understanding of the wildland environment and responsible land stewardship concepts, including voluntary property management and collaboration with neighbors. The Wildland Stewardship Program focuses on the area adjacent to the defensible space area to enhance protection for structures and protect surrounding natural resources. The Wildland Stewardship Program is described in educational materials which shall be available at the County. The Wildland Stewardship Program includes the following:~~

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- a. ~~The educational material, which provides background and supporting information describing the wildfire and regulatory setting, as well as other important information for property owners in understanding and maintaining defensible space.~~
- b. ~~A property owner's guide to help property owners develop goals, identify types of fire fuels, select treatment processes, estimate cost and time frames, and understand environmental constraints and regulations.~~
- c. ~~Good neighbor practices to help achieve adequate defensible space in situations where structures cannot achieve it due to parcel size or other constraints.~~
- d. ~~Fuels management environmental protection measures to inform property owners of various regulations, provide contacts at resource and regulatory agencies, and explain how best to comply with the regulations.~~
- e. ~~Technical and funding assistance information to facilitate fuels management activities.~~
- d. ~~Networking and coordination information to facilitate the coordination of fuels treatment programs.~~

~~The County may issue a Statement of Cooperation for property owners who demonstrate effective stewardship practices, in order to provide an incentive for property owners to engage in fuels treatment activities. The County may also monitor the effectiveness of the Wildland Stewardship Program and provide reports to the Board of Supervisors to assess the effectiveness of the program.~~

Policy FP-10.10.1 The County shall encourage the use of prescribed burning as a management tool for hazardous fuels reduction, timber management, livestock forage production and enhancement of wildlife habitat consistent with seasonal State and local regulations.

Policy FP-10.10.2 Consistent with Senate Bill 1122 (2012) and Senate Bill 859 (2016), Nevada County shall facilitate public and or private entities' efforts to establish bio-mass facilities in the County with the goal of reducing forest fuel loads, reducing the wildfire hazard risk and creating electrical power.

Policy FP-10.110.3 The County shall collaborate with the Fire Safe Council in updating and maintaining the countyCountywide Community Wildfire Protection Plan according to Healthy Forest Restoration Act guidelinescooperate with Federal, State, community fire safety groups and other fire protection entities in fire hazard risk reduction projects in zones of high and very high fire hazard severity zones either prior to or as a component of project review.

Policy FP-10.10.4 The County shall support fuel modification across public and private forestlands to reduce the potential for catastrophic wildfires, with the highest priority directed toward reducing hazardous fuel levels in the WUI. The County shall, in coordination with other agencies, identify, create and maintain fuel breaks, such as the Ponderosa West Grass Valley Defense Zone.

Policy FP-10.10.5 The County shall be supportive of programs for affordable, residential green waste disposal opportunities to encourage vegetation management on private property.

GOAL FP-10.1211

As desirable and as funding becomes available, the County should consider Programs FP-10.12.1 through FP-10.12.2916, prioritized by the order in which they appear.

Program FP-10.1211.1 Establish-Maintain the cooperative relationship between the Nevada County Community Development Agency and ~~thean official~~ Nevada County Fire Marshal's Office, and provide funding for the appropriate staffing of the County Fire Marshal ~~services's~~ Office to provide oversight and implement fire protection policies.

Program FP-10.1211.2 Support the Nevada County Office of Emergency Services and the Fire Safe Council as a significant contributors of providing fire safe education and information to the residents of the County by assisting in funding their services and programs.

Program FP-10.1211.3 Coordinate with the Nevada County Office of Emergency Services and the Fire Safe Council in their efforts to update and maintain the ~~county~~Countywide Community Wildfire Protection Plan. These efforts include:

- a. Identifying areas within the County that potentially could be the source of large and damaging wildfires; and
- b. Prioritizing those potentially hazardous areas for grant funds to reduce the fire hazard and risk.

Program FP-10.1211.4 Provide a permanent funding mechanism for the Fire Safe Council's chipping program and services.

Program FP-10.1211.5 ~~Conduct a study for funding a Countywide system of strategically located rural fire protection water storage tanks;~~

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- Program FP-10.12.6 Sponsor workshops that develop cooperative efforts between businesses, professional services, and governmental agencies in the fuel and resource management industry, including those that provide fire-safe operations, fuel management services, and environmental compliance services.
- Program FP-10.12.7 Support the establishment and publication of a list of business resources that includes businesses and professionals that have attended the County's fire safety workshop and are knowledgeable of County fire-safe programs.
- Program FP-10.12.8 Support and expand greenwaste pickup and chipping programs and develop a mulching-composting program as the preferred methods for leaf and pine needle disposal.
- Program FP-10.12.9 Provide consulting services for private landowners for the restoration and rehabilitation of wildlands impacted by fire, insects, and disease.
- Program FP-10.12.10 Create a directory of assistance programs for large landowners, including CAL FIRE's Vegetation Management Program, CAL FIRE's California Forest Improvement Program, and the Natural Resources Conservation Service's Environmental Quality Incentives Program.
- Program FP-10.12.11 Provide financial aid to those landowners who can demonstrate financial need based upon established criteria and who are incapable of accomplishing the fuels management on their own to meet the requirement of the Nevada County Defensible Space Standards.
- Program FP-10.12.12 Nevada County Department of Public Works and the Fire Marshal's Office should work together to identify County-maintained arterial and collector roads or segments of these roads that are not meeting design standards for current or anticipated average daily trips, and prioritize these roads for upgrading as funds become available.
- Program FP-10.12.13 Direct the Fire Marshal's Office to coordinate with the Fire Safe Council to create a multimedia-format lending library. The lending library shall focus on proper land stewardship, defensible space, fire prevention, disaster preparedness and application of fuels management prescriptions. The Fire

~~Marshal's Office should seek outlets to inform the public of this library.~~

Program FP-10.1211.147 Develop a compliance program for future development to ensure that proposed roads are maintained over the long term to the same standard as they were originally approved and conditioned.

Program FP-10.1211.158 Encourage the Board of Supervisors to reconvene a Fire Safety Committee at least every five years for a comprehensive review of the effectiveness of the fire protection policies in the General Plan, codes, and ordinances along with the Office of Emergency Services review and update of the Local Hazard Mitigation Plan. (combined FP-10.8.2 to create this edited program. The study was already conducted, and no money was allocated to implement program).)

Program FP-10.12.16 ~~Develop an evacuation road standard and private landowner incentives to participate in the standard.~~

Program FP-10.12.17 ~~Encourage the Board of Supervisors to explore feasible funding mechanisms for those County roads not meeting the evacuation road standard.~~

Program FP-10.12.18 ~~Conduct a study for funding a countywide system of strategically located rural fire protection water storage tanks.~~

Program FP-10.12.19 ~~Conduct an analysis of private roads with offers of dedication on them and identify those of significant regional importance for public safety and evacuation. Once identified, those roads should be prioritized for inclusion into the County maintained mileage program through a public process.~~

Program FP-10.12.20 ~~Explore feasible funding mechanisms to add roads that are regionally important for connectivity and public safety access under County maintenance.~~

Program FP-10.1211.219 Support the Fire Safe Council's and other public and private entities in their effort to create a biomass reutilization center opportunities.

Program FP-10.12.22 ~~Upon implementation of a countywide water storage program; amend Land Use and Development Code Chapter XVI to eliminate the requirement for individual water~~

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storage tanks. Develop a transition process to coordinate the change in the water storage program.

Program FP-10.12.23 Create a forum to bring together private and public groups with a statutory or general interest in wildfire risk reduction with the intent of creating and maintaining a consistent public message regarding fire prevention and risk reduction requirements and activities.

Program FP-10.12.24 Task the County Fire Marshal, in cooperation with the Fire Safe Council, to develop and maintain a forum with public and private land managers to treat hazardous vegetation on their lands in order to increase community wildfire protection.

Program FP-10.1211.2510 Conduct seminars on-going workshops for landowners on proper stewardship defensible space, vegetation management and home-hardening techniques based upon County fuels current science, management guidelines and programs policies to reduce wildfire hazards.

Program FP-10.12.26 Provide educational workshops on environmental protection measures for property owners to minimize environmental impacts while implementing fuels treatment projects on their property.

Program FP-10.1211.2711 Increase the County roadside vegetation management program treatment rate from the current rate of 69% to a minimum of 10% of County-maintained road miles, thus decreasing the rotational period from an estimated 1711-year return interval to a 10-year return interval.

Program FP-10.1211.2816 Implement recommendations based on the countywide water storage study.

Program FP-10.12.29 Provide cost-share assistance through grant programs to property owners who have collectively organized and develop a project based on the Community Wildfire Stewardship Program.

Severe Weather Hazards (WH)

GOAL WH-10.1312

Minimize injury and property damage due to severe weather hazards (rain, snow, lightning, and high winds).

Policy WH-10.13.12.1 Ensure a coordinated, multi-jurisdictional preparedness program that will educate residents of Nevada County on how to best prepare for the hazards that severe weather can cause.

Policy WH-10.13.12.2 Continue to promote public awareness of emergency preparedness for potential severe weather hazards by:

- a. Providing education opportunities to local community groups; and
- b. Distributing the latest educational documents on emergency preparedness.

~~*Policy WH-10.12.3*~~~~*Program WH-10.13.1*~~ Continue to maintain qualification as a National Weather Service StormReady® County.

Climate Change Resiliency And Mitigation (CC)

GOAL CC-10.13

Build Climate-Resilient Communities and Protect Neighborhoods, Public Infrastructure and Natural Resources Through Mitigating Climate Change.

Policy CC-10.13.1 While the impacts of climate change on local communities are difficult to quantify, to the extent possible, Nevada County will prepare to address environmental hazards and vulnerabilities that climate change is currently influencing and will influence in the future.

Policy CC-10.13.2 Nevada County shall identify within the existing safety hazards and vulnerabilities discussed in the Safety Element and the Local Hazard Mitigation Plan which ones are likely to be exasperated by climate change and have the potential to negatively affect the people and the environment of Nevada County. During the periodic future updates of the Safety Element the hazards and vulnerabilities shall be reviewed, updated and new policies adopted to reflect the most current information available regarding climate change and strategies to reduce hazard risks compounded by climate change.

Policy CC-10.13.3 Nevada County shall identify, based on current and updated science, strategies to foster resiliency to climate change influences in both the built and undeveloped lands including mitigation measures to reduce climate change causes and adaptation plans to decrease the effects of climate change and to protect residents and businesses from increased risks of natural disasters such as flooding, drought, severe weather events and wildfire. The mitigation measures will be implemented as feasible.

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Policy CC-10.13.4 Require new discretionary development to include an analysis of potential affects to climate change impacts and water resources in the project review process. Projects shall reduce or limit impacts as feasible.

Policy CC-10.13.5 The County shall work with State agencies on adaptation strategies to address climate change impacts.

Policy CC-10.13.6 The County adopted Energy Action Plan shall be implemented through the support and collaboration of working groups.

Program CC-10.13.1 The County shall research funding, financing and partnership opportunities that would offset costs for energy efficiency appliances and infrastructure.

Environmental Justice (EJ)

GOAL CC-10.14

Reduce the exposure to, increase preparedness for and reduce recovery times from natural and human-caused safety risks for all populations and communities in Nevada County.

Policy EJ-10.14.1 Ensure that public emergency operations' (including evacuation routes) educational materials are available via different platforms and in formats that are understandable by Nevada County residents including non-English readers.

Policy EJ-10.14.2 Ensure emergency preparedness planning efforts inventory and consider vulnerable communities and populations such as seniors, daycare facilities, health care facilities, latch key kids, and other populations where mobility is a constraint that creates additional vulnerability in emergency evacuation situations.

Policy EJ-10.14.3 Ensure Nevada County emergency facilities and services are located and/or can respond equitably to the emergency needs of vulnerable populations and communities (also see FP-10.9.7).

List of Acronyms

The following acronyms are used in the Safety Element:

AH ——— Airport Hazards

ALUC ——— Airport Land Use Commission

ALUCP	Airport Land Use Compatibility Plan
BLM	Federal Bureau of Land Management
CAL FIRE	California Department of Forestry and Fire Protection
CWPP	Community Wildfire Protection Plan
DMA	Federal Disaster Mitigation Act of 2000
DTSC	California Department of Toxic Substances Control
EP	Emergency Preparedness
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FH	Flood Hazards
FP	Fire Hazards and Protection
FSC	Nevada County Fire Safe Council
GH	Geologic Hazards / Seismic Activity
HM	Hazardous Materials LHMP
	Local Hazard Mitigation Plan
MOA	Military Operation Area
NFPA	National Fire Protection Association
OES	Nevada County Office of Emergency Services
PRC	California Public Resources Code
SRA	State Responsibility Area
USFS	US Forest Service
WH	Severe Weather Hazards

General Plan Safety Element Assessment

Board of Forestry and Fire Protection



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Purpose and Background

Upon the next revision of the housing element on or after January 1, 2014, the safety element is required to be reviewed and updated as necessary to address the risk of fire for land classified as state responsibility areas and land classified as very high fire hazard severity zones. (Gov. Code, § 65302, subd. (g)(3).)

The safety element is required to include:

- Fire hazard severity zone maps available from the Department of Forestry and Fire Protection.
- Any historical data on wildfires available from local agencies or a reference to where the data can be found.
- Information about wildfire hazard areas that may be available from the United States Geological Survey.
- The general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities. The location and distribution of planned uses of land shall not require defensible space compliance measures required by state law or local ordinance to occur on publicly owned lands or open space designations of homeowner associations.
- The local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services. (Gov. Code, § 65302, subd. (g)(3)(A).)

Based on that information, the safety element shall include goals, policies, and objectives that protect the community from the unreasonable risk of wildfire. (Gov. Code, § 65302, subd. (g)(3)(B).) To carry out those goals, policies, and objectives, feasible implementation measures shall be included in the safety element, which include but are not limited to:

- Avoiding or minimizing the wildfire hazards associated with new uses of land.
- Locating, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are in the SRA or VHFHSZ.
- Designing adequate infrastructure if a new development is in the SRA or VHFHSZ, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
- Working cooperatively with public agencies with responsibility for fire protection. (Gov. Code, § 65302, subd. (g)(3)(C).)

The safety element shall also attach or reference any fire safety plans or other documents adopted by the city or county that fulfill the goals and objectives or contains the information required above. (Gov. Code, § 65302, subd. (g)(3)(D).) This might include Local Hazard Mitigation Plans, Unit Fire Plans, Community Wildfire Protection Plans, or other plans.

There are several reference documents developed by state agencies to assist local jurisdictions in updating their safety elements to include wildfire safety. The Fire Hazard Planning, General Plan Technical Advice Series from the Governor's Office of Planning and Research, referenced in Government Code section 65302, subdivision (g)(3) and available at

1400 Tenth Street
Sacramento, CA 95814
(916) 322-2318

https://www.opr.ca.gov/docs/Final_6.26.15.pdf

provides policy guidance, information resources, and fire hazard planning examples from around California that shall be considered by local jurisdictions when reviewing the safety element of its general plan.

The Board of Forestry and Fire Protection (Board) utilizes this Safety Element Assessment in the Board's

Joint Committee 2 (b)

review of safety elements under Government Code section 65302.5. At least 90 days prior to the adoption or amendment of their safety element, counties that contain SRAs and cities or counties that contain VHFHSZs shall submit their safety element to the Board. (Gov. Code, § 65302.5, subd. (b).) The Board shall review the safety element and respond to the city or county with its findings regarding the uses of land and policies in SRAs or VHFHSZs that will protect life, property, and natural resources from unreasonable risks associated with wildfires, and the methods and strategies for wildfire risk reduction and prevention within SRAs or VHFHSZs. (Gov. Code, § 65302.5, subd. (b)(3).)

The CAL FIRE Land Use Planning team provides expert fire protection assistance to local jurisdictions statewide. Fire captains are available to work with cities and counties to revise their safety elements and enhance their strategic fire protection planning.

Methodology for Review and Recommendations

Utilizing staff from the CAL FIRE Land Use Planning team, the Board has established a standardized method to review the safety element of general plans. The methodology includes

- 1) reviewing the safety element for the requirements in Government Code section 65302, subdivision (g)(3)(A),
- 2) examining the safety element for goals, policies, objectives, and implementation measures that mitigate the wildfire risk in the planning area (Gov. Code, § 65302, subd. (g)(3)(B) & (C)), and
- 3) making recommendations for methods and strategies that would reduce the risk of wildfires (Gov. Code, § 65302.5, subd. (b)(3)(B)).

The safety element will be evaluated against the attached Assessment, which contains questions to determine if a safety element meets the fire safety planning requirements outlined in Government Code, section 65302. The reviewer will answer whether or not a submitted safety element addresses the required information, and will recommend changes to the safety element that will reduce the wildfire risk in the planning area. These recommended changes may come from the list of sample goals, policies, objectives, and implementation measures that is included in this document after the Assessment, or may be based on the reviewer's knowledge of the jurisdiction in question and their specific wildfire risk. By answering the questions in the Assessment, the reviewer will determine if the jurisdiction's safety element has adequately addressed and mitigated their wildfire risk. If it hasn't, any specific recommendations from the reviewer will assist the jurisdiction in revising the safety element so that it does.

Once completed, the Assessment should provide clear guidance to a city or county regarding any areas of deficiency in the safety element as well as specific goals, policies, objectives, and implementation measures the Board recommends adopting in order to mitigate or reduce the wildfire threat in the planning area.

General Plan Safety Element Assessment

Jurisdiction: Nevada County	Notes: Formal Review	CAL FIRE Unit: NEU	Date Received: 10/16/19
County: Nevada	LUPP Reviewer: C Mitchell	UNIT CONTACT: Matt Furtado	Date Reviewed: 10/23/19

Background Information Summary

Specific background information about fire hazards in each jurisdiction.

Indicate whether the safety element includes the specified information. If YES, indicate in the comments where that information can be found; if NO, provide recommendations to the jurisdiction regarding how best to include that information in their revised safety element.

	Yes	No	Comments/Recommendations
Are Fire Hazard Severity Zones Identified? <i>CAL FIRE or Locally Adopted Maps</i>	X		Recommend formally adopting the Hazard maps by local ordinance. Adopted by reference only in Safety Element thus far. County is currently working on a formal ordinance.
Is historical data on wildfires or a reference to where the data can be found, and information about wildfire hazard areas that may be available from the United States Geological Survey, included?	X		Policy EP-10.1.12 Volume I page 10-15
Has the general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities, been identified?	X		Added Land Use paragraph on page 10-4, referenced LHMP Maps on pages 4.173 and 4.176 and provided link to Nevada County GIS for Land Use Map that is continually updated. These maps are also available in the LHMP on pages 238 and 241 of the LHMP along with the following other maps: LHMP Page 238 (PDF) LHMP page 4-173 – General Plan Land Use LHMP Page 241 (PDF) LHMP page 4-176, - Future Development Areas LHMP Page 319 (PDF) LHMP – Page 4-254 - Critical Facilities Map
Have local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services, been identified?	X		Chapter 10 volume 1 Page 10-22: Fire Agencies and Support Organizations
Are other fire protection plans, such as Community Wildfire Protection Plans, Local Hazard Mitigation Plans, CAL FIRE Unit or Contract County Fire Plans, referenced or incorporated into the Safety Element?	X		Chapter 10 volume 1 Page 10-24: Fire Protection Plans and Programs
Any other relevant information regarding fire hazards in SRAs or VHFHSZs?			**Recommend adopting the County's local hazard mitigation plan into the Safety Element to satisfy the requirement of SB 379 once it is adopted by the County.

Goals, Policies, Objectives, and Feasible Implementation Measures

A set of goals, policies, and objectives based on the above information to protect the community from unreasonable risk of wildfire and implementation measures to accomplish those stated goals, policies, and objectives.

Critically examine the submitted safety element and determine if it is adequate to address the jurisdiction's unique fire hazard. Answer YES or NO appropriately for each question below. If the recommendation is irrelevant or unrelated to the jurisdiction's fire hazard, answer N/A. For NO, provide information in the Comments/Recommendations section to help the jurisdiction incorporate that change into their safety element revision. This information may utilize example recommendations from Sample Safety Element Recommendations and Fire Hazard Planning in Other Elements of the General Plan below, may indicate how high of a priority this recommendation is for a jurisdiction, or may include other jurisdiction-specific information or recommendations.

Avoiding or minimizing the wildfire hazards associated with new uses of land.

	Yes	No	N/A	Comments/Recommendations
Land Use				
Does local ordinance require development standards that meet or exceed 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) for SRAs and/or VHFHSZs?	X			Policy FP-10.8.1 (Partial) Recommend having local ordinances that meet or exceed State Fire Safe Regulations Certified by the CA Board of Forestry and Fire Protection. Currently in conversation with Local CAL FIRE staff and the County. Policy FP-10.8.1 review and revise existing codes Policy FP-10.8.5 is for considering wildfire ordinances FP-10.8.4 and FP-10.8.7
Are there goals and policies to avoid or minimize new residential development in VHFHSZs?	X			Policy FP-10.8.8
Has fire safe design been incorporated into future development requirements?	X			Policy FP-10.7.6
Are new essential public facilities located outside high fire risk areas, such as VHFHSZs, when feasible?	X			LHMP Page 319 (PDF) LHMP – Page 4-254 - Critical Facilities Map Policy EP -10.1.7
Are there plans or actions identified to mitigate existing non-conforming development to contemporary fire safe standards, in terms of road standards and vegetative hazard?	X			Policy EP – 10.1.10
Fuel Modification				
Is fuel modification around homes and subdivisions required for new development in SRAs or VHFHSZs?	X			Program FP-10.11.1 – Recommend identifying a policy that requires fuel modification around homes and sub divisions for new development. Policy FP-10-8.7

Are fire protection plans required for new development in VHFHSZs?	X				Policy FP-10.8.4 Policy FP-10.8.7
Does the plan address long term maintenance of fire hazard reduction projects, including community fire breaks and private road and public road clearance?	X				Policy FP-10.7.1 Policy FP-10.7.2
Access					
Is there adequate access (ingress, egress) to new development in VHFHSZs?	X				Policy EP 10.1.11
Are minimum standards for evacuation of residential areas in VHFHSZs defined?	X				Policy FP-10.1.6
If areas exist with inadequate access/evacuation routes, are they identified? Are mitigation measures or improvement plans identified?	X				Policy EP- 10.1.7
Are there policies or programs promoting public outreach about defensible space or evacuation routes? Are there specific plans to reach at-risk populations?	X				Policy FP-10.9.2 Policy FP-10.9.3 Policy FP-10.9.4
Fire Protection					
Does the plan identify future water supply for fire suppression needs?	X				Policy FP-10.7.4
Does new development have adequate fire protection?	X				Policy FP-10.7.5 Policy FP-10.7.6
Develop adequate infrastructure if a new development is in SRAs or VHFHSZs.					
	Yes	No	N/A		Comments/Recommendations
Does the plan identify adequate infrastructure for new development related to:					
Water supply and fire flow?	X				Policy FP- 10.7.4
Location of anticipated water supply?	X				Policy FP-10.7.4 – Researches feasibility of rural water supply. Policy FP-10.8.3
Maintenance and long-term integrity of water supplies?	X				Develop a policy for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure Policy FP-10.7.7
Evacuation and emergency vehicle access?	X				Policy FP - 10.8.4 Policy FP - 10.7.3 Policy FP - 10.8.7
Fuel modification and defensible space?	X				Policy FP- 10.8.1
Vegetation clearance maintenance on public and private roads?	X				Policy FP-10.7.2

Visible home and street addressing and signage?					Policy FP- 10.8.6 (c) Policy FP-10.10.4
Are community fire breaks identified in the plan? Is there a discussion of how those fire breaks will be maintained?	X				
Working cooperatively with public agencies responsible for fire protection.					
	Yes	No	N/A	Comments/Recommendations	
Is there a map or description of existing emergency service facilities and areas lacking service, specifically noting any areas in SRAs or VHFHSZs?	X			LHMP Page 216 (PDF) or LHMP Page 4-151 Policy FP-10.7.6	
Does the plan include an assessment and projection of future emergency service needs?	X			Policy SF-10.6.2 Policy SF-10.6.1 LHMP Section 5.4	
Are goals or standards for emergency services training described?	X			Policy EP-10.1.1	
Does the plan outline inter-agency preparedness coordination and mutual aid multi-agency agreements?	X			Chapter 10: Volume 1: Fire Protection Plans and Programs	

Sample Safety Element Recommendations

These are examples of specific policies, objectives, or implementation measures that may be used to meet the intent of Government Code sections 65302, subdivision (g)(3) and 65302.5, subdivision (b). Safety element reviewers may make recommendations that are not included here.

A. Maps, Plans and Historical Information
1. Include or reference CAL FIRE - Fire Hazard Severity Zone maps or locally adopted wildfire hazard zones.
2. Include or reference the location of historical information on wildfires in the planning area.
3. Include a map or description of the location of existing and planned land uses in SRAs or VHFHSZs, particularly habitable structures, roads, utilities, and essential public facilities.
4. Identify or reference a fire plan that is relevant to the geographic scope of the general plan, including the Unit/Contract County Fire Plan, Local Hazard Mitigation Plan, and any applicable Community Wildfire Protection Plans.
5. Align the goals, policies, objectives, and implementation measures for fire hazard mitigation in the safety element with those in existing fire plans, or make plans to update fire plans to match the safety element.
6. Create a fire plan for the planning area.
B. Land Use
1. Develop fire safe development codes to use as standards for fire protection for new development in SRAs or VHFHSZs that meet or exceed the statewide minimums in the SRA Fire Safe Regulations.
2. Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.
3. Identify existing development that do not meet or exceed the SRA Fire Safe Regulations or certified local ordinances.
4. Develop mitigation measures for existing development that does not meet or exceed the SRA Fire Safe Regulations or certified local ordinances or identify a policy to do so.
C. Fuel Modification
1. Develop a policy to communicate vegetation clearance requirements to seasonal, absent, or vacation rental owners.
2. Identify a policy for the ongoing maintenance of vegetation clearance on public and private roads.
3. Include fuel breaks in the layout/siting of subdivisions.
4. Identify a policy for the ongoing maintenance of existing or proposed fuel breaks.
5. Identify and/or map existing development that does not conform to current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance in SRAs or VHFHSZs.
6. Identify plans and actions for existing non-conforming development to be improved or mitigated to meet current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance.
D. Access
1. Develop a policy that approval of parcel maps and tentative maps in SRAs or VHFHSZs is conditional based on meeting the SRA Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access. (See Gov. Code, § 66474.02.)
2. Develop a policy that development will be prioritized in areas with an adequate road network and associated infrastructure.
3. Identify multi-family housing, group homes, or other community housing in SRAs or VHFHSZs and develop a policy to create evacuation or shelter in place plans.

4. Include a policy to develop pre-plans for fire risk areas that address civilian evacuation and to effectively communicate those plans.
5. Identify road networks in SRAs or VHFHSZs that do not meet title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 2 and 3 (commencing with section 1273.00) or certified local ordinance and develop a policy to examine possible mitigations.
E. Fire Protection
1. Develop a policy that development will be prioritized in areas with adequate water supply infrastructure.
2. Plan for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure.
3. Map existing emergency service facilities and note any areas lacking service, especially in SRAs or VHFHSZs.
4. Project future emergency service needs for the planned land uses.
5. Include information about emergency service trainings or standards and plans to meet or maintain them.
6. Include information about inter-agency preparedness coordination or mutual aid agreements.

Fire Hazard Planning in Other Elements of the General Plan

When updating the General Plan, here are some ways to incorporate fire hazard planning into other elements. Wildfire safety is best accomplished by holistic, strategic fire planning that takes advantage of opportunities to align priorities and implementation measures within and across plans.

Land Use Element
Goals and policies include mitigation of fire hazard for future development or limit development in very high fire hazard severity zones.
Disclose wildland urban-interface hazards, including fire hazard severity zones, and/or other vulnerable areas as determined by CAL FIRE or local fire agency.
Design and locate new development to provide adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allow citizen egress during emergencies.
Describe or map any Firewise Communities or other fire safe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organization.
Housing Element
Incorporation of current fire safe building codes.
Identify and mitigate substandard fire safe housing and neighborhoods relative to fire hazard severity zones.
Consider diverse occupancies and their effects on wildfire protection (group housing, seasonal populations, transit-dependent, etc.).
Open Space and Conservation Elements
Identify critical natural resource values relative to fire hazard severity zones.
Include resource management activities to enhance protection of open space and natural resource values.
Integrate open space into fire safety planning and effectiveness.
Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.
Circulation Element
Provide adequate access to very high fire hazard severity zones.
Develop standards for evacuation of residential areas in very high fire hazard severity zones.
Incorporate a policy that provides for a fuel reduction maintenance program along roadways.

From: McCready-Hoover, Karen@CalOES
Sent: Tuesday, October 8, 2019 10:30 AM
To: sadie.caldas@co.nevada.us
Subject: Nevada County 2019 Safety Element

Good morning Sadie,

I received your letter dated October 4, 2019 regarding the public review of Nevada County's 2019 Safety Element update. I coordinate AB 2140 compliance with local jurisdictions, so I reviewed the language in the safety element for language about the county's local hazard mitigation plan (LHMP). As I can see, the Safety Element does include language about the LHMP, and therefore will meet most of the requirements.

When the Safety Element has been adopted by the county's governing board, please e-mail me the following:

- Copy of the adoption resolution stating that the LHMP was adopted into the General Plan Safety Element. You may attach it to the e-mail
- Link to the updated General Plan page of the county's website
- Link to the 2018 LHMP page of the county's website

Once I determine that everything is in order, I will send you a letter of AB 2140 compliance. At that time, the county will be eligible for consideration of California Disaster Assistance Act (CDAA) match funding for recovery activities through the Public Assistance Branch after a disaster.

Feel free to contact me with any questions you may have.

Karen McCready-Hoover

Emergency Services Coordinator
Cal OES Mitigation Planning Division
3650 Schriever Avenue
Mather, California 95655
(916) 845-8177 Office
(916) 216-1751 Cell
Karen.McCready-Hoover@caloes.ca.gov

From: McCrink, Tim@DOC <Tim.McCrink@conservation.ca.gov>
Sent: Tuesday, October 22, 2019 5:15 PM
To: Sadie Caldas <Sadie.Caldas@co.nevada.ca.us>
Subject: RE: Geohaznotice_6-6-13.pdf

Hi Sadie,

I made some edits in red below. Two specific examples I can think of include damage to the waste water treatment plant on Gas Canyon Road (landslides fell onto the plant at the pit bottom in early 2000's) and the evacuation of houses along Mountain View Drive (landslides ~100-200 feet from the top of the pit in 2017). Probably cannot get those into the Safety Element but should be on the County's radar.

I hope my edits help.

Tim McCrink
Supervising Engineering Geologist
California Geological Survey
801 K Street, MS 12-31
Sacramento, CA 95814
Tim.McCrink@conservation.ca.gov
Desk: (916) 324-2549
Mobile: (916) 747-6061

From: Sadie Caldas <Sadie.Caldas@co.nevada.ca.us>
Sent: Tuesday, October 22, 2019 2:32 PM
To: McCrink, Tim@DOC <Tim.McCrink@conservation.ca.gov>
Subject: RE: Geohaznotice_6-6-13.pdf

Good Afternoon Tim,

I was hoping to get a little more information about your comments on the Safety Element. We discussed on the phone that Nevada County has had a lot of hydraulic mining, which has caused landslide hazards.

This section of the Safety Element is under the landslide section and it briefly discusses hydraulic mining:

Triggers such as an earthquake, vegetation removal (potential results from a wildfire or development), heavy rainfall and human activities can set a landslide in motion. Mining is a human activity that can greatly increase the potential of a landslide. Nevada County contains many historic hydraulic mining sites, one of which, located northeast of Nevada City, is an area of over 20,000 acres. Because of the extreme methods used in hydraulic mining to "wash away" hillsides in the mid to late nineteenth century, **the remaining slopes are very steep and are capped by very expansive clay soils. The result is that** these areas are extremely prone to **damaging slope failure resulting in** landslides. In addition to

presenting risks to human life and property, landslides also present risks to the integrity of infrastructure such as water, sewer, gas lines and transportation corridors.

I believe this section includes the information that you commented on in the phone call. Please let me know if you have any other comments or feedback on this.

Thank you,
Sadie

Sadie Caldas

Associate Planner



Planning Department
County of Nevada
Community Development Agency

950 Maidu Ave. Suite 170
Nevada City, CA 95959

office 530.265.1345 fax 530.265.9851
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*Making Conservation
a California Way of Life.*

October 25, 2019

GTS# 03-ED-2019-00135

Sadie Caldas, Associate Planner
Nevada County
950 Maidu Avenue, Suite 170
Nevada City, CA 95959-8617

Nevada County 2019 Safety Element Update – Public Review Draft

Dear Ms. Sadie Caldas:

Thank you for including the California Department of Transportation (Caltrans) in the public review process for the project referenced above. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development - Intergovernmental Review (LD-IGR) Program reviews land use projects and plans through the lenses of our mission and state planning priorities of infill, conservation, and travel-efficient development. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

The County has completed a public review draft of the updated Safety Element. The Safety Element update is required by Government Code Section 65302(g) upon the County's recent adoption of the Housing Element (2019) and the Local Hazard Mitigation Plan (2017). The Safety Element addresses potential and existing hazards in the County, which are outlined in the following categories: Emergency Preparedness, Geological Hazards/Seismic Activity, Flood Hazards, Airport and Military Airspace Hazards, Hazardous Material and Mining Hazards, Public Safety Services and Facilities, Fire Hazards and Protection, and Severe Weather Hazards. Among other updates, two additional categories for Climate Change Resiliency and Mitigation, and Environmental Justice have been added to the Safety Element.

The following comments are based upon the Public Notice for the Safety Element Update documents received.

Climate Change

We advise Nevada County to work with Caltrans District 3 for Climate Adaptation efforts. Caltrans District 3 has recently completed a Climate Change Vulnerability Assessment to provide estimated changes to climate stressors including Absolute Minimum Temperature, 7-Day Maximum Temperature Events, 100-Year Precipitation Event Depth, Wildfire Level of Concern, Sea Level Rise and Storm Surge from Sea Level Rise.

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Ms. Sadie Caldas
October 25, 2019
Page 2

Though this assessment does not show Sea Level Rise or Storm Surge as concerns for State Highway facilities in Nevada County, Caltrans requires local assistance with identifying climate risks where State Highway facilities and Caltrans services would become resources to aid in the mitigation and management of areawide events, such as those that may call for evacuations.

Caltrans seeks to work with Nevada County to identify the conditions influencing potential directions of evacuation, the modeling of evacuation scenarios, and to determine any treatments or strategies to State Highway facilities to support community or regional evacuations should the need arise. In addition, Caltrans often administers discretionary grant programs to aid in various transportation studies including community Climate Change adaptation strategies and Vulnerability Assessments. One such example is the Town of Truckee, where local officials and Caltrans are developing an effective Climate Action Plan.

The State Highways in Nevada County are State Route (SR) 20, SR 49, Interstate 80 (I-80), SR 89, SR 174 and SR 267. Caltrans Climate Change maps forecasting to years 2025, 2055 and 2085 allow for evaluative approaches to infrastructure investments in preparation for resiliency in a prudent and cost-effective manner. Caltrans seeks partnerships with Nevada County to ensure a mutual benefit from the results of this kind of collaboration.

If you have any questions regarding these comments or require additional information, please contact Vishal Ream-Rao, Intergovernmental Review Coordinator for Nevada County, by phone (530) 741-5202 or via email to Vishal.Ream-Rao@dot.ca.gov.

Sincerely,



KEVIN YOUNT, Branch Chief
Office of Transportation Planning
Regional Planning Branch—East

From: McCreary, Gavin@DTSC <Gavin.McCreary@dtsc.ca.gov>
Sent: Friday, October 25, 2019 2:42 PM
To: Sadie Caldas <Sadie.Caldas@co.nevada.ca.us>
Cc: State.clearinghouse@opr.ca.gov; Planning <Planning@co.nevada.ca.us>; Jameson, Lora@DTSC <Lora.Jameson@dtsc.ca.gov>; Jones, Dick@DTSC <Dick.Jones@dtsc.ca.gov>
Subject: County of Nevada 2019 Safety Element Update

Ms. Caldas,

Thank you for the opportunity to comment on the Nevada County 2019 Safety Element Update. The Department of Toxic Substances Control only has one comment: the mining section on pages 10-14 and 10-15 should be updated to mention acid mine drainage. If you have any questions, please contact me at Gavin.McCreary@dtsc.ca.gov or (916) 255-3710.

Thank you.

Gavin McCreary
Project Manager
Department of Toxic
Substances Control
8800 Cal Center Drive
Sacramento, CA 95826
gavin.mccreary@dtsc.ca.gov
(916)255-3710

From: ksannar@nccn.net <ksannar@nccn.net>
Sent: Friday, December 13, 2019 11:38 AM
To: Sadie Caldas <Sadie.Caldas@co.nevada.ca.us>
Cc: dlandon@nccn.net
Subject: Draft Nevada County Safety Element

Hi Sadie

Thank you for the opportunity to review the Draft Nevada County Safety Element. I have reviewed the document and find it's policies to be consistent with the Nevada County Airport Land Use Compatibility Plan and the Truckee Tahoe Airport Land Use Compatibility Plan. If you have any questions, please do not hesitate to contact me.

Thank you,

Kena D Sannar

Transportation Planner



Nevada County Transportation Commission

101 Providence Mine Road, Suite 102, Nevada City, CA 95959

(530) 265-3202 / Fax: (530) 265-3260

<http://www.nctc.ca.gov>

From: Steve Monaghan <Steve.Monaghan@co.nevada.ca.us>
Sent: Tuesday, November 26, 2019 2:52 PM
To: Brian Foss <Brian.Foss@co.nevada.ca.us>; Caleb Dardick <Caleb.Dardick@co.nevada.ca.us>; Sean Powers <Sean.Powers@co.nevada.ca.us>
Subject: RE: Fire safety in General Plan

These items should include OES as they relate/are included in our Ready Nevada County initiative and Board objectives.

Policy FP-10.9.2 Increase public education and outreach on wildfire safety issues by utilizing the Fire Safe Council and collaborating with community and business associations.

Policy FP-10.9.3 Support the Fire Safe Council's public education efforts to inform and create a better understanding with the public and with the architectural and building industry, about the benefits of reducing vulnerabilities to wildfire risks through site design, defensible space and building material/design options available with ignition-resistant building materials.

Program FP-10.11.2 Support the Fire Safe Council as a significant contributor of providing fire safe education and information to the residents of the County by assisting in funding their services and programs.

Program FP-10.11.3 Coordinate with the Fire Safe Council in their efforts to update and maintain the Countywide Community Wildfire Protection Plan. These efforts include:

Items I did not clearly see that may warrant inclusion in the Safety Element:

- Pursue affordable residential green waste disposal opportunities/programs for the community. This is currently a barrier to more residential parcel vegetation management.
- Working with the State, address home owner fire insurance challenges. Policy FP-10.9.6 may relate to this affordability challenge.
- Working with OES and Fire Safe Council, support and promote existing and new Firewise communities.
- Related to evacuation routes, the County needs to perform traffic analysis in combination with fire/heat analysis to determine if there are issues with county roads designated as primary and secondary egress routes. We don't know now if based on CAL FIRE's most likely wildfire scenarios if the routes will have adequate evacuation capacity during an event. It certainly did not during the Lobo fire in Wildwood. Analysis needs to be done to identify/determine high risk egress routes, and then mitigation plans developed to address them.

"Routes designated on Nevada County General Plan Land Use Maps 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 County and ingress for emergency personnel. Routes designated on the General Plan Land Use Maps as minor arterial and major collector routes are considered secondary evacuation routes. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities.”



Stephen T. Monaghan

Agency Director

Information and General Services Agency

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Nevada City, CA 95959

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steve.monaghan@co.nevada.ca.us

[Connect with me on LinkedIn](#)

www.MyNevadaCounty.com

www.ReadyNevadaCounty.org

From: Greg Thrush <greg.thrush@sierrafund.org>
Sent: Wednesday, October 23, 2019 2:09 PM
To: Sadie Caldas <Sadie.Caldas@co.nevada.ca.us>
Subject: 2019 Safety Element Plan comments

Dear Sadie,

Thank you for the opportunity to comment on the 2019 Safety Element. The Sierra Fund is a tax-exempt non-profit organization located in Nevada City. Our mission is to restore ecosystem resiliency and build community capacity in the Sierra Nevada. We offer the following comments based on our expertise regarding the impacts of gold mining and other resource extraction in the region.

1. Mining. We suggest that the document include information about fish consumption advisories. As a result of the use of mercury to improve gold recovery in local mines there are fish consumption advisories issued for certain species of fish in the region. People catching and eating fish as a regular part of their diet should consult the California Office of Environmental Health Hazard Assessment website (<https://oehha.ca.gov/fish/advisories>).

In the section on Stationary Sources of Hazardous Materials, it might be worthwhile to add that the hydraulic mine sites which dot the landscape of Nevada County are sometimes discharge sediment-laden water after major storm events. Under certain conditions, hydraulic mine pits or surfaces become saturated and can release large amounts of silt and clay into surface flows, most of which eventually end up in our local watersheds. Due to the presence of mercury at these mine sites this sediment may include particulate bound elemental mercury that can cause water quality contamination.

2. With regards to climate change, it might be worthwhile to include wildfire smoke as another impact. Regional wildfires will continue to affect the air quality in nearby air basins. Vulnerable populations may be adversely affected because of an inability to recirculate air or lack of adequate clean air spaces.

3. With regards to EJ, one measure of vulnerable population is income. The California Department of Water Resources has identified "disadvantaged communities" in Nevada County including the City of Grass Valley.

I hope these comments are helpful.

Regards,
Greg

--

Greg Thrush
Environmental Justice Community Organizer

THE SIERRA FUND

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PO Box 972, Cedar Ridge, CA 95924-0972
www.cea-nc.org / email: info@cea-nc.org

October 14, 2019

Sadie Caldas Associate Planner Nevada County, CA

RE; Comments on the 2019 Draft Safety Element Plan

Dear Associate Planner;

Thank you for the opportunity to comment on the Nevada County 2019 Draft Safety Element Plan. Nevada County Climate Action Now's mission is to further climate change understanding and action by Nevada County citizens to abate global warming, reduce greenhouse gas emissions, and seek just climate solutions. The Community Environmental Advocates (CEA) supports responsible land use and environmental protection policies and actions in Nevada County.

The proposed 2019 Safety Element is well-written and thorough. Our submitted comments are meant to suggest improvements that will address climate issues for our county. Though most of the Safety elements either directly or indirectly are affected by the impacts of climate warming, our comments will focus on the Fire Hazards and Protection Element and the Climate Change Resiliency and Mitigation Element.

Fire Hazards and Protection Element

From the plan:

"The number and severity of wildfires in California are projected to continue to face dramatic increases. The fire management constraints due to the increasing population trends within and adjacent to forests and other highly flammable vegetated landscapes, which also correlate to increased human ignition sources, establish conditions that have created circumstances that are most conducive to have large scale, extremely impactful wildfires."

Policy FP-10.8.5 Land use patterns and development standards shall minimize fire hazards, and shall be reviewed and revised, as needed, consistent with the five-year update of the Safety Element.

Fire protection comments

We ask that the County no longer permit new construction in fire-prone Cal Fire level 3 areas outside of the WUI, unless the buildings are off the grid, or serviced by undergrounded cable in the vicinity.

Given the recent power shutdown (triggered by potential fire danger) by the local electricity distribution and transmission utility (PG&E) and the likelihood of future shutdowns, the County should make sure all of their facilities will remain available during a shutdown.

The county already has recently installed a solar power station that provides almost all of its municipal building electricity needs. This should be augmented by adding battery storage to the facility that would be able to supply electricity during a shutdown. The county could then use its protected facilities such as the Helling Library as a place where residents could gather to receive information and recharge their devices to be able to be kept informed.

Climate Change Resiliency and Mitigation

From the Safety Element section on climate change:

From the north coast of California through the Sierra Nevada to the Mojave Desert, all of California will continue to experience effects of climate change in different ways, including increased likelihood of drought, flooding, wildfires, heat waves, severe weather and sea level rise. Senate Bill 379 requires the update 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.

Nevada County's Local Hazard Mitigation Plan includes a hazard identification assessment that lists the County's potential hazards. Based on the assessment results, mitigation strategies have been developed for reducing the County's risks and vulnerabilities to these hazards. (See the Local Hazard Mitigation Plan, Sections 4.1 and Chapter 5). Note: there is no section 4.1 in the plan.

Climate Change Resiliency and Mitigation comments

These assessments only deal with mitigating the risks of climate change and do not address mitigating climate change itself.

Policy CC-10 13.3 does suggest identifying strategies that deal with climate change itself: *Nevada County shall identify, based on current and updated science, strategies to foster resiliency to climate change influences in both the built and undeveloped lands, including mitigation measures to reduce climate change causes and adaptation plans to decrease the effects of climate change, to protect residents and*

businesses from increased risks of natural disasters, such as flooding, drought, severe weather events and wildfire.

i.e. Policy CC-10 13.3, “Nevada County shall identify...strategies to foster resiliency to climate change...” is a good first step, but merely ‘identification of strategies’ is not sufficient. There should be wording to support implementation of those strategies.

Similarly, with Policy CC-10.13.4, “Require new discretionary development to include and analysis...”, merely inclusion of an analysis of the potential effects of climate change is a good first step, but there are no guidelines for limiting such development.

Goal CC-10.14 The inclusion of an Environmental Justice section is very good. One critical aspect of the recent power outages has become more apparent: many people do not have the resources to respond to prolonged power outages. The possible nexus of a prolonged power outage and a long period of health threatening smoke can create a new and widespread crisis for even healthy people with respect to:

- **Food preservation and safety**
- **Food and medical access**
- **Excessive heat**
- **Respiratory health**

It seems provisions for dealing with these scenarios need more attention.

In 2019 Nevada County approved an Energy Action Plan. We suggest that strategies recommended in the EAP be strengthened and incorporated into the Safety Element:

Strategy 1.2: Improve compliance with current California Building Energy Efficiency Standards (Title 24, Part 6) by providing informational materials when available.

Strategy 1.2 should be added to this Safety Element and changed to require compliance with the 2019 building codes.

Strategy 2.1: Prepare for the inclusion of renewable energy systems in new construction and large retrofit projects in order to meet California Zero Net Energy Goals by providing informational material when available.

Strategy 2.1 should be added to this Safety Element and modified to require enforcement and monitoring of the requirements of the 2019 Building Codes in addition to providing informational materials.

A growing number of municipalities are turning to building codes and other local requirements to reduce greenhouse gas emissions, and observers say the trend is likely

to accelerate. A quarter of California's greenhouse gas emissions come from buildings, according to NRDC.

While California has its own set of clean-energy regulations that developers must meet, cities can go a step further by enacting reach codes-basically rules that "reach" beyond statewide sustainability thresholds by making zero-emission electric building the standard.

We ask that Nevada County consider a new "reach" code ordinance that includes the following:

- 1. Prohibiting natural gas infrastructure in new detached accessory dwelling units, single-family, and low-rise multi-family buildings starting January 1, 2020.**
- 2. Require all new multi-family buildings to include 70 percent electric vehicle capable spaces, and additionally at least 20 percent electric vehicle ready spaces**
- 3. Research funding, financing, and partnership opportunities that would offset the costs for:**
 - a) Installing solar and battery storage in new affordable housing construction**
 - b) Installing electric vehicle infrastructure in new affordable housing construction, like the California Electric Vehicle Infrastructure Project**
 - c) Purchasing electric appliances, such as induction stovetops, heat pump water heaters, and heat pump space heaters**
- 4. Consider options for potential fee and tax reductions for new all-electric multi-family and commercial building construction.**
- 5. Consider a policy prohibiting natural gas infrastructure in all new municipal construction, with exceptions allowed for emergency equipment or micro-grids providing energy resiliency in anticipation of extended blackouts and de-energization of the grid.**
- 5. Explore the opportunity to reduce parking requirements in exchange for electric vehicle supply equipment being included in projects.**
- 6. Consider a policy prohibiting natural gas infrastructure in all new municipal construction, with exceptions allowed for emergency equipment or micro-grids providing energy resiliency in anticipation of extended blackouts and de-energization of the grid.**

Conclusion

The cities, counties and states of the United States face an existential threat from unmitigated climate change. The 2019 Safety Element of the General Plan and the Local Hazard Mitigation plan are an opportunity to protect its citizens from this threat.

Thank you for considering our comments.

Donald L Rivenes

Donald L Rivenes, Chair
Nevada County Climate Action Now
108 Bridger Ct Grass Valley, CA 95945
rivenes@sbcglobal.net

Ralph Silberstein, President
Community Environmental Advocates Foundation



**SHINGLE SPRINGS BAND
OF MIWOK INDIANS**

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shinglespringsrancheria.com



CULTURAL RESOURCES

October 17, 2019

Nevada County Planning Department
Sadie Caldas
950 Maidu Avenue, Suite 170
Nevada City, CA 95959

RE: 2019 Safety Element Update

Dear Sadie Caldas,

Thank you for your letter dated October 4, 2019 in regard to the above mentioned project. Based on the information provided, the Shingle Springs Band Of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses. This will foster a greater communication between the Tribe and your agency.

SSR would also like to request any and all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports. If during the progress of the project new information or human remains are found, we would like to be able to go over our process with you to protect such important and sacred artifacts (especially near rivers and streams).

If such finds are made, please contact Kara Perry, Site Protection Manager, at (530) 488-4049 or kperry@ssband.org.

Thank you for providing us with this notice and opportunity to comment.

Sincerely,

Daniel Fonseca
Cultural Resource Director
Tribal Historic Preservation Officer (THPO)
Most Likely Descendant (MLD)



MIWOK United Auburn Indian Community
 MAIDU of the Auburn Rancheria

Gene Whitehouse
 Chairman

John L. Williams
 Vice Chairman

Calvin Moman
 Secretary

Jason Camp
 Treasurer

Gabe Cayton
 Council Member

October 23, 2019

Sadie Caldas
 County of Nevada
 950 Maidu Ave
 Nevada City, CA 95959



Subject: Public Draft Review of the Nevada County 2019 Safety Element Update

Dear Sadie Caldas,

Thank you for providing a draft of The Nevada County 2019 Safety Element Update. We have reviewed this document and believe that additional information is needed to address the effects of hazardous events on cultural resources of importance to the United Auburn Indian Community (UAIC). In 2015, the Native American Heritage Commission (NAHC) published a document titled: *Protecting California Native American Sites During Drought, Wild Land Fire, and Flood Emergencies. A Guide to Relevant Laws and Cultural Resources Management Practices*. This document provides useful information on how hazardous events impact Native American sacred places and sites of religious or ceremonial importance and how to protect these sites if such an event occurs.

Wild fires and floods can severely threaten, damage, or destroy Native American sacred places and sites of religious or ceremonial importance, as well as expose previously hidden sites, making them vulnerable to vandalism. The document referenced above provides agencies the tools needed to collaborate with California tribes in the protection of their fragile cultural resources in the event of flooding or wild land fire. We recommend incorporating this information into Nevada County's Safety Element Update.

We look forward to coordinating with the incorporation of the effects of hazards on cultural resources. Please continue to send us copies of the project's environmental documents. Thank you again for taking these matters into consideration, and for involving the UAIC in the planning process. Please contact Anna M. Starkey, Cultural Regulatory Specialist, at (916) 251-1565 or email at astarkey@auburnrancheria.com if you have any questions.

Sincerely,

Gene Whitehouse,
 Chairman

CC: Matthew Moore, UAIC Tribal Historic Preservation Officer