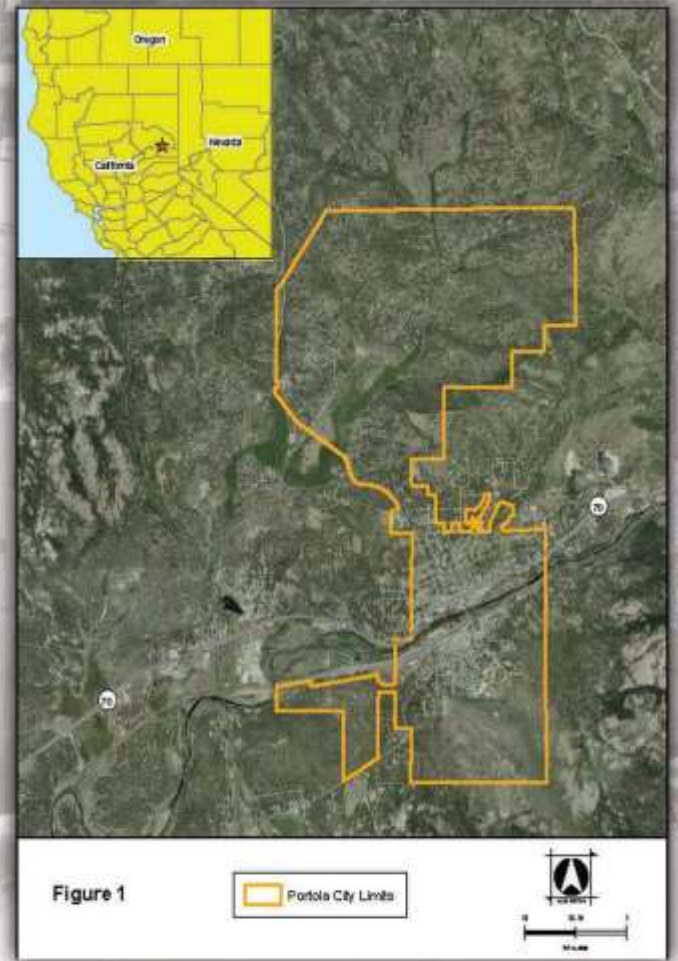




City of Portola 2019 Local Hazard Mitigation Plan Update

Rev. September 2020





City of Portola Local Hazard Mitigation Plan Update

June 2019
Rev. September 2020

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2019 City of Portola Local Hazard Mitigation Plan Update

What's New?

44 CFR Section 201.6(d)(3): a local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funding.

The 2013 City of Portola Local Hazard Mitigation Plan contained a detailed description of the planning process, a risk assessment of identified hazards for the City of Portola Planning Area, and an overall mitigation strategy for reducing the risk and vulnerability from these hazards.

Since approval of the 2013 LHMP by FEMA, much progress has been made by the City of Portola implementing mitigation strategies. As part of this 2019 LHMP Update, a thorough review and update of the 2013 plan was conducted to ensure that this update reflects current community conditions and priorities in order to realign the overall mitigation strategy for the next five-year planning period. This Update includes the following information:

- **What's New?** This is an overview of the approach to updating the plan and identifies new information included in this plan update to reflect current community conditions. This includes a summary of hazard and risk assessment as it relates Portola as well as information on current and future development trends affecting the community.
- **Summary of Significant Changes to Current Conditions and Hazard Mitigation Program Priorities:** This provides a summary of significant changes in current conditions and any resulting modifications to the community's mitigation program priorities.
- **2013 Mitigation Strategy Status and Successes:** This section provides a description of the status of mitigation actions from the 2013 plan and also indicates whether a project is no longer relevant or is recommended for inclusion in the updated 2019 mitigation strategy.
- **Climate Change Vulnerability Assessment:** The state has taken action to prepare for the unavoidable impacts of climate change. Among the initiatives being implemented in is Senate Bill (SB) 379, which requires cities and counties to address applicable climate adaptation and resiliency strategies. Accordingly, the vulnerability assessment for climate change within Portola will discuss the risks that climate change poses, as well as the impacts to existing vulnerabilities.

WHAT'S NEW IN THE 2019 LHMP UPDATE

This LHMP Update involved a comprehensive review and update of each section of the 2013 LHMP and includes an assessment of the mitigation strategies outlined in the initial plan. The information and data still valid from the 2013 plan was carried forward as applicable into this LHMP Update.

To update the LHMP, the hazards were reviewed to:

- Consider changes in vulnerability due to action implementation;

- Document areas where mitigation actions were either successful not effective;
- Document any new hazards that may arise or were previously overlooked;
- Incorporate new data or studies on hazards and risks;
- Incorporate new capabilities or changes in capabilities;
- Incorporate new action recommendations or changes in action prioritization.

These requirements and others as detailed throughout this plan were addressed during this update process.

The following issues were reviewed by the City of Portola as part of its comprehensive review and update:

- Reviewed each hazard for updated data and changes in land use
- **Climate Change:** Climate Change has been addressed as a stand-alone hazard through a Climate Change Vulnerability Assessment to assist the City in considering climate change issues when identifying future mitigation actions.
- As required by current FEMA planning guidance, an analysis of the City’s ongoing and continued compliance with the National Flood Insurance Program (NFIP).
- Summary of Significant Changes to Current Conditions, Vulnerability, and Hazard Mitigation Priorities

SIGNIFICANT ACCOMPLISHMENTS

The City of Portola has implemented many of the “Hazard Mitigation Implementation Strategies” established in the 2013 LHMP. The following significant accomplishments have been achieved since the LHMP was adopted:

- Adopted Community Wildfire Protection Plan
- Established and Maintained Firewise Community Status
- Significant effort toward brush removal- Riverwalk Park, Joy Way Park
- Significant effort towards tree thinning- Willow Springs Property, Golden Springs, Portola 192, approval from Woodbridge owners to clear property.
- Established a Weed Abatement Program
- Established a Code Enforcement Program
- Updated the Safety Element of the General Plan
- Eastern Plumas Rural Fire Protection District has participated in an annual open house to support educational efforts

SUMMARY OF HAZARDS

This section provides a summary by hazard of significant changes in current conditions, vulnerability, and any resulting modifications to the community’s mitigation program priorities since the 2013 LHMP.

Table 1 reviews the 2013 LHMP Hazards, as identified in the 2013 LHMP, noting any changes in conditions and any change in vulnerability.

Table 1: Review of LHMP Hazards

2013 LHMP Hazards <i>Vulnerability Risk</i>	Changes in Conditions	Change in Vulnerability <i>(Decrease, No Change, Increase)</i>
<p>Dam Failure <i>Vulnerability: Unlikely Risk: Low</i></p>	<p>The Grizzly Valley Dam continues to be evaluated and sufficiently maintained by the California Department of Water Resources’ Division of Safety of Dams, so potential hazards associated with a dam break or break would be considered unlikely for naturally occurring events. The DWR condition assessment rating is “Satisfactory”.</p> <p>Although the vulnerability is unlikely and the risk is low, this hazard has continued to be profiled in this update, to ensure that the City continues to coordinate with the California Department of Water Resources, Division of Safety of Dams.</p> <p>Climate change is not expected to impact dam failure conditions.</p>	<p>No change</p>
<p>Debris Flow (Post Fire) <i>Vulnerability & Risk: Must be assessed after occurrence of event</i></p>	<p>Post fire debris flows present a unique hazard in that the conditions that are necessary for the hazard to develop have not yet impacted the community or its immediate vicinity. Once wildfires burn and scar the topography flash floods and debris flows become critical. Deforestation and destabilization of the forest floor allows even small amounts of precipitation to lead to flash floods and debris flows.</p> <p>There is no change to this hazard because the risk and severity must be assessed after the occurrence of the event (wildfire).</p>	<p>No change</p>

2013 LHMP Hazards <i>Vulnerability Risk</i>	Changes in Conditions	Change in Vulnerability <i>(Decrease, No Change, Increase)</i>
<p>Earthquake <i>Vulnerability: Very Likely Risk: Moderate</i></p> <ul style="list-style-type: none"> • Surface Rupture <i>Vulnerability: Unlikely Risk: Moderate</i> • Strong Ground Motion <i>Vulnerability: Very Likely Risk: Moderate</i> • Liquefaction <i>Vulnerability: Likely Risk: Moderate</i> • Lateral Spreads <i>Vulnerability: Likely Risk: Moderate</i> 	<p>The primary concerns are strong ground motion and strong ground motion combined with a potential for liquefaction and lateral spreading adjacent to the Middle Fork of the Feather River channel, which could specifically impact older structures.</p> <p>The Gulling Street Bridge (1954) should still be assumed to present a meaningful risk during a significant seismic event unless and until liquefiable, lateral spreading and liquefaction has been evaluated and the threat dismissed.</p> <p>Disruption to underground utilities may occur due to seismic activity, primarily because the City’s system is old.</p> <p>Climate change is not anticipated to impact earthquake conditions.</p>	No change
<p>Extreme Heat <i>Vulnerability: Unlikely Risk: Low</i></p>	<p>Portola’s mountainous environment with a nearby river, ensure that Extreme Heat as defined by FEMA is a low probability.</p> <p>Climate change may impact temperature but is not likely to change the hazard severity level.</p>	No change
<p>Flood <i>Vulnerability: Very Likely Risk: High</i></p>	<p>The physical setting of Portola remains the same-straddling the Middle Fork of the Feather River and being confined in a river canyon, which puts the City at significant risk for flood damage, especially in low lying areas along the river.</p> <p>The City continues to participate in the National Flood Insurance Program.</p> <p>Climate change may increase the likelihood and alter the pattern of flooding. It is not likely to change the hazard severity level.</p>	No change

2013 LHMP Hazards Vulnerability Risk	Changes in Conditions	Change in Vulnerability (Decrease, No Change, Increase)
Severe Weather <ul style="list-style-type: none"> • Hail <i>Vulnerability: Likely</i> <i>Risk: Moderate</i> • Lightning <i>Vulnerability: Very Likely</i> <i>Risk: Low</i> • Microbursts <i>Vulnerability: Unlikely</i> <i>Risk: Low</i> • Thunderstorms <i>Vulnerability: Very Likely</i> <i>Risk: Moderate</i> • Tornadoes <i>Vulnerability: Unlikely</i> <i>Risk: Low</i> • Windstorms <i>Vulnerability: Very Likely</i> <i>Risk: Moderate</i> • Monsoonal Flows <i>Vulnerability: Likely</i> <i>Risk: Low</i> 	<p>Thunderstorms with hail will continue to occur in the Portola area (predominantly in the spring and summer months), the intensity and magnitude will infrequently approach or exceed the severe thunderstorm/high wind designation threshold.</p> <p>With this update, subhazards of Hail, Thunderstorms, and Windstorms will need to be identified and addressed separately.</p> <p>Lightning strikes present a relatively high incidence of occurrence and significant risk factor for the potential to ignite a wildfire (impacts reviewed in Wildfire section).</p> <p>Climate change may impact the frequency of storm events and alter precipitation patterns. It is not likely to change the hazard severity level.</p>	No change
Wildfire <i>Vulnerability: Very Likely</i> <i>Risk: High</i>	<p>The worst-case scenario wildland fire in the WUI would be wind-driven crown fire late in the fire season when fuel moisture is at its lowest. These conditions in combination with hot and dry weather, steep slopes, or high winds can create a situation in which the worst-case fire severity scenario can occur. There is significant risk to the City, especially for development near the perimeter.</p> <p>Climate change impact may increase the likelihood and severity of wildfires. It is not likely to change the hazard severity level.</p>	No change
Winter Storm and Extreme Cold <i>Vulnerability: Very Likely</i> <i>Risk: Low</i>	<p>Because of Portola’s location and elevation, winter storms, wintertime freezing temperatures, and windows of extreme cold are to be anticipated. Heat, power, and communications can be knocked out by winter events and access will be impeded. However, there is generally ample time for preparation for impacts.</p> <p>Climate change may impact temperature but is not likely to change the hazard severity level.</p>	No change

2013 LHMP Hazards Vulnerability Risk	Changes in Conditions	Change in Vulnerability (Decrease, No Change, Increase)
Other	<p>The following hazards were reviewed but were not considered to be a hazard and were not profiled in the 2013 LHMP:</p> <ul style="list-style-type: none"> • Avalanche • Coastal Erosion • Coastal Storm • Drought • Expansive Soils • Hurricane • Land Subsidence • Landslide • Tsunami • Volcano 	No change

2013 LHMP MITIGATION IMPLEMENTATION STATUS

The City of Portola has been very successful in implementing actions identified in the 2013 LHMP Mitigation Strategy, thus, working diligently towards meeting their 2013 goals of:

1. Increase public awareness of potential natural hazards and self-reliant mitigation measures.
2. Reduce risk of loss of life/injuries due to natural hazards.
3. Reduce risk of loss to property, both public and private
4. Maintain and increase funding for natural disaster preparedness, planning, and response.

Where possible, the City of Portola used existing activities, plans, and programs to implement the 2013 mitigation strategy. Examples include implementation of wildfire mitigation actions through Plumas County Fire Safe Council and the City’s Community Wildfire Protection Plan (CWPPs), implementation of flood mitigation actions, and implementation of City projects.

The 2013 LHMP contained +/-119 separate mitigation actions. As detailed below, certain actions have been completed, some are ongoing, some have not been started, and some were determined not to be viable projects due to a variety of reasons, including funding availability, resulting in a lack of priority.

Table 2 provides a status summary of the mitigation action projects from the 2013 LHMP. Following the mitigation action is a description of the progress and status of each project.

Table 2: 2013 Mitigation Implementation Status

STRATEGY • Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
Educate the public about potential hazards and high hazard areas within the community in the event of a natural disaster. <i>Response: The City has an Emergency Evacuation Plan, and is currently working to update it through community meetings</i>		X		
• Update City website to contain information on natural hazards facing the City (link to websites Cal EMA, FEMA, ready.gov). <i>Response: The City will be working to add links to the above agencies on their website</i>			X	
• Set up a text and email notification system that residents can sign up for on the website. <i>Response: The City has a link to Code Red, a County wide Emergency Evacuation system for cell phones</i>		X		
• Target specific residents in high potential hazard areas with education and community workshops. <i>Response: This should be incorporated as the Emergency Evacuation Plan is updated.</i>			X	
• Provide fliers and handouts to local school, churches, and other civic organizations about hazards facing the City. <i>Response: This should be part of the process for updating the EOP</i>			X	
• Promote education and upcoming meetings with City road banners. <i>Response: this would need to be an approved budgeted item for the City of Portola.</i>			X	
Encourage property owners to actively participate in education programs, access resources, and develop personal mitigation measures as they relate to natural hazards specific to the community and personal property. <i>Response: The City has recently become a FireWise Community and the FireWise Committee holds public meetings.</i>		X		
• Provide booths at local events with information regarding natural hazards and ways the residents can participate in mitigation. <i>Response: This would need to be reviewed by the City Council and made to be a priority for staff or volunteers.</i>			X	
• Provide incentives at local meetings to encourage residents to attend (raffle-dinner or other prizes). <i>Response: this would need to be reviewed by Council for provision of this type by City government.</i>			X	
• Target specific residents in high potential hazard areas with education and community workshops. <i>Response: The City Council will begin holding public workshops as part of the Emergency Operations Plan update</i>		X		

STRATEGY • Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> • Provide flyers and handouts to local schools, churches and other civic organizations about hazards facing the City and workshops. <i>Response: Needs Council direction</i> 			X	
<ul style="list-style-type: none"> • Keep the City Website current with upcoming meetings and highlight ways the residence can get involved. <i>Response: The City strives to update its website with new information and meetings</i> 		X		
<ul style="list-style-type: none"> • In lieu of relying only on mailings and flyers, phone invitations will be presented to service groups and the Chamber of Commerce. <i>Response: This would need Council direction as a staff priority.</i> 			X	
<ul style="list-style-type: none"> • Encourage homeowners to have a 72 hour emergency preparedness kits. <i>Response: This would be a great public outreach program for the City Code Compliance Officer.</i> 			X	
<p>Provide online access to awareness/protection materials relevant to City of Portola residents. <i>Response: As the City gets online resources it will continue to post them.</i></p>		X		
<ul style="list-style-type: none"> • Update City website with upcoming meetings, highlight ways the residents can get involved, links to information on local Hazards. <i>Response: The City posts these items on their website.</i> 		X		
<ul style="list-style-type: none"> • Provide link on City of Portola web page when LHMP is approved. <i>Response: this document will be posted to the website.</i> 		X		
<p>Educate the public on the Citywide Emergency Evacuation Plan and Emergency Action Plan. <i>Response: This document will be posted and made accessible to the public.</i></p>			X	
<ul style="list-style-type: none"> • Review current evacuation plan; revise or update as needed. Provide easy links in City Website to evacuation plan. <i>Response: This document will be posted and made accessible to the public.</i> 			X	
<ul style="list-style-type: none"> • Identify City emergency evacuation sites with signs. <i>Response: This would need Council direction as a staff priority and to be budgeted.</i> 			X	
<ul style="list-style-type: none"> • Consider mailing final document to civic groups, church groups, & businesses for public postings. <i>Response: The Council should decide the level of outreach.</i> 			X	
<ul style="list-style-type: none"> • Consider incorporating age appropriate lessons to school curriculum. <i>Response: This would need to be made a staff priority by the Council and coordinated with the local school district.</i> 			X	

STRATEGY <ul style="list-style-type: none"> Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> Offer to make presentations to civic groups and churches on the emergency evacuation plan and to garner support. <i>Response: This would need to be made a staff priority by the Council or coordinated through volunteer efforts by the Council.</i> 			X	
Educate the public about living with fire and fire safe requirements in the General Plan Safety Element. <i>Response: The City will coordinate efforts through public meetings.</i>		X		
<ul style="list-style-type: none"> Focus efforts on residents near forested areas or in identified high fire hazard areas. <i>Response: The City should coordinate efforts with all residents as the majority of the City area is forested.</i> 			X	
<ul style="list-style-type: none"> Educate homeowners on current city, state codes and regulations relating to fire protection and local burn ordinances. <i>Response: This can be coordinated with local meetings and outreach.</i> 			X	
<ul style="list-style-type: none"> Add open space and defensible space requirements to Safety Plan & web page. <i>Response: This will occur as the City defines these requirements.</i> 			X	
<ul style="list-style-type: none"> Consider incorporating age appropriate lessons to school curriculum. <i>Response: DELETE THIS WAS MENTIONED EARLIER</i> 				No
Create a public notification plan to provide a means to educate, inform, and alert the community regarding changes in hazard identification, occurrence, and mitigation processes and options. <i>Response: This should remain part of the County wide code red notification system. The City should coordinate with the Plumas County.</i>	X	X		
<ul style="list-style-type: none"> Establish a list of contacts for Schools, Churches, Community Organization, and other civic groups. <i>Response: This would need to be accomplished to implement other action items</i> 			X	
<ul style="list-style-type: none"> Add a notification link to Safety Plan web page for automatic emails when updates occur. <i>Response: The City does not currently have a program to do this, this would need to be budgeted for</i> 			X	
<ul style="list-style-type: none"> Consider sending update notices to civic groups, church groups, & businesses when updates for major milestones are completed. <i>Response: This would need to be made a staff priority by the Council</i> 			X	
Provide hazard warning and forecasting information to City residents & establish a rapid communication system for the community. <i>Response: The City does not currently have a program to do this, this would need to be budgeted for.</i>				No
<ul style="list-style-type: none"> Reverse 911 through Plumas County. <i>Response: This is done through the Plumas County Sheriff Department</i> 	X			

STRATEGY <ul style="list-style-type: none"> Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> Low Watt Transmitters, for emergency broadcast. <i>Response: This would need to be made a budget priority by the Council</i> 			X	
<ul style="list-style-type: none"> Educate public on location/website to go to get information when the city siren sounds. <i>Response: This could be coordinated with KJRX from Susanville</i> 			X	
<ul style="list-style-type: none"> Educate public on state wide emergency alert system. <i>Response: This could be coordinated through outreach and the City website</i> 			X	
<ul style="list-style-type: none"> Reverse 911 through Plumas County. <i>Response: DELETE</i> 				No
<ul style="list-style-type: none"> Low Watt Transmitters, for emergency broadcast. <i>Response: DELETE</i> 				No
<ul style="list-style-type: none"> Educate public on location/website to go to get information when the city siren sounds. <i>Response: DELETE</i> 				No
<ul style="list-style-type: none"> Educate public on state wide emergency alert system. <i>Response: DELETE</i> 				No
<p>Actively participate in the development of Plumas County's Safety Element to ascertain Portola's concerns are addressed. <i>Response: The City should assign a staff member to participate with the County</i></p>			X	
<ul style="list-style-type: none"> Assign appropriate staff to attend meetings and review documents. <i>Response: City management should consider this action item</i> 		X		
<ul style="list-style-type: none"> Seek citizen involvement to supplement & support from either the County or from the City of Portola. <i>Response: Councilmembers can solicit volunteers</i> 		X		
<p>Coordinate with the California Department of Water Resources (Dam Safety Division) for mitigation measures within the community as a result of a dam failure inundation. <i>Response: Review DWR information</i></p>		X		
<ul style="list-style-type: none"> Contact DWR and establish a contact and begin information sharing and communication regarding the dam. <i>Response: Not complete</i> 		X	X	
<ul style="list-style-type: none"> Establish a method to implement mitigation measures. Work with DWR to coordinate and fund mitigation strategies. <i>Response: The City currently works with DWR</i> 		X		
<ul style="list-style-type: none"> Review current mitigation strategies, modify to include dam failure safety. <i>Response: None addressed at DWR; nothing to include.</i> 	X			No
<p>All Development within floodway shall meet FEMA Standards. <i>Response: This is currently required.</i></p>		X		

STRATEGY • Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
• Establish a monitoring protocol to identify construction or non-permitted activity in floodway. <i>Response: This could be a staff coordinated priority between the building department and the City Code Compliance Officer.</i>			X	
• Train/update staff on current Flood Plain Management Ordinance Codes and requirements. <i>Response: This currently happens.</i>		X		
• Review Current FEMA Floodway Standards and Update Flood Plain Management Ordinance as needed. <i>Response: This will occur as necessary.</i>		X		
Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC). <i>Response: This currently happens.</i>		X		
Prioritize and evaluate essential facilities for seismic conditions and potential retrofit. <i>Response: This would need to be made project priority by the City Council.</i>			X	
• Prioritize City essential facilities. <i>Response: They are prioritized.</i>		X		
• Perform seismic review of essential facilities and identify potential retrofit needs. <i>Response: This would need to be made a project priority by the City Council.</i>			X	
• Secure funding to support staff in development of grant requests for analysis & prioritization study. <i>Response: This would need to be made a project priority by the City Council.</i>			X	
• Perform Benefit: Cost analyses as part of the prioritization and selection protocol. <i>Response: This would need to be made project priority by the City Council.</i>			X	
Monitor and continue to regulate grading and slope development standards to reduce potential landslide and slope movement impacts. <i>Response: This currently occurs for new construction</i>		X		
• Establish review protocols for new development to ensure slope development standards are met. <i>Response: The building department can review if this is a goal.</i>			X	
• Train/update staff on current slope development standards. <i>Response: Building department staff should be trained</i>		X		
Enforce compliance with open space and fuel break requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section. <i>Response: This could be a program implemented by the Code Compliance Officer.</i>			X	

STRATEGY <ul style="list-style-type: none"> Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> Review existing ordinances. Train/educate staff on current code and enforcement measures. <i>Response: Necessary staff are educated.</i> 		X		
<ul style="list-style-type: none"> Draft and adopt more stringent policies, including fee or assessment for properties that do not comply. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> Search for funding for property owners that do not have the means to keep in compliance with ordinance. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> Encourage property owners to seek funding for Fuel Break/Fire Safety improvements. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i> 			X	
Review and update mutual aid agreements with Forest Service, CAL Fire, and other surrounding fire departments and volunteer agencies. <i>Response: This is done as needed by staff.</i>		X		
<ul style="list-style-type: none"> Review possibilities for multi-jurisdictional grants and funding. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i> 			X	
Adopt California PRC 4290 and PRC 4291 code <i>Response: This has not yet been completed</i>			X	
<ul style="list-style-type: none"> Review Title 14 and the defensible space requirements set forth in PRC 4290 and 4291. <i>Response: This was completed with the update of the Safety Element in 2019 and will be an ongoing review.</i> 	X	X		
<ul style="list-style-type: none"> Hold public meetings regarding the fire codes in PRC 4290 and 4291 and highlight the effects, positive and negative to the City. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i> 			X	
<ul style="list-style-type: none"> Vacant Lot Standards for the city should reviewed. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council. The City does have an Ordinance in place for weed abatement.</i> 		X	X	
Adopt and complete steps to become a NFPA Fire-Adapted Community or a 'Fire Wise Community.' <i>Response: The City is currently a FireWise community.</i>	X			
<ul style="list-style-type: none"> Review the National Fire Protection Agencies policies in becoming a Fire wise, Fire Adapted Community. <i>Response: Done</i> 	X			

STRATEGY <ul style="list-style-type: none"> Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> Participate and adopt Portola Community Wildfire Protection Plan. <i>Response: Done</i>	X			
<ul style="list-style-type: none"> Seek education opportunities as outlined in Goal 1, increasing public awareness of potential hazards <i>Response: This is being coordinated through the FireWise Council.</i>		X		
<ul style="list-style-type: none"> Look into opportunities for forest management assistance. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<ul style="list-style-type: none"> Encourage and facilitate property owners to share equipment necessary to protect/improve property. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<ul style="list-style-type: none"> Create a neighborhood level fuel reduction plan. Identify tactical areas & areas of vulnerability. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<p>Seek opportunities to reduce high fuel hazards and create fuel breaks.</p> <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<ul style="list-style-type: none"> Seek funding for fuel reduction projects. <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<p>Evaluate potential impacts of identified hazards on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities for mitigation based on risk level and criticality to community and/or criticality to emergency evacuation routes.</p> <i>Response: This would need to be made a policy/ priority by the City Council and could be coordinated with the FireWise Council.</i>			X	
<ul style="list-style-type: none"> Evaluate need for Gulling Street Bridge (Scour Protection) <i>Response: This is monitored by the City Engineer</i>		X		
<ul style="list-style-type: none"> City lift station is within Floodplain, review potential impacts to water system in the event of a flood. <i>Response: This is monitored by the City Engineer.</i>		X		
<ul style="list-style-type: none"> Waste Water Treatment Plant near or within the floodplain. Identify flood impact to treatment and discharge. <i>Response: This is monitored by the City Engineer</i>		X		
<ul style="list-style-type: none"> Identify water and sewer lines which could be impacted by an earthquake. <i>Response: This is monitored by the City Engineer.</i>		X		

STRATEGY <ul style="list-style-type: none"> Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> Adopt utility mitigation protocol to replace old lines and services. <i>Response: This would need to be made a policy/ priority by the City Council</i> 			X	
<ul style="list-style-type: none"> Seek environmental funding/support for sanitary sewer line replacement if required. <i>Response: The City is currently working CAL State representatives on a Technical Assistance grant to seek funding.</i> 		X		
Continue to combine water quality, open space, and recreation projects within flood measures where feasible. <i>Response: The City has identified projects at City Park and West End Park that combine water quality, open space, and recreation projects.</i>	X	X		
Maintain natural stream courses and adjacent habitat, where feasible during flood control improvements. <i>Response: This would be done during flood control improvements.</i>		X		
Establish zoning and land use ordinances that limit development in flood prone areas. <i>Response: Complete</i>	X			
<ul style="list-style-type: none"> Review Ordinances currently in place and evaluate future development standards near or within flood prone areas. <i>Response: Complete and ongoing</i> 	X	X		
<ul style="list-style-type: none"> Review current allocations/approvals for development that impact flood prone areas. <i>Response: N/A</i> 				No
Ensure the impacts of flooding are adequately analyzed when considering areas for future urban development or significant improvements to existing facilities or structures. <i>Response: This would need to be made a policy/ priority by the City Council. Building and planning staff does an initial assessment when reviewing applications for new development.</i>		X		
<ul style="list-style-type: none"> Train/update staff on City development standards and requirements for improvements or new development in floodplains. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> Keep current on FEMA Mapping requirements <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
Ensure that flood mitigation measures are incorporated into repairs, new development, major alterations, and new redevelopment applications. <i>Response: This would need to be made a policy/ priority by the City Council</i>		X		
Enforce compliance with the City of Portola Master Drainage Plan and Floodplain Management Ordinance. <i>Response: This would need to be made a policy/ priority by the City Council.</i>		X		

STRATEGY • Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
<ul style="list-style-type: none"> • Train City staff who deal with permitting. <i>Response: This is currently done</i> 		X		
Pursue a regional approach to flood issues. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	
Educate and encourage homeowners residents to adopt seismic safety protocols as their time and resources allow. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	
<ul style="list-style-type: none"> • Educate residents about the benefit of securing hot water heaters and other items in the event of an earthquake. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> • Establish a strap water heater program. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> • Inform public about Disaster Assistance.gov a Federal disaster assistance program offering loans and additional support. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
<ul style="list-style-type: none"> • Educate/inform about preventive strategies and link the public to www.ready.gov/earthquakes for proactive strategies. <i>Response: This would need to be made a policy/ priority by the City Council.</i> 			X	
Secure a grant that would provide support staff to aid in the implementation and execution of the LHMP. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	
Apply for grants specific to identified action items, including scientific studies and evaluation of existing improvements. <i>Response: This would need to be made a policy/ priority by the City Council.</i>		X		
Cross train staff with Plumas County personnel and adopt uniform protocols where applicable. <i>Response: This would need to be made a policy/ priority by the City Council. However, the City strives for consistency with Plumas County.</i>		X		
Work toward securing multi-jurisdiction grants and funding for disaster planning and response. <i>Response: This would need to be made a policy/ priority by the City Council</i>			X	
<ul style="list-style-type: none"> • See appendix of LHMP for grant opportunities. <i>Response: Complete and reviewed as appropriate.</i> 		X		
Create a community network for emergency response alternatives including churches, and civic meeting halls. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	

STRATEGY • Implementation Ideas & Action Items <i>Progress</i>	Complete	Ongoing	Not Started	Include in Update?
Apply for grants that may help fund improvements beyond the City limits; e.g. fire safety and wildfire hazard mitigation, channel and water quality improvements to the Middle Fork of the Feather River, etc. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	
Review existing hazard response training protocol and update/upgrade as necessary. <i>Response: This would need to be made a policy/ priority by the City Council</i>			X	
Begin to search for grant/funding opportunities for upgrade of fire equipment & training opportunities. <i>Response: This would need to be made a policy/ priority by the City Council.</i>		X		
Utilize County, State, and other regulatory agency opportunities for cross and specialty training modules. <i>Response: This would need to be made a policy/ priority by the City Council.</i>			X	

DOCUMENT PREPARATION AND PUBLIC REVIEW

44 CFR Sections 201.6(b) and 201.6(c)(1): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

1. An opportunity for the public to comment on the plan during the drafting stage and prior to the plan approval;
2. An opportunity for neighboring communities, local and regional agencies involved in the hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process; and
3. Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

The City conducted a public workshop in February 2019 regarding a variety of community hazards. Planning staff met, provided information on the LHMP Update process, and answered any questions. The workshop was advertised in the *Portola Reporter*, on the City’s Facebook page, and information was made available on the City’s website. In addition to the workshop, information the LHMP Update was presented at the May 22, 2019 and June 12, 2019 City Council meetings.

Following the public workshop, the City began to review information for the 2019 LHMP Update and re-established the Hazard Mitigation Team. The Hazard Mitigation Team was re-established to provide a review body for this Update. The HMP met to review the LHMP Hazards and to review and summaries the Mitigation Implementation Status.

A completed copy of the 2019 LHMP Update will be kept at the City of Portola and will be available for public review and comment.

The City reviewed certain plans and programs to include in this update for planning consistency among documents. Relevant information from reviewed plans, studies, reports, and technical information incorporated into the LHMP Update includes:

- **State Hazard Mitigation Plan-** The State Hazard Mitigation Plan was reviewed for recent updates on Statewide hazard events and hazard information for consistency.
- **City of Portola 2013 LHMP-** Reviewed so the Plan could be updated
- **General Plan Safety Element** (including incorporated documents)- Information from the recently-updated document was cross-referenced for inclusion as part of the overall profile. Additionally, any vulnerabilities identified were included as part of the vulnerability and risk assessment for wildfire, landslide, and flood.
- **Portola General Plan-** reviewed and included as part of the vulnerability assessment.
- **Plumas County Emergency Operations Plan-** The EOP was reviewed to gather hazard information as it related to the assessed natural hazards.

After receiving comments and direction from the City Council, the Hazard Mitigation Team met to discuss policies to include in the Update. Then, staff completed the draft LHMP update. The draft update was submitted for City Council review and then submitted to Cal OES and FEMA for review. Staff incorporated comments into the final LHMP Update for City Council consideration. The LHMP Update was approved by the Portola City Council on XX, Resolution No. XX and was sent to FEMA for approval.

February 22, 2019 Public Workshop
May 6 – June 7, 2019 Draft LHMP Update
May 22, 2019 City Council meeting to review the draft LHMP Update policies/ “What’s New”
May 29, 2019 Hazard Mitigation Team meeting
June 1-7, 2019 Environmental review, contact other agencies as appropriate
June 12, 2019 City Council meeting to approve the draft LHMP and direct staff to submit it to Cal OES
October 2019 Receive comments back from Cal OES and FEMA
June 2020 Revise draft per comments
September 2020 Revise draft per comments
XX City Council to consider adoption of LHMP Update
XX Receive FEMA approval letter



INTRODUCTION

The Disaster Mitigation Act of 2000 (DMA2K) was established to emphasize the need for long-term mitigation planning to help reduce public and personal exposure from natural and human-caused hazards. Through implementation of DMA2K, Federal Emergency Management Agency (FEMA) established the requirement for local governments and other jurisdictions to develop Local Hazard Mitigation Plans (LHMP) to identify new and highlight known natural hazards. The LHMP also helps the City of Portola (City) remain eligible for certain types of state and federal grants. Once hazards have been identified, mitigation strategies can be formulated for those hazards that could present an adverse impact to the City.

Hazard mitigation consists of deliberate action(s) initiated to reduce or eliminate long-term risk or exposure to property and life from identified hazards. Mitigation strategies may occur prior to, during, or after an event. However, the most effective mitigation strategies occur before a disaster strikes. The goals associated with the development of a local mitigation plan include:

- Helping jurisdictions conduct comprehensive reviews of their existing mitigation plans and update as necessary to meet the requirements of 44 Code of Federal Regulations (CFR) Part 201.
- Helping jurisdictions develop and adopt new mitigation strategies or revise existing plans as necessary to meet the requirements of 44 CFR Part 201.

The most successful mitigation plans develop comprehensive risk and capability assessments that facilitate the City's evaluation processes and in the development of hazard mitigation strategies. These successful mitigation plans also embrace a wide range of stakeholders who help identify and initiate those mitigation strategies that can be most effective and beneficial to the community. Once mitigation strategies have been identified, benefit cost analyses (BCA) can be performed to identify and prioritize those strategies that present the greatest benefit.

The City's LHMP identifies potential hazards and assesses resources to assist the City staff and officials, residents, and others interested in participating in the planning process, to meet the demands triggered by natural disasters and other events. The LHMP also provides a list of action items that serves to direct the City toward reducing risk and preventing loss. Strategies and action items address activities specific to hazards facing the City, specifically flooding, wildfire, and earthquake.

Cities cannot be protected against every possible hazard; however, many potential events and outcomes can be anticipated and reasonably predicted so the City can take the steps necessary to reduce the detrimental effects those hazards can pose. Re-evaluating and updating the LHMP perpetuates the process of examining and evaluating the risks various hazards pose to the City. This process also engages the City and the citizenry in the necessary dialogue to identify which risks present the greatest concerns and which avenues of mitigation are most important and effective to those citizens.



THE CITY

City Overview

The City of Portola is located along the Middle Fork of the Feather River in the southeast portion of Plumas County, California. Nearby towns include Beckwourth to the east and Graeagle to the west. Reno, Nevada is approximately 50 miles to the southeast and Sacramento, California is approximately 150 miles to the southwest. The City of Portola is the only incorporated city in Plumas County. The City limits are depicted in Figure 1.

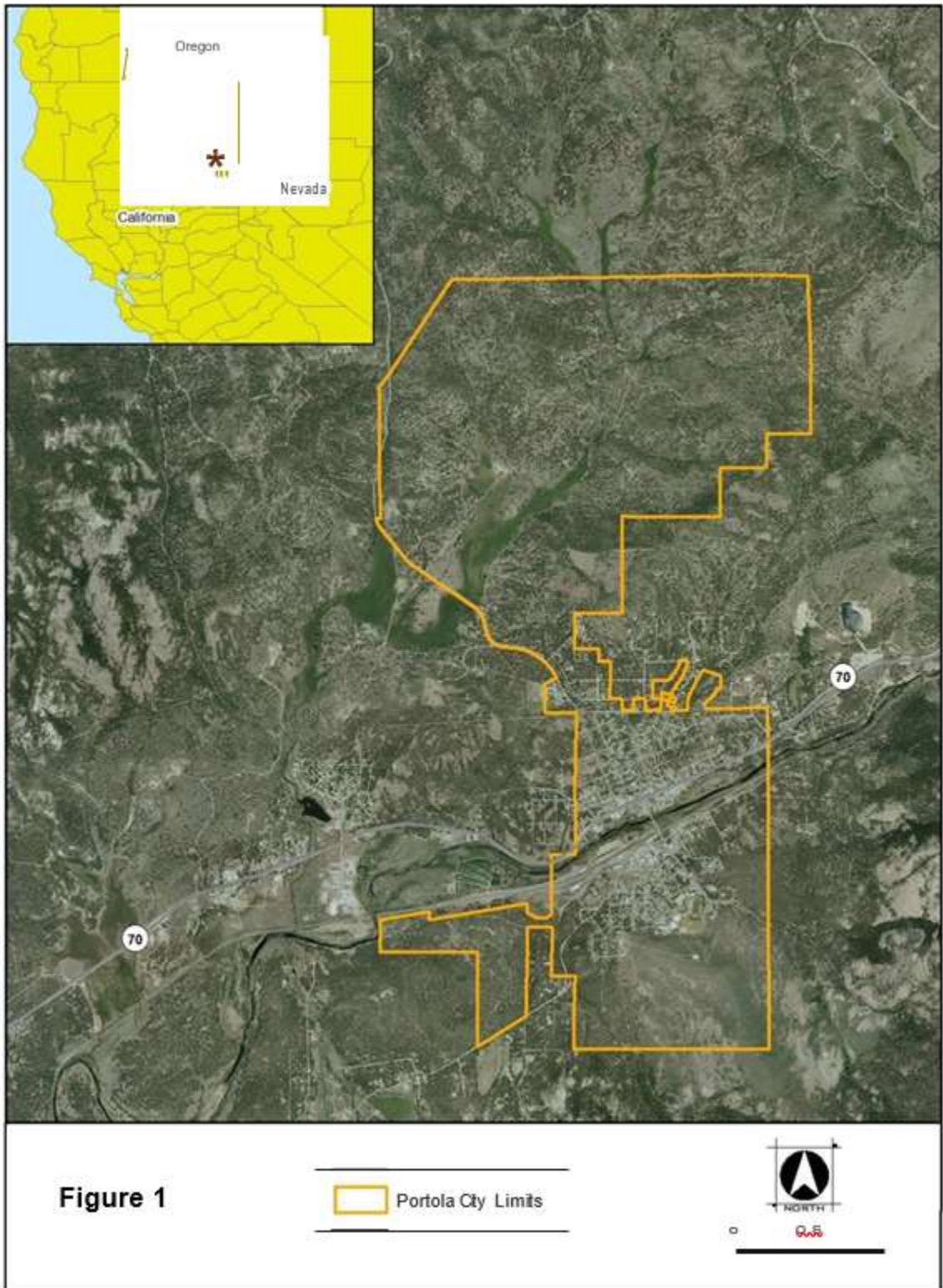
The 2010 census recorded 2,104 residents, representing 887 occupied households within the City. A total of 1,134 total housing units were reported by the Census, indicating a vacancy rate approaching 20 percent. At the time of the 2010 census, the population density was 389 people per square mile for the 5.4 square mile city limits; this population density is significantly higher than the 8 people per square mile for the entirety of Plumas County.



Image 1-City of Portola Downtown



Image 2-Middle Fork of the Feather River at West End Park



Infrastructure

The City of Portola straddles State Highway 70, which connects to US 395 on the east and State Highway 89 on the west. There are no other major roads entering or leaving Portola. The Gulling Street Bridge crosses the Feather River and the Western Pacific Railroad corridor and serves as the main connection route between north and south Portola. The Portola middle and high schools and the community hospital are located in the southern portion of Portola. Most residential and local streets which serve the community and are maintained by the City.

The Union Pacific Railroad (UPRR) corridor follows the course of the Feather River through the City. UPRR currently provides transport services for the automotive, chemical, industrial, energy, and agricultural businesses.

The Nervino Airport is the nearest airport and is located approximately 5 ½ miles west of Portola. This airport services mainly single engine airplanes and in 2010 averaged 33 aircraft operations per day.

The City's domestic water supply is provided through the City's Lake Davis Water Treatment Plant. Back-up service is supplied by Willow Creek Springs, owned and operated by the City. Two wells, located at the City's public works yard and at the corner of Gulling and Commercial Streets, provide the City's water source. The City's water system serves approximately 1,200 customers within the City and adjacent county, conveying approximately 12 million gallons of water per month. The water system infrastructure includes 24.53 miles of pipeline, two ground water wells, and four springs.

The City provides sewer collection and treatment just west of the City and south of the Feather River. The sewer system serves approximately 1,200 customers within in the City and adjacent County and treats 0.35 million gallons of wastewater on an average day. The sewer infrastructure consists of 15.8 miles of sewer pipeline and a wastewater collection and treatment facility.

Critical Facilities, Infrastructure, and Community Interests

A critical facility is defined as a facility in either the public or private sector that provides essential products and services to the general public, such as preserving the quality of life in the City and fulfilling important public safety, emergency response, and disaster recovery functions. Similar to critical facilities, critical infrastructure includes infrastructure that is essential to preserving the quality of life and safety in the City. Critical facilities and infrastructure identified and considered within the City are shown in Table 1. Critical facilities identified in this section may also be discussed with Infrastructure, Healthcare, Housing, and Schools and Education.

Table 1A – Critical Facilities, Support Facilities and Essential Infrastructure City Owned Facilities and Community Interests

Critical Facilities		
Eastern Plumas District Hospital²	Fire Station (South side Feather River)	Plumas County Sheriff’s Office (Portola)
	Fire Station (North side Feather River)	
Support Facilities & Essential Infrastructure		
State Highway 70	Lake Davis Water Treatment Facility	Gulling Street Bridge
WPRR Corridor	Waste Water Treatment Facility	Schools (Portola Junior/Senior High School³, Carmichael Elementary School⁴)
City Owned Facilities & Community Interests		
Portola Veteran’s Memorial Hall ⁵	Western Pacific Railroad Museum	William’s House
City Hall¹	Portola Branch Library	Grizzly Ranch Conference Center⁶
Note: Locations in Bold and Reference Number indicate City Office of Emergency Services’ (OES) approved evacuation centers.		

Healthcare

The City of Portola has one local hospital, Eastern Plumas Health Care. Nearby hospitals include the Loylton Medical Clinic, part of Eastern Plumas Health Care (approximately 25 miles), the Plumas District Hospital in Quincy (approximately 30 miles), Renown Regional Medical Center and St. Mary’s Regional Medical Center in Reno (Approximately 50 miles). According to the City’s Community Evacuation Route Map, hospital access for the northern portion of Portola would be limited to helicopter (from the north Sports Field Complex to the Portola High School Football Field) should the Gulling Street Bridge become compromised. To travel along the evacuation route along Highway 70 to the west, to the intersection with Highway 89, and back along A15 to Portola would encompass approximately 26 miles. This encompasses approximately the same distance as travelling to hospitals located in Quincy and Loylton.

Housing

The City has many old neighborhoods which pre-date the common use of automobiles and which over time have developed a distinctive character. One goal of the General Plan is to enhance the existing neighborhoods and restore or replace the existing housing stock” (City of Portola Community Design Element, Neighborhood Conservation and Development section).

Figure 2 – City of Portola – Essential Facilities Map



Schools and Education

The City of Portola supports 3 schools; an elementary school, junior/senior high school, and the Portola Opportunity School which is a public school serving grades 3-7. The elementary and junior/senior high schools have a combined enrollment of approximately 625 students.

Land Use

The City's Land Use Plan within the City's General Plan guides the development, maintenance, and improvement of land and properties. It allows the City to preserve those qualities that define the City, while developing new paths toward a sustainable future.

Portola actively works towards creating a community that has a balance of opportunities and events, while fostering economic, environmental, and social sustainability. The goals established by the City of Portola Land Use Plan are designed to continue and improve the City's role as the commercial and service center for eastern Plumas County. Table 2a illustrates the distribution of land uses throughout the City of Portola. The City Land Use map is presented below.

Figure 3 – Land Use Map
See Appendix 4

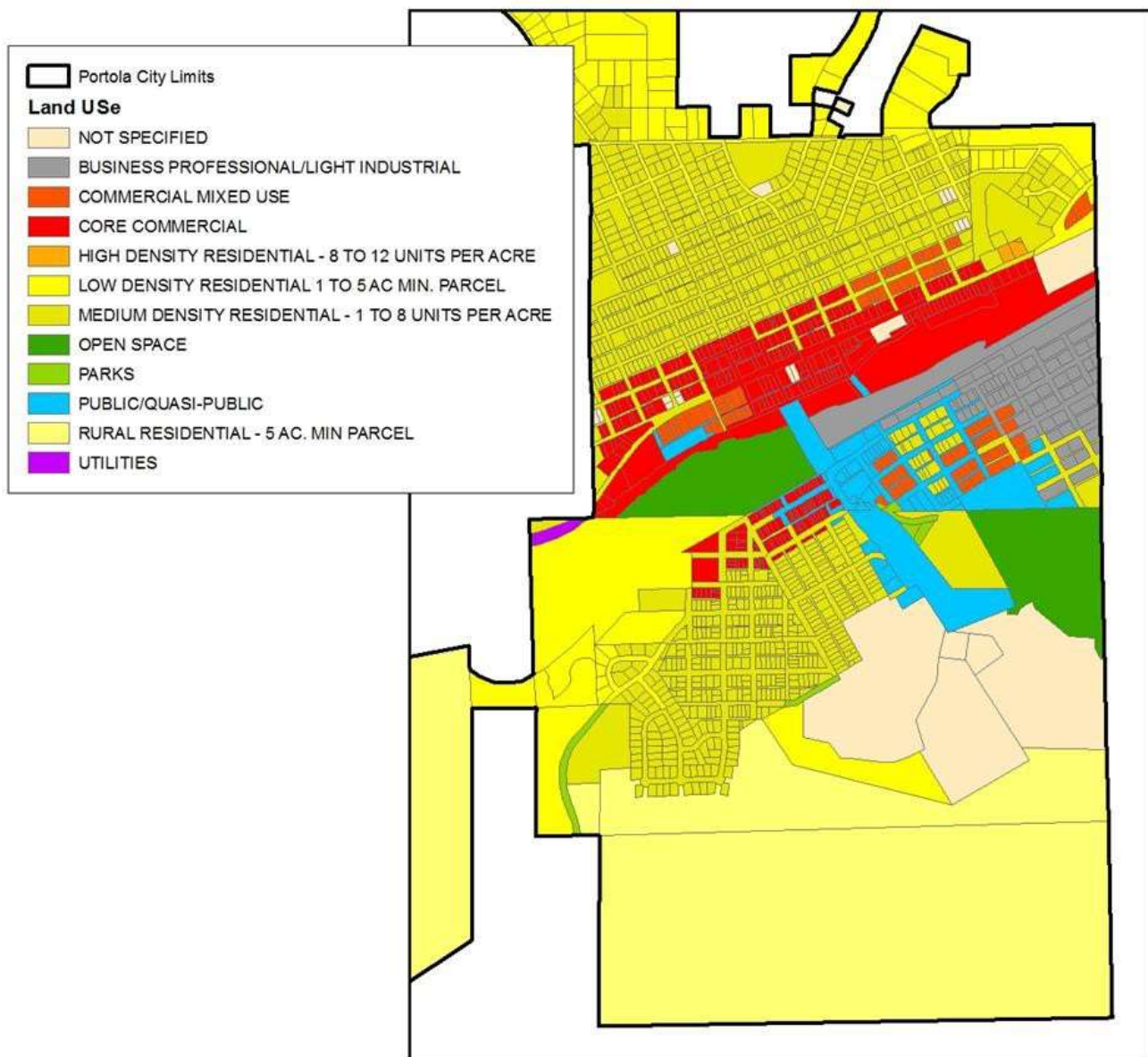
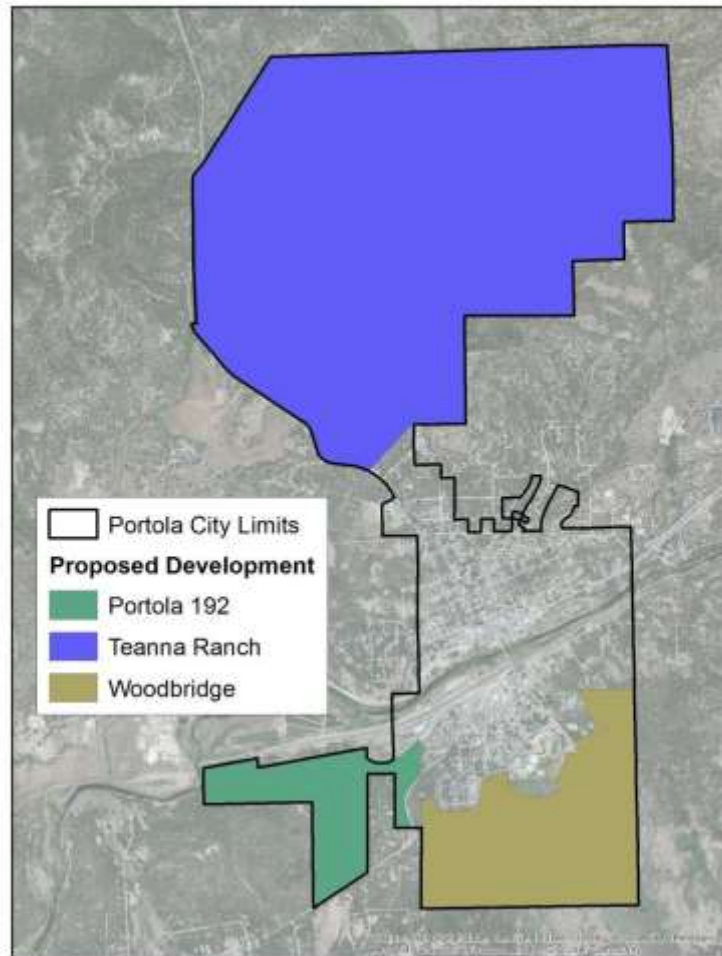


Table 2a – City of Portola Land Use Profile

Land Use	Total Area (ac)	% of Total Area
Business Professional/Light Industrial	5	1.55%
Commercial Mixed Use	2	0.67%
Core Commercial	1	3.01%
High Density Residential – 8 to 15 Units per Acre	1	0.03%
Low Density Residential – 1 to 5 Acre Minimum Parcel	2	6.40%
Medium Density Residential – 1 to 8 Units per Acre	3	9.77%
Not Specified	21	60.87%
Open Space	5	1.66%
Parks	5	0.16%
Public/Quasi-Public	5	1.68%
Rural Residential – 5 Acre Min. Parcel	4	14.14%
Utilities	1	0.05%
Total Area (ac)	34	100%

Three locations within the City limits have been identified for future development, Woodbridge Development, Portola 192, and Teanna Ranch. Woodbridge Development and Portola 192 both have City approved Tentative Subdivision Maps. These two developments would provide an additional 1200 residential dwelling units, commercial, retail, and industrial space. Although approved, no progress has been made toward Final Map Approval in the last 5 to 10 years. Teanna Ranch has no formal proposal to develop the property at this time; however, the purpose of the annexation and reorganization of this property was to provide for the future growth of the City. All approved maps are reviewed by the City on an annual basis, but with the current vacancy rate and declining population the city does not anticipate these developments to move forward until economic and/or current housing needs within the City changes. These developments relative to the City limits can be seen in Figure 4.

Figure 4 – Future Development
(See Appendix 4)



Economy

The economy of the City of Portola is historically based on logging; both as a logging camp and mill site. As the logging industry grew, railroads sprang up to help more efficiently transport the lumber in and out of the area. When the Western Pacific Railway through the Feather River Canyon was completed in 1910, the City of Portola provided the ideal location for a depot which has sustained the City to present day. Currently the City of Portola remains a railroad hub which helps support year round outdoor recreation, tourism, and a Railroad museum.

As the service center for eastern Plumas County, future economic development depends on maintaining and expanding that role. Historically, the economy was based on natural resource extraction, but availability, environmental pressures, commodity value, and export difficulties have made these historic industries less viable. Current economic development has increased as workers seeking an active outdoor lifestyle relocate and are able to use technology to operate successful businesses free of traditional commuting and manufacturing restrictions. Additional resources are

facilitating expanding tourism and visitor opportunities to help further develop this sector of the economy.

Government

In California, there are two kinds of cities: charter cities and general law cities. The City of Portola is a general law city which means that the legal authority for the City's Acts and Ordinances originates with the laws of the State of California. The City of Portola is located in the 1st Senate District, and in the 3rd Assembly District. Federally, Portola is located in California's 4th congressional district.

The City of Portola operates under the council-manager form of government, meaning that the Council selects a Mayor from among its members to serve a one year term. The City Council is composed of five Council Members elected to staggered four year terms.

Environment

Disaster resistance should further environmental sustainability and reduce pollution in the City of Portola. Central among environmental concerns is the impact of human actions and choices on the atmosphere and climate. The air quality in Portola is considered good. An air quality monitoring station is operated in the City of Portola by the North Sierra AQMD, located at 161 Nevada Street. This station monitors for PM2.5 (fine particles and airborne particulates), temperature, wind direction, and wind speed. In 2010 the number of days with PM2.5 concentrations greater than the National 24-hour Standard was 9.2, which is slightly less than the State Annual Average of 9.6 (<http://www.arb.ca.gov/adam/select8/sc8display.php>). Most days of poor air quality are due to atmospheric inversions, which are common in high Sierra valleys, especially in winter. These inversions trap air pollution and smoke from wood stoves to near ground level. Measurements at the City of Portola's testing station from the years 2000 to 2010 showed no noticeable time trend of increasing or decreasing PM2.5 levels.

Transportation sources account for the highest percentage of greenhouse gas emissions in most urban areas. Although the City has no ability to specifically address vehicle emission directly, the General Plan Update sets forth focused strategies to increase bicycle, pedestrian, and transit use. In addition to reducing greenhouse gas emissions, the General Plan also establishes goals for energy conservation through energy efficient construction standards and alternative energy sources.



ELEMENT A – THE PLANNING PROCESS

Overview

The City's Planning Department initiated the LHMP process with the selection and contracting of consultant support in late December 2011; the LHMP update started in February 2019. Early in the process, a Hazard Mitigation Team (HMT) was created to identify the stakeholders and interested parties to provide input and guidance into the City of Portola's LHMP. Although adjacent jurisdictions, the County, and other local entities were involved in this process, this LHMP is specific to the City of Portola. Each team member was asked to review the documents regarding overall plan formatting and global understanding and to respond specifically as the plan relates to their area of purview. For instance, the review by the health and safety advisor would be more attentive to emergency response and evacuation. The members of the Hazard Mitigation Team are as follows:

2019 Update Team

Manhard Consulting

Karen Downs, Contract Planner

LHMP Development Coordinator and Task Manager
Manhard Consulting
241 Ridge Street, Suite 400
Reno, NV 89501

Todd Roberts, Building & Public Works Director

Melissa Klundby, City Clerk

City of Portola
Building and Public Works
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m.klundby@ci.portola.ca.us

Jerry Sipe, Environmental Health Director

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Nick Dawson, Assistant Chief – Emergency Services

Lori Beatley, Health Education Coordinator

Plumas County Sheriff's Department
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beatley@pcso.net

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Northern Sierra Air Quality Mgmt. District
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Leah Turner, Phlebotomist, EMT

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Bob Frank, Chief

Elaine Frank, Captain ISO, EMT

Eastern Plumas Rural Fire Protection District
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2013 LHMP Team

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Mickey Smith & Jon Simpson

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msmith@woodrodgers.com

Sheila Anderson

Assistant Project Development (Fire)
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Carson City, NV 89703
775-883-1600
sheila@rcinv.com

City of Portola

Evacuation Plans, Risk Assessment of
Public Utilities & Potential Mitigation Response
Public Works Department
(Streets & Roads, Solid Waste, Sewer)
Todd Roberts 530-832-6809
t.roberts@ci.portola.ca.us

**Joint Fire Hazard Assessment &
Emergency Resource Response**

Jerry Hurley
PC FSC Coordinator
530-283-0829
jerry.hurley@sbcglobal.net

City of Portola

Emergency Medical & Hazard Response
Community Service Officer
(Fire/Hospital/Eastern Plumas Health Care EMT1)
Leah Turner
530.832.6833

US Forest Service

Joint Fire Hazard Assessment &
Short/Long-Term Mitigation Approach
Jerry Sipe, Don Fregulia
ADFMO Fuels
(530) 836-7176
dfregulia@fs.fed.us

Plumas County Fire Safe Council

Union Pacific Railroad

UPRR Corridor Risk Assessment
Carl Anderson
916-789-5134

Additional agencies, jurisdictions, and districts invited to participate in the review process include:

Eastern Plumas Health Care

Designated BOD Member
500 1st Avenue
Portola, CA 96122
530-832-6500

Eastern Plumas Chamber of Commerce

California 89
Blairsdon, CA 96103
530-836-6811

Plumas Unified School District

Office of the Superintendent
50 Church Street
Quincy, CA 95971
530-283-6500

Once the HMT was in place, a schedule was developed to allow for CalEMA and FEMA approval in accordance with terms of the Disaster Recovery Initiative (DRI) funding grant. In order to complete the LHMP planning process, the HMT identified needs, reviewed the following specific target areas, and developed protocols for meeting the intent of these specific target areas based on the guidance presented in FEMA's Local Mitigation Plan Review Guide, October 1, 2011. It should be noted that although the Guide is dated 2011, it was not publicly available through the FEMA web page until October 1, 2012.

1. Garner public input. Develop a Public Participation Plan (PPP). Specifics to this process and findings are presented in the Public Involvement subsection of Element A.
2. Review and incorporate as appropriate existing studies, reports, and technical information. These documents will include, but not be limited to: the City's General Plan including the Land Use Element (GPLUE) and Safety Element (GPSE), the City's Emergency Evacuation Plan (EEP). Additional documents reviewed are discussed in the *Existing Plans, Studies, Reports and Technical Information* subsection to Element A, entitled *The Planning Process*.
3. Evaluation of the community's resources and available response mechanisms will need to rely on continued public participation. The *Plan Maintenance Process* subsection of Element A describes the current vision of the HMT for developing and fostering public participation. It is envisioned this component of the LHMP will be the most dynamic as the HMT and the community work iteratively to refine the stated goals and available means to meet those goals.
4. Once the LHMP has been adopted, the HMT must continue to move forward in the implementation and maintenance of mitigation strategies. In addition, it is critical that these policies be modified as certain items become addressed and as the community realizes that some items may need additional refinement before the ultimate goal can be obtained.

Monitoring, Evaluating and Updating the Mitigation Plan, the final subsection to Element A, addresses these very methodologies and schedules.

Once the planning process had been framed, the Team moved forward with formulating the remaining required LHMP elements: Hazard Identification and Risk Assessment, Mitigation Strategies, and Plan Adoption.

Public Involvement

Consultant efforts and feedback from the HMT at the March 2012 HMT meeting resulted in the formulation of a Public Participation Plan which guided subsequent public interaction protocols. The PPP is provided in detail in Appendix 6; key aspects the PPP presents are:

- Goals of broad and timely public involvement to allow for the development of public awareness of the LHMP process and receipt of meaningful feedback;
- Objectives of the PPP include the development of and providing for:
 - Database of contacts, presented in Appendix 6, subsection 2,
 - Email distribution of notices,
 - Meetings in an open public forum,
 - Distribution of information facilitated by establishment of project web site and distribution through existing City hard copy postings and distributions and media contacts, www.portolasafetyplan.com
 - HMT availability for public questions and feedback via meetings, email, and phone calls; and
- Evaluation of the public involvement process.

A copy of the Public Participation Plan is presented in Appendix 6, subsection 1. Public meetings were scheduled to allow for direct public contact and interaction. Meeting summaries are presented in Appendix 6, subsection 3, 4, and 6.

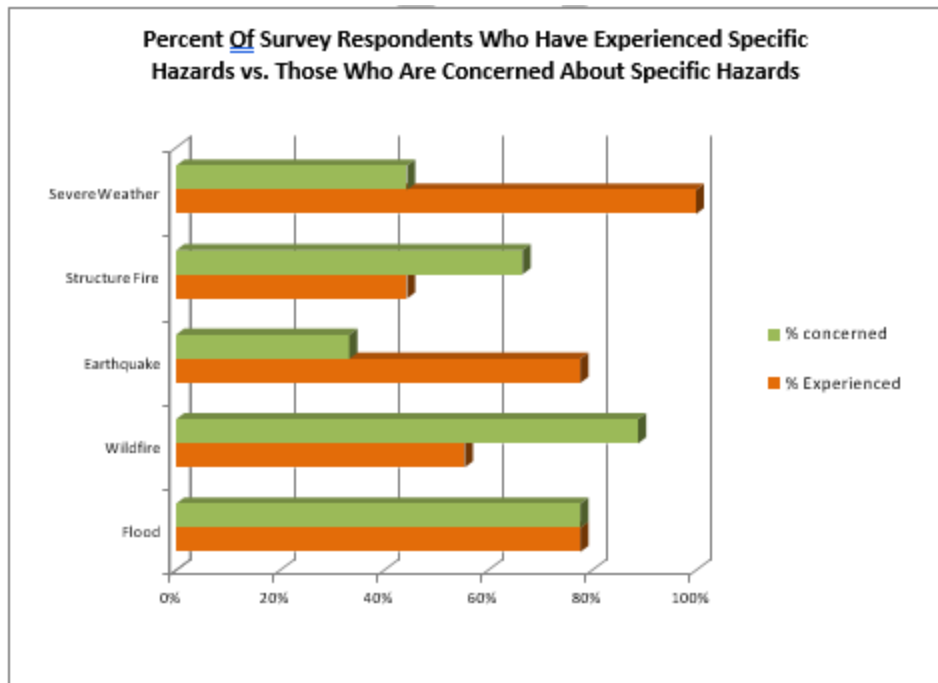
As an initial step in the development of the LHMP, a survey was presented to the community to attempt to gauge their levels of concern with hazard mitigation and to attempt to garner anecdotal evidence of prior hazards and how they may or may not have affected the community. A copy of the questionnaire and graphic presentations of some of the data are presented in Appendix 6, subsection 8.

One of the questions that helped guide the formulation of mitigation strategies asked the respondents to characterize their level of concern for various hazards based on hazards they had experienced vs. hazards they had not (Figure 4). Although the survey response cannot be considered a statistical sampling, it is interesting to note that when it comes to Severe Weather, Earthquake, and Flood, experience seems to temper the amount of concern felt by the residents. Whereas Wildfire and/or structure fire present a greater concern once the hazard has been

experienced. This data provided unique insight to the planning process as we begin to formulate the Plan and how to work with the City to mitigate those hazards identified.

As development of the LHMP progressed, public involvement outside the HMT was very limited. The PPP was therefore subsequently modified to include providing specific invitations to meetings and to present specific requests for review to community and civic groups, including: Chamber of Commerce, Rotary Club, and interested church groups. Because churches typically have access to large structures capable of housing many people and an existing communication network through phone trees and church bulletins, incorporating interested church groups as a secondary tier to public notification protocols might present a productive endeavor. This might also lead to greater involvement and public input.

Figure 5 – Hazard Concerns
(See Appendix 4)



Existing Plans, Studies, Reports and Technical Information

City Planning Documents

The HMT reviewed and incorporated information from the following City Planning documents:

- City of Portola General Plan, Land Use Element (GPLUE)

The General Plan, Land Use Element provides information on existing land use, including characterization of development type and intensity based on location.

- City of Portola General Plan, Safety Element (GPSE)

The Safety Element provides a framework for presenting hazard mitigation identification, and mitigation goals and strategies. The GPSE is currently being updated in tandem and in conjunction with the development of this LHMP.

- City of Portola, Citywide Emergency Evacuation Plan (CEEP)

The Citywide Emergency Evacuation Plan attempts to affect the emergency evacuation of residents, businesses, and visitors during natural disaster events and other emergency situations.

Documents for Neighboring Jurisdictions and State Regulation Authorities

Other documents relied upon to garner information to incorporate into the LHMP are:

- Plumas County General Plan
- The Plumas County General Plan presents information on hazard areas immediately adjacent to the city limits and on City ingress and egress options.
- State of California Multi-Hazard Mitigation Plan
- This plan, prepared by Cal EMA, was used for internal quality assurance and evaluation purposes to ensure that the City's LHMP was consistent with the State's Plan.
- Past disaster declarations provided a record of historical occurrences and a basis to formulate risk assessments and sense of frequency associated with hazard events.

Technical Information

Analysis of hazard areas, particularly as it relates to flooding and seismic risk was developed through the use of Hazards – United States (Hazus). Hazus is a nationally applicable standardized methodology that has developed models for estimating potential losses from earthquakes and floods. Data compiled through Geographic Information Systems (GIS) is used to estimate physical, economic, and social impact of these disasters.

Documents reviewed for technical analysis and information regarding the identification and characterization of specific hazards are summarized in the *Reference* section of this Plan.

Federal Guidelines

The following FEMA guides were consulted for general information and guidance on the LHMP processes and formulation of this Plan:

- Local Mitigation Plan Review Guide, October 1, 2011,
- Local Multi-Hazard Mitigation Planning Guidance, July 1, 2008,
- How-To Guide #1: Getting Started: Building Support For Mitigation Planning,
- How-To Guide #2: Understanding Your Risks – Identifying Hazards and Estimating Loss Potential,
- How-To Guide #3: Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies, and

- How-To Guide #4: Bringing the Plan to Life: Implementing the Hazard Mitigation Plan.

Plan Maintenance & Public Involvement

The City is committed to garnering public involvement in the perpetual reshaping and modifying of the LHMP. However, strategies to encourage public participation cannot be formulated without examining the community for which the LHMP is intended to serve. Small town apathy is a common phenomenon; which seems counter intuitive given the affection many in the community have for their hometown. It is difficult to rally support behind mitigation projects for risks that may or may not manifest, especially when immediate financial needs and obligations are going unfulfilled. To their credit, many officials serve as volunteers in performing community functions. Additional tasks such as garnering public support, while implementing and managing an LHMP, can leave community leaders taxed, overburdened, and overwhelmed. Therefore, finding grant funding to help provide the support level necessary to perpetuate hazard mitigation activities and maintenance of the LHMP is a high priority for the City. Grant funding will allow the City to alleviate and distribute some of the LHMP administrative burdens by providing for the means to support the needed mitigation efforts while at the same time utilizing community resources.

Upon approval of the LHMP, the City's web page will be formatted to allow for:

- The plan, and any proposed changes will be posted on the City's Web site for public review and comment.
- The web site will present contact information for interested citizens to direct their comments and specific concerns.
- The web page will be modified to allow for individual citizens and groups interested in receiving updates to sign up so automatic notices can be sent via email as public meetings are held and changes to the LHMP are considered and adopted.
- Comments received regarding the LHMP will be collected by City personnel, included in the annual report to the City Council, and considered during future LHMP updates.
- The requesting of a physical copy of the LHMP.

The proposed mitigation goals and objectives also present several specific approaches to encouraging public involvement.

Updating the Plan

Monitoring, Evaluating, and Updating the Mitigation Plan

Emergency Management and Assistance regulation 44 CFR Part 201 states that the agency responsible for the LHMP is required to, "at a minimum, review and, if necessary, update the local mitigation plan every five years from date of plan approval to continue program eligibility". The office of the City Planner is responsible for the annual review of the LHMP. This annual review is to be completed by February 28 of the year following the year under consideration and will provide the basis for consideration of any changes to the LHMP's adopted Goals, Objectives, and Strategies.

Items to be specifically considered and documented in the annual review are to include:

- Grants applied for and/or funding received for administrative support for the implementation and execution of the LHMP.
- Summary of community comment and summary of actions taken.
- Summary of items reviewed and current status including a discussion of ongoing action items.
- Changes in identified hazards.
- Changes in hazard vulnerability.
- Changes in hazard type or rating.
- Changes in potential impact to critical facilities.
- Changes in available resources.
- Difficulties or concerns observed with plan implementation.
- Status of ongoing and/or completed mitigation items.
- Status of multi-jurisdiction LHMP's with whom the City shares an interest.
- Funding received for implementation of action items.
- Submit annual review to City Council for review and approval.

A GAP analysis is a means to evaluate and determine steps to be taken to move away from a current protocol to a desired protocol or level of activity. Performing GAP analyses should be conducted as necessary in the early implementation of the Plan and comprehensively with every Plan update. Specific to this Plan, the Public Participation Plan should be analyzed to attempt to more actively engage the public. Public participation during the initial development of the Plan was not consistent with the goals envisioned by the HMT and leaders of the community. The approaches incorporated during the development of the Plan were passive and relied on mailings, flyers, and newspaper notices. Adopting a more active approach, where members of the HMT engage the public through meetings for civic groups, community dinners, and churches may spark interests where less active approaches go unnoticed. As the Plan is implemented, look for opportunities to actively seek support for specific tasks. For instance, a civic group might not respond to a global request to become involved in the LHMP process. However, when approached to purchase a public notification banner, support may be more forthcoming. Another area where further analysis will be required is staffing. As Plan activities become more complex and pressing, current staff will not have the time or resources to meet the demands of their existing workload while facilitating and coordinating mitigation activities. As mitigation actions become more costly, the process by which to secure those improvements become more complex and the evaluation of current status and future direction becomes more critical.

To ensure that the 5-year update occurs, in the fourth year (2017) following the City's adoption of the LHMP, the City Planner's office will initiate the following activities at least 6 months prior to the end of the 5 year cycle for the LHMP review.

- Compile items of interest identified and presented in each of the previous annual reports for the period under review;
- Review and update to the LHMP for any new identified hazards change in risks. For instance, completion or progress for any mitigation strategies would bear discussion.

- Review, revising, and formulate additions and changes to the mitigation strategy;
- Prepare a new action plan with prioritized strategies, identified responsible parties, and available resources;
- Prepare an amended LHMP to be submitted to the City Council for review; and,
- Submit the amended LHMP to CalEMA for approval.
- Submit the amended LHMP to City Council for adoption.



ELEMENT B—HAZARD IDENTIFICATION & RISK ASSESSMENT

Overview

No one source identifies or characterizes all potential hazards that may affect or impact a jurisdiction. In addition, each hazard will affect each jurisdiction in unique ways; a wildfire may be devastating or of limited consequence depending on the area surrounding the community, the community's ability to respond, and the level of commitment the public has displayed to help protect themselves. Tasks associated with performing the hazard identification and risk assessments included the following:

1. Present a description of the type, location and extent of all natural hazards that can affect the City of Portola.
2. Summarize previous occurrences and present information on the probability of future hazard events.
3. Provide a description of each hazards potential impact on the community.
4. Address National Flood Insurance Program (NFIP) structures that have been repeatedly damaged by floods.

Natural Hazards

Hazards presented by FEMA for consideration in the formulation of an LHMP are listed alphabetically below. No additional hazards specific to the community were identified during public input or during our research efforts to document historical events. Utilizing historical data from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), CalEMA, and FEMA Region IX, and the United States Geological Survey (USGS) the overall list was pared to reflect only those natural hazards of significance within and immediately adjacent to the limits of the City of Portola. The US Forest Service and members of the Plumas County Fire Safety Council were consulted for information regarding wildfire. 'Significance' was considered in generic terms, focusing on key criteria that essentially relates to frequency and/or intensity. Potential hazards considered for Portola have been summarized in Table 3. Threshold or screening conditions are indicated; reference links are supplied in a supplement to Table 3 located in Appendix 7 of this plan. Table 3 reviews each hazard, the threshold value or condition, whether the hazard is considered a hazard in the City of Portola, and whether the hazard was profiled in this LHMP. Please note that the risk and significance of each hazard are identified as applicable in Table 1 with each hazard that was reviewed in this LHMP, and also further identified in the discussion section below for each hazard. Additional screening criteria, that may be integral to characterization of certain hazards, were not examined further once the hazard had been removed from consideration by a limiting condition.

Table 3 – Hazard Consideration Selection Matrix			
Hazard	Threshold Value or Condition	Considered a Hazard	Hazard Profiled
Avalanche	Slope >30°	N	N
Coastal Erosion	On Coast	N	N
Coastal Storm	On Coast	N	N
DAM FAILURE	Refer to California Division of Water Resources	N	Y
DEBRIS FLOW(POST FIRE)	Independent Study Required	Y	N Addressed after any occurrence (post fire)
Drought	Agricultural Dependency & D4	N	N
EARTHQUAKE	PGA > 0.02g	Y	Y
GROUND SHAKING	PGA > 0.02g	Y	Y
LIQUEFACTION & LATERAL SPREADING	PGA > 0.02g	Y	Y
Expansive Soils	a.) >30% Clay b.) Plasticity Index >15	N	N
EXTREME HEAT	Heat Index >105°F predicted for more than 2 days.	Y	Y
FLOOD	FEMA 100 Year Flood Zone	Y	Y
Hurricane	Within Tropical Cyclone Formation Region	N	N
Land Subsidence	a.) Aquifer Compaction Area b.) Evaporate or Carbonate Rock	N	N
Landslide	Slope (°) > 0.19(Relief, m) - 0.16	N	N
SEVERE WEATHER: HAIL	> ¾" Diameter	Y	Y
Severe Weather: Lightning	No Threshold Established	N	N
Severe Weather: Microbursts	Straight line wind speed >85 mph	N	N
SEVERE WEATHER: THUNDERSTORMS	Severe, wind>58 mph & hail>¾"	Y	Y
Severe Weather: Tornadoes	Wind speed > 85 mph	N	N
SEVERE WEATHER: WINDSTORMS	Wind > 58 mph (50 knots)	Y	Y
Severe Weather: Monsoonal Flows	Extensive Rain	N	N
WILDFIRE		Y	Y
Tsunami	Within 1000' of Water Body	N	N
Volcano	Within Mt. Lassen Influence Zone	N	N
Winter Storms/Extreme Cold	Definition for Cold Air Outbreak	Y	Y

Dam Failure

Vulnerability: Unlikely

Risk: Low

The City of Portola lies approximately 8 miles downstream of Lake Davis, which is the reservoir created by the Grizzly Valley Dam. Lake Davis was built to provide recreation, create a water supply to the City of Portola, and to improve fish habitat. The Grizzly Valley Dam was completed in 1915 and the maximum surface elevation is 5,744 ft with a maximum storage volume of 195,000 acre-feet. If the dam were to fail catastrophically the flood surge would travel south down the Grizzly Valley Creek channel and reach the Middle Fork of the Feather River approximately 2.25 miles east of Portola. Because the Feather River flows to the west, structures along the Feather River at the eastern boundary of the City of Portola would be the first structures to be affected by the flood surge. Figure 6 shows the proximity of the Grizzly Valley Dam to the City of Portola.

Although the vulnerability is unlikely and the risk is low, this hazard has continued to be profiled in this update, to ensure that the City continues to coordinate with the California Department of Water Resources, Division of Safety of Dams.

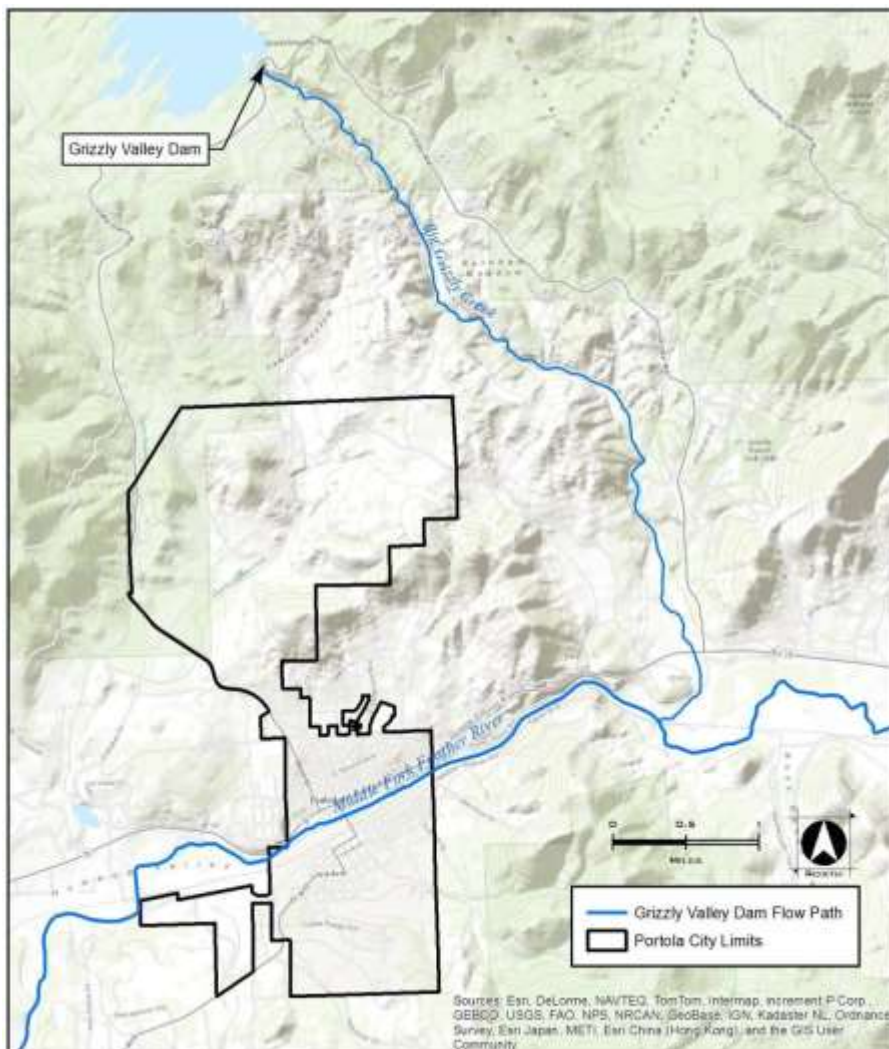


Figure 6 – Grizzly Valley Dam Location in Relation to the City of Portola

History

There have been no dam inundation events impacting the City of Portola.

Location, Extent & Probability of Future Events

Dam Inundation areas, as mapped by the California Emergency Management Agency, show the potential flood extent, given a complete and sudden dam failure at full capacity. Given its physical setting and proximity to the Grizzly Valley Dam, the City of Portola could be affected both by the immediate impacts of a flood wave, and long-term impacts if roads, buildings and bridges are destroyed. The flood wave has the potential to impact the South Gulling Street Bridge, which is the only connection between the south and north sides of the City. If the bridge were adversely impacted, those people on the south side of the Middle Fork of the Feather River would be required to travel over 25 miles to return to the north side of Portola; those on the north side would not be able to reach the hospital in the event of a medical emergency. Based on records presented by the National Bridge Inventory, the bridge is considered scour critical.

The main channel of the Middle Fork of the Feather River runs fairly central to the flood plain. The relatively broad flood plain will help mitigate potential damage and limit destruction as it allows for some spreading of the flood wave, while continuing to help channelize the flow. Depending on flood levels, the railroad, a City well, and the sewage treatment plant could all be impacted by the event. Because of confidentiality concerns on behalf of the Division of Safety of Dams, specific concerns will have to be reviewed by the City and cannot be represented herein.

As long as the dam continues to be evaluated and sufficiently maintained by the California Department of Water Resources' Division of Safety of Dams, the potential hazard associated with a dam break or breach would be considered unlikely for naturally occurring events. Manmade hazards may elevate the level of risk, but given the size of the dam, remote location, and lack of high value impact the potential for a successful targeted attack would also be considered unlikely. The probability regarding the likelihood of a dam break or breach would be addressed more specifically and comprehensively in the Division of Safety of Dams' assessment.

Earthquake

Vulnerability: Very Likely

Risk: Moderate

An earthquake is a sudden motion or trembling caused by a release of stress accumulated within or along the edge of the earth's tectonic plates. Earthquakes usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. The effects of an earthquake can be felt far beyond the site of its origin. The most common effect of earthquakes is ground motion or the vibration or shaking of the ground during an earthquake. The severity of ground motion generally increases with the amount of energy released and decreases with distance from the fault or hypocenter of the earthquake.

In addition to ground motion, several secondary hazards can occur from earthquakes: surface faulting/rupture, liquefaction, and lateral spreading. The Seismic Hazards Mapping Act (SHMA) of 1997 established zones of required site-specific geotechnical investigations to identify seismic hazards and formulate mitigation measures prior to permitting developments designed for human occupancy. Portola is not within, nor is it in, an area slated for the development of a Seismic Hazard Zone Map.

History

The City of Portola is located in an area of potentially moderate seismic activity. The nearest active faults are the Mohawk Valley fault, located about 8.5 miles to the west, and the Honey Lake fault, located 21 miles to the east. The Mohawk Valley fault (MCE 7.0) is characterized as being less than 130,000 years old and the Honey Lake Fault (MCE 7.8) is less than 15,000 years old. Figure 5 on the following page presents a summary of epicenters and associated magnitudes for earthquakes in the area surrounding Portola. The bulk of the events present a magnitude on the order of 4, with a couple event reaching as high as 6.2.

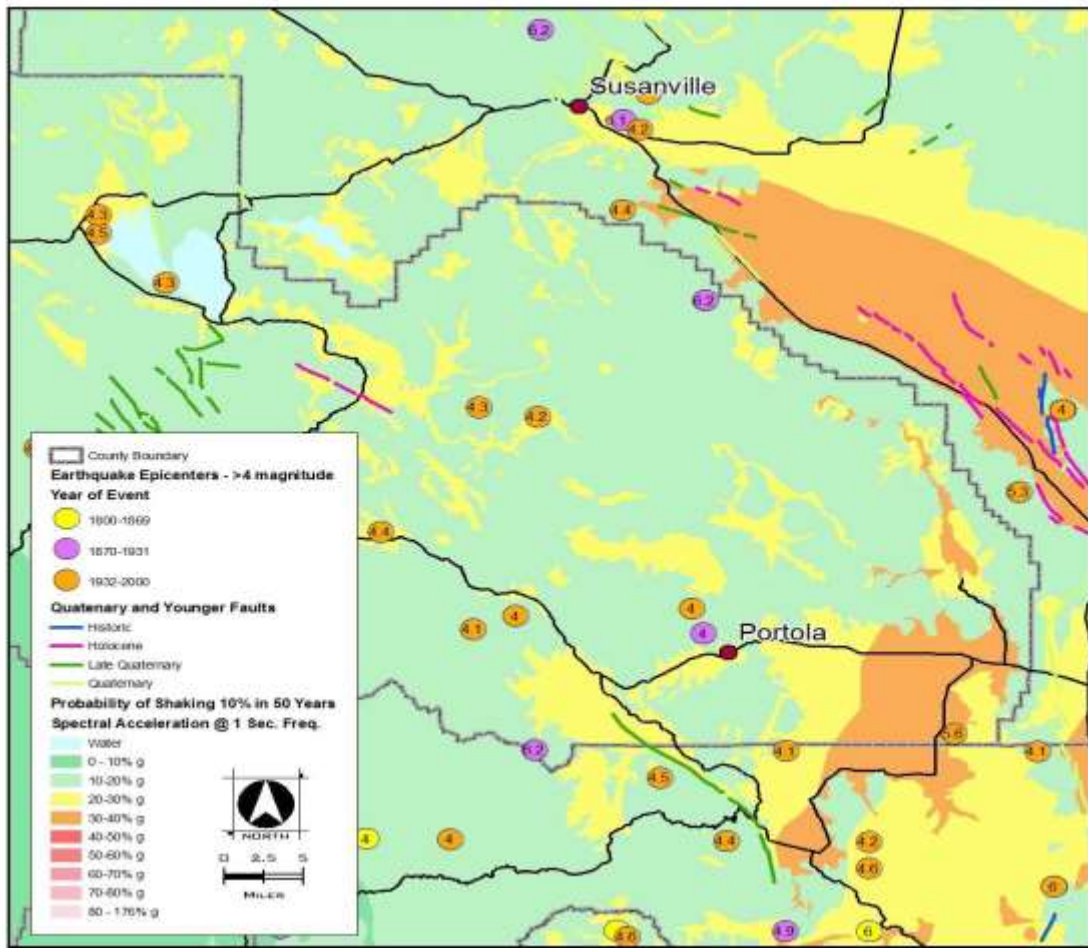


Figure 7 – Earthquake Epicenters with Magnitudes > 4



Image 3 – Surface Rupture through field in El Centro, California
 (NOAA>NESDIS>NGDC>MGGD>Natural Hazards>Image Database)

Location, Extent, and Probability of Future Events

For the City of Portola, the primary earthquake concerns are strong ground motion and strong ground motion combined with a potential for liquefaction and lateral spreading adjacent to the Middle Fork of the Feather River channel (discussed below). Contemporary structural design protocols consider the impact of strong ground motions and require new construction to meet the performance rigors demanded by the seismic environment. However, due to the age of many of Portola’s structures, an increased potential for damage exists when compared to that of new construction. Figure 8 presents the likelihood of future events based on magnitude, proximity to the City, and within the next 75 years.

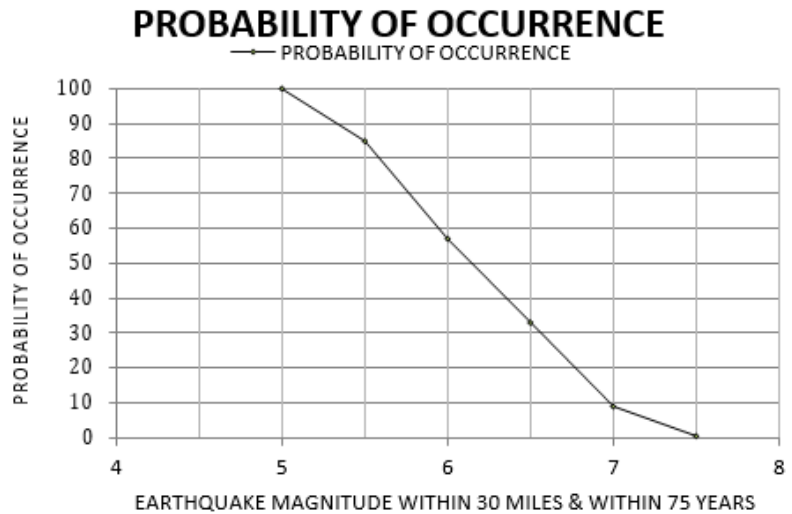


Figure 8 – Probability of Occurrence for Various Magnitude Events

Fault traces and active fault zones have not been identified within Portola proper, and disruption to underground utilities and services is not anticipated to be a significant hazard due to extension across a fault zone. However, the City's system is old and may just break due to seismic activity. Disruption in overhead power lines may occur depending on the strength of the event and proximity to groundwater and/or crossings associated with the Middle Fork of the Feather River.

Based on Portola's seismic history, proximity to surrounding fault zones, and age of structures and improvements, the risk probability for the community to be at seismic risk would be considered moderate. The greatest potential for damage is considered to be from ground shaking. When considering potential risk severity associated with utilities and transportation the Portola area would be considered low to moderate. However, the City and County have a history of sewer and water line breaks being triggered by a seismic event. When considering the potential severity for liquefaction and lateral spreading, the hazard would be considered moderate. Hazard impact must also consider type and age of construction of the structures. Given the age of many of the structures in the community, the severity becomes more moderate to potentially high. Typically, brick and unreinforced masonry structures present the greatest risk. Heavy masonry structures with large spans present a more moderate risk. Small wood framed structures typically present the lowest risk level for damage when considering seismic response. Secondary hazards, such as fire, can also present a significant risk to the community. Old heating systems, broken gas lines, old wooden structures can all become both a risk and a hazard if fire is triggered during a seismic event. Image 6 also shows what kind of damage is typical to large open bays.



Image 6 – School Damage from May 1983 Coalinga Earthquake
(<http://www.smate.wvu.edu/teched/geology/eq-CA-central.html>)

Earthquake- Ground Shaking

Vulnerability: Very Likely

Risk: Moderate

Seismic waves radiating away from the hypocenter, like ripples in a pond, and travelling rapidly through the earth's crust produce shaking as these waves reach the ground surface. Strength and duration of shaking is a function of the size (magnitude) and location of the earthquake and on the characteristics of the site such as proximity to bedrock and stiffness and thickness of overlying alluvium. Soil deposits filter seismic waves by attenuating the motion at some frequencies while amplifying motion at others. This 'filtering' is what causes the dramatic variations in the levels of ground shaking observed within relatively small areas. Ground shaking is a general term that refers to all aspects of motion of the earth's surface resulting from an earthquake and is usually considered the most important of all seismic hazards because all the other hazards are triggered by ground shaking.

Ground shaking is what typically triggers the structural responses that make the headlines. Of course, the amount of damage that ensues is a function of the design of the structure and materials from which it is built. Typically structures with larger open areas, such as schools, can experience the most significant damage. Unreinforced masonry structures are also at significant risk.

History

The most recent notable earthquake near the City of Portola occurred prior to 1931 and was estimated as a magnitude 4 earthquake. The nearest earthquake above magnitude 6.0 also occurred prior to 1931 and was centered about 15 miles southeast of the City. There are no records of significant earthquakes ($M \geq 6.5$, caused loss of life, or caused more than \$200,000) within close proximity to the City of Portola.

Earthquakes occur frequently and depending on type of event, proximity, and characteristics of both the structure and the soils/bedrock supporting the structure, its effects may or may not be felt. Figure 5 presents a summary of historic earthquake events close enough to the City to be noticed by most of its residents. The earthquake profile for an event having a 7% Probability of Exceedance within 75 years, i.e. the current design level earthquake, would be a Magnitude 7.2 event occurring within 30 miles of the City.

Location, Extent, and Probability of Future Events

For the City of Portola, the primary concerns are strong ground motion and strong ground motion combined with a potential for liquefaction and lateral spreading adjacent to the Middle Fork of the Feather River channel. Contemporary structural design protocols consider the impact of strong ground motions and require new construction to meet the performance rigors demanded by the seismic environment. However, due to the age of many of Portola's structures, an increased potential for damage exists when compared to that of new construction.

Fault traces and active fault zones have not been identified within Portola proper, and disruption to underground utilities and services is not anticipated to be a significant hazard due to extension

across a fault zone. However, the City's system is old and may just break due to seismic activity. Disruption in overhead power lines may occur depending on the strength of the event and proximity to groundwater and/or crossings associated with the Middle Fork of the Feather River.

Based on Portola's seismic history, proximity to surrounding fault zones, and age of structures and improvements, the risk probability for the community to be at seismic risk would be considered moderate. The greatest potential for damage is considered to be from ground shaking. When considering potential risk severity associated with utilities and transportation the Portola area would be considered low to moderate. However, the City and County have a history of sewer and water line breaks being triggered by a seismic event. When considering the potential severity for liquefaction and lateral spreading, the hazard would be considered moderate. Hazard impact must also consider type and age of construction of the structures. Given the age of many of the structures in the community, the severity becomes more moderate to potentially high. Typically, brick and unreinforced masonry structures present the greatest risk. Heavy masonry structures with large spans present a more moderate risk. Small wood framed structures typically present the lowest risk level for damage when considering seismic response. Secondary hazards, such as fire, can also present a significant risk to the community. Old heating systems, broken gas lines, old wooden structures can all become both a risk and a hazard if fire is triggered during a seismic event.

Earthquake- Liquefaction and Lateral Spreading

Vulnerability: Likely

Risk: Moderate

Some of the most infamous events associated with earthquake damage deal with liquefaction, the point during a seismic event when soils lose their strength and begin to act as fluids, and lateral spreading. Liquefaction can cause severe damage to structures, bridges, roadways, and buried utilities. Image 4 helps highlight that when liquefaction occurs its effects can be very isolated.

Image 4 – Seismic Waves Propagating thru Different Soils

http://www.webpages.uidaho.edu/~simkat/course_materials/geol344/ground_shake.jpg

The Cal EMA MyHazards Awareness website (<http://myhazards.calema.ca.gov/Default.aspx>) indicates that Portola is not in a liquefaction prone area. However, for areas of limited subsurface data, it has also been recommended that the California Geological Society generate liquefaction zone maps which would require investigation if the area contains late Holocene age deposits along current river channels and within their historical floodplains, where the M7.5 weighted peak acceleration is greater than 0.1g, and the anticipated depth to saturated soil is less than 40 feet. Wood Rodgers has determined that Portola presents all three of the required conditions particularly within the floodplain deposits of the Middle Fork of the Feather River. In addition, the California Division of Mines and Geology has concluded that the Pleistocene Lake Mohawk sediments that underlie much of the Portola area and along the Middle Fork of the Feather River may be susceptible to seismically induced liquefaction. Therefore, for the purposes of the City of Portola LHMP, Wood Rodgers has listed liquefaction as a natural hazard risk in the City. Image 5 indicates how variable the results of liquefaction can be.



Image 5 – Results of Liquefaction in 1906
(http://geomaps.wr.usgs.gov/sfgeo/liquefaction/image_pages/tilted_victorian.html)

Lateral spreading develops on gentles slopes and adjacent to rivers and channels as the saturated stream sediments liquefy during a seismic event and can no longer support the adjacent slopes.

History

The most recent notable earthquake near the City of Portola occurred prior to 1931 and was estimated as a magnitude 4 earthquake. The nearest earthquake above magnitude 6.0 also occurred prior to 1931 and was centered about 15 miles southeast of the City. There are no records of significant earthquakes ($M \geq 6.5$, caused loss of life, or caused more than \$200,000) within close proximity to the City of Portola.

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meet the performance rigors demanded by the seismic environment. However, due to the age of many of Portola's structures, an increased potential for damage exists when compared to that of new construction. Figure 8 presents the likelihood of future events based on magnitude, proximity to the City, and within the next 75 years.

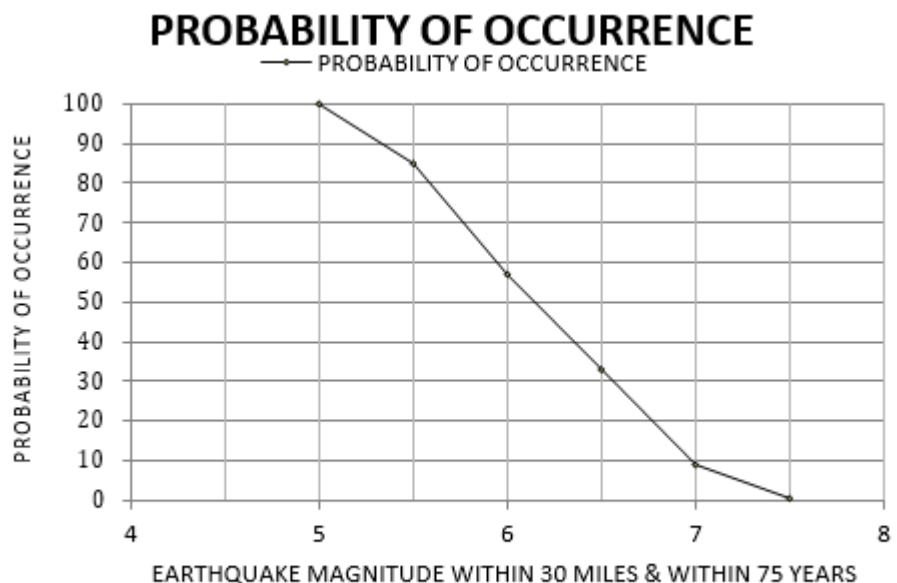


Figure 8 – Probability of Occurrence for Various Magnitude Events

The Gulling Street Bridge crosses the Middle Fork of the Feather River, the UPRR corridor, and provides ready access between north and south Portola. The Gulling Street Bridge was constructed in 1954 and consists of 3 spans, constructed of steel with a cast-in-place concrete deck. 1954 was well before the ability to evaluate liquefaction and lateral spreading had been developed. Recent evaluations of the structure (2010, National Bridge Inventory, NBI Structure Number 09C0130) indicates that the structure is: *equal to present minimum criteria* but scour critical. It should be noted; *the evaluation protocol has not been refined to include evaluating bridge criticality as related to liquefaction and/or lateral spreading*. Because the structure spans the Feather River, and the soils have been superficially assessed as potentially liquefiable, lateral spreading and liquefaction should be assumed to present a meaningful risk during a significant seismic event until that hazard is specifically evaluated and the threat dismissed.

Fault traces and active fault zones have not been identified within Portola proper, and disruption to underground utilities and services is not anticipated to be a significant hazard due to extension across a fault zone. However, the City's system is old and may just break due to seismic activity. Disruption in overhead power lines may occur depending on the strength of the event and proximity to groundwater and/or crossings associated with the Middle Fork of the Feather River.

Based on Portola's seismic history, proximity to surrounding fault zones, and age of structures and improvements, the risk probability for the community to be at seismic risk would be considered moderate. The greatest potential for damage is considered to be from ground shaking. When considering potential risk severity associated with utilities and transportation the Portola area would be considered low to moderate. However, the City and County have a history of sewer and water line breaks being triggered by a seismic event. When considering the potential severity for liquefaction and lateral spreading, the hazard would be considered moderate. Hazard impact must also consider type and age of construction of the structures. Given the age of many of the structures in the community, the severity becomes more moderate to potentially high. Typically, brick and unreinforced masonry structures present the greatest risk. Heavy masonry structures with large spans present a more moderate risk. Small



Image 6 – School Damage from May 1983 Coalinga Earthquake
(<http://www.smate.wvu.edu/teched/geology/eq-CA-central.html>)

wood framed structures typically present the lowest risk level for damage when considering seismic response.

Secondary hazards, such as fire, can also present a significant risk to the community. Old heating systems, broken gas lines, old wooden structures can all become both a risk and a hazard if fire is triggered during a seismic event. Image 6 also shows what kind of damage is typical to large open bays.

Extreme Heat

Vulnerability: Unlikely

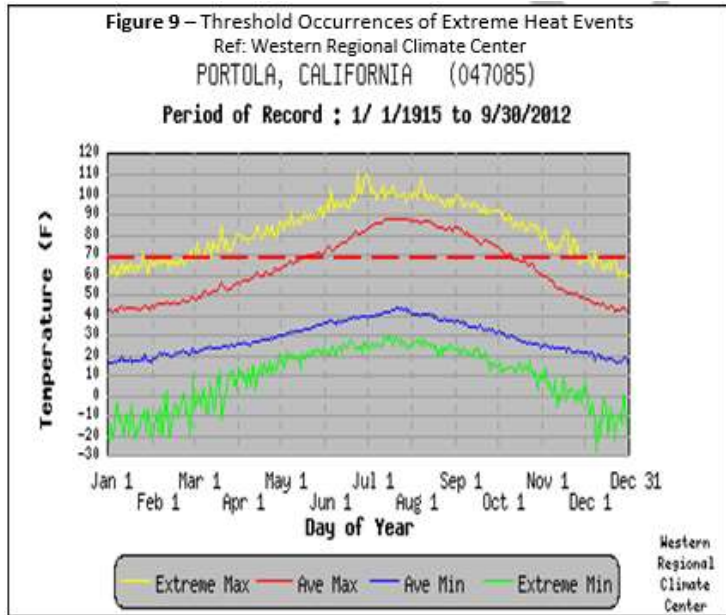
Risk: Low

As defined by FEMA, extreme heat occurs when temperatures of 100° F or more above average high temperatures for the area are exceeded for extended periods. The National Weather Service and Cal EMA consider criteria which includes a combination of factors in defining hazardous heat conditions: daytime high temperatures, humidity, nighttime low temperatures, and the specific climate region. High humidity and poor air quality can exacerbate the effects of heat.

Heat can incapacitate or kill. Based on information provided by Cal EMA, approximately 20 Californians per year die due to the effects of extreme heat. However, during extreme heat emergencies the impacts can be much greater. For example, 946 were killed in California as a result of a 1955 heat wave lasting 8 days. Extreme heat has killed more Californians than all other declared disasters combined in the past 17 years. Extreme heat is a unique hazard in that it can result in a large number of casualties but very little damage to infrastructure.

History

Figure 9 presents records of maximum temperatures within the Plumas County areas. Evidence or records of deaths or injuries due to extreme heat have not been presented for the City of Portola as documented in SHELDUS™. SHELDUS™ is a data set for 18 different natural hazard events such as thunderstorms, hurricanes, floods, etc., represented at the county level. As indicated in the following graphic, isolated and limited periods of extreme heat have occurred in the past. The average annual maximum temperature for Portola is approximately 90 °F. All-time peak temperatures have been reported near 110 °F and periods of temperatures in excess of 100 °F have occurred. Figure 9 also provides an indication as to the frequency of extreme heat events since 1915.



LEGEND

Extreme Max. - Maximum of all daily maximum temperatures recorded for the day of the year.

Ave. Max. - Average of all daily maximum temperatures recorded for the day of the year.

Ave. Min. - Average of all daily minimum temperatures recorded for the day of the year.

Extreme Min. - Minimum of all daily minimum temperatures recorded for the day of the year.

- - - Threshold Events

Location, Extent & Probability of Future Events

Periods of elevated summertime high temperatures are certain to occur in the City of Portola. However, as a mountainous environment with a nearby river, the City of Portola is not generally subject to extreme heat as defined by FEMA. The high elevation (4,850 ft) in combination with typically dry conditions during hot periods results in substantial cooling during evenings and nighttime. Average high and low temperatures during the summer months typically swing as much as 45°F; providing significant relief and for cooling of the outdoor and indoor environments. Fortunately, even when daytime temperatures reach elevated levels it is typically only for a few hours. Therefore, the probability of an extreme heat event is considered low, with a resulting low severity. Structures and critical facilities would not be typically be directly impacted. However, any fire caused incidents could impact any structure.

Flood

Vulnerability: Very Likely

Risk: High

Floods are the most prevalent hazard in the United States and are considered the natural events when people and property can be most adversely affected. Due to their frequency and proximity to occupied structures and residences, floods present the highest distress rate of any natural hazard. Flooding of the Middle Fork of the Feather River typically occurs as excess water from rainfall and snowmelt runoff into streams and tributaries to the river, collect, and cause the rivers' water to overflow the riverbanks and flow onto the adjacent floodplain. Rainfall intensity, snow pack, topography and ground cover all impact the extent and magnitude of flooding observed.

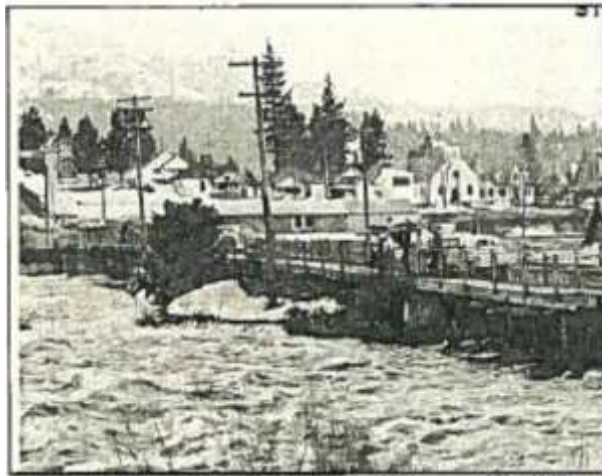


Image 7 – Historic Flooding of the Feather River (City source)

Due to its physical setting straddling the Middle Fork of the Feather River, and being confined in a river canyon, the City of Portola is at significant risk for flood damage, especially in low lying areas along the river. Historically floods have been a result of either “cloudburst storms” or general rainstorms. Cloudburst storms are unpredictable, high intensity storms of relatively short duration (<6 hours) which produce short duration peak flows and relatively small runoff volumes. General rainstorms are longer duration storms which produce large runoff volumes. The impacts of these storms can be exacerbated when the rainfall occurs over frozen ground or existing snowpack (Plumas County, California Flood Insurance Study). Burn areas can also exacerbate flooding conditions due to increased runoff and debris-laden flows.

Recent evaluations of the Gulling Street Bridge (2010, National Bridge Inventory, NBI Structure Number 09C0130) indicates that the bridge is scour critical. A specific study would be required to identify the risk and present specific recommendations for mitigation. In addition to the Gulling Street Bridge being located in the flood plain, a municipal water well and some of Portola’s housing are also located in the flood plain. (Figure 11)

In the Sierra Nevada Mountains, and City of Portola, inclement weather, including general rainstorms, are primarily expected from November through March when approximately 75% of the annual

precipitation falls. The month with the highest average precipitation is January, with 3.67 inches of precipitation, and an average snowfall of 16.0 inches.

FEMA flood insurance rate maps (2005) show the areas of the City that are subject to 100-year and 500-year floods. Figure 8 shows flood hazard areas in relationship to land use, to indicate types of parcels affected by the 100-year flood event. Flooding potential exists along both sides of the middle Fork of the Feather River. Two unnamed, minor tributaries which pass through Portola from the south also contribute to potential flood risk. The “Portola Tributary” (name assigned by FEMA, it is nameless on the USGS Quadrangle) to the north. The areas along the Middle Fork of the Feather River and the Portola Tributary are designated as FEMA flood Zone AE (areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods with Base Flood Elevations shown).

The unnamed tributaries which originate south of Portola are designated Zone A (areas subject to inundation by the 1-percent-annual-chance flood event determined using approximate methodologies). There are minor areas of designated 0.2 percent annual chance flood hazard (500 year flood hazard) along the Portola Tributary. The Grizzly Valley Dam also ultimately discharges to the Middle Fork of the Feather River.

History

Records from NOAA’s nearest gauging station on the Middle Fork of the Feather River indicate that the “action stage” of 7 feet has been exceeded regularly. Records also indicate that the “flood stage” of 8.5 feet was most recently reached on 3/17/2011 with a flood stage of 9.03 feet. Figure 8 also indicates FEMA Flood Zones within and immediately around the City limits. Table 4 presents those historic flood events which have exceeded the “action stage” within the period of record. Inserted with these historical events are characterizations of what those flood levels mean to the community.



Image 8 - Downstream View from Gage Location (Flood Stage 9')

Ref: [National Weather Service Photo](#)

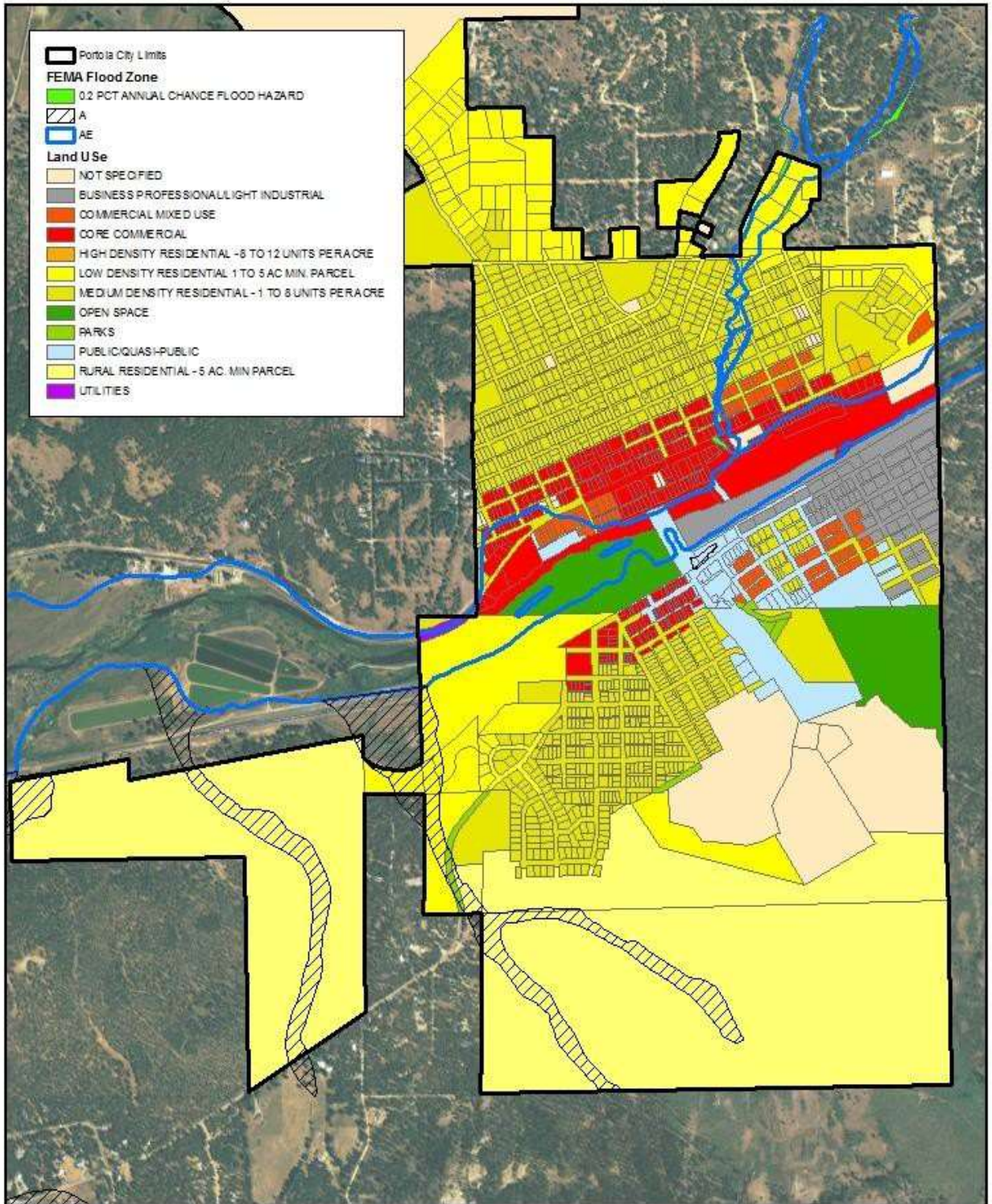


Figure 10 – FEMA Flood Zone Map

See Appendix 4

Table 4 – Measured Flood Levels & Dates (Sorted by Height above Action Stage)		
Event	Height Above Action Stage	Date
11' (8,400 cfs) Major Event - Record flooding of homes, businesses, structures, roads, railroads, and bridges from Beckwourth to Sloat California, including Portola. Before the gage record, this level was exceeded during the flood events of 2/21/1927, 3/26/1928, 4/6/1952, 12/23/1955, 2/1/1963, and 12/24/1964.		
1	10.62 ft	01/21/1969
10.5' (7,640 cfs) Major Event - Near record flooding with significant damage to roads, railroads, homes, businesses and structures along river with significant damage.		
2	10.07 ft	03/27/1971
10' (6,450 cfs) Moderate Event - Flooding of lowlands, structures, and roads from Beckwourth to Sloat, including Portola. Sleepy Pines Motel and other low structures along river in Portola flood. Evacuation of homes on south end of West Street likely to begin. Sewage ponds in Portola may exceed capacity and may need to release to river. River near foundation of Veterans Hall in Portola.		
3	9.56 ft	01/14/1980
9.5' (5,600 cfs) Moderate Event - Flooding of lowlands, roads, and low-lying structures in reach from Beckwourth to Sloat California, including Portola. In Portola, Sleepy Pines Motel on CA Hwy 70 begins to experience some minor flooding. Water near bottom of large propane tanks along Hwy 70. South end of West Street floods. River encroaches within about a foot of the Veterans' Hall foundation and some low homes along river.		
4	9.11 ft	01/25/1980
5	9.03 ft	3/17/2011
9' (4,800 cfs) Minor Event - Flooding of lowlands, rural roads, agricultural areas, and some low structures between Beckwourth and Sloat California, including Portola. In Portola water encroaches within CA Hwy 70 road surface. Water level is nearing the Sleepy Pines Motel and is just below the propane tanks on Hwy 70. The south end of West Street floods.		
8.5' (4,100 cfs) Flood Stage - Some minor lowland flooding in reach between Beckwourth and Sloat California, including Portola.		
6	8.17 ft	03/31/1974
8' (3,440 cfs) – Minor Event - Some areas of minor out of bank flow in reach between Beckwourth and Sloat California, including Portola.		
7	7.74 ft	03/27/1975
8	7.73 ft	01/17/1978
7.5' (2,850 cfs) Action Stage Event - Some areas of very minor out of bank flow in reach between Beckwourth and Sloat, California. No incidents reported for Portola.		
9	7.32 ft	01/18/1973
http://water.weather.gov/ahps2/hydrograph.php?wfo=rev&gage=mftc1		

Location, Extent & Probability of Future Events

Areas within the 100-year flood zone are considered high flood hazard areas as previously indicated in Figure 10. The City of Portola participates in the National Flood Insurance Program (NFIP). As a result, all new development within the floodplain requires certification that the proposed development within floodplain will be raised above the 100-year water surface and that any proposed structures will not increase flood depths or velocities on adjacent properties. In addition, the NFIP requires owners of property within the designated flood zones to purchase flood insurance. No NFIP structures have been reported as experiencing repetitive claims from flooding. The sewage treatment plant is mapped within the 100-year flood plain, as is a pump house for a City well.

Severe Weather

Severe weather encompasses several phenomena that can alternately govern and be the most critical of a weather event or not even be present. Below you will find a general discussion of Severe Weather in Portola, however, only **Hail, Windstorms, and Thunderstorms** are profiled as subhazards because they have a higher level of vulnerability and risk. Microbursts, Tornadoes, and Monsoonal Flows have lower vulnerability and risk.

- Hail
 - Vulnerability: Likely**
 - Risk: Moderate**
- Lightning
 - Vulnerability: Very Likely**
 - Risk: Low**
- Microbursts
 - Vulnerability: Unlikely**
 - Risk: Low**
- Thunderstorms
 - Vulnerability: Very Likely**
 - Risk: Moderate**
- Tornadoes
 - Vulnerability: Unlikely**
 - Risk: Low**
- Windstorms
 - Vulnerability: Very Likely**
 - Risk: Moderate**

- **Monsoonal Flows**

Vulnerability: Likely

Risk: Low

Each of these phenomena can present special considerations that may or may not alone present a hazard. However, when considered in tandem they present the increased likelihood of a damaging event.

Severe weather is most commonly associated with the term thunderstorm. Thunderstorms develop when warm, moist, air rises and condenses as it cools at the higher altitudes. As the moisture condenses it causes the surrounding air to continue to warm, intensifying the instability in the air mass. Thunderstorms present a potential for both direct and indirect hazardous impacts and manifest several different weather phenomena during their occurrence. Direct impacts and various specific phenomena include: hail, lightning, microbursts (wet and dry), and windstorms (including tornadoes). Unfortunately, indirect impacts can present more significant threats and include: flash flooding and wildfires.

- Hail is formed due to cyclical freezing and partial thawing as particles alternately fall and get carried back up in strong updrafts in an unstable air mass. FEMA considers a thunderstorm severe when hail exceeds $\frac{3}{4}$ inch.
- Lightning develops as liquid and ice particles collide and discharge electrons, causing the buildup large electrical fields. Once those fields become large enough, the field ‘sparks’ creating a lightning strike. The insulation properties of air allow the fields to become exceptionally large before discharge. Dry lightning can also occur, increasing the potential for wildfire.
- Windstorms form from both thunderstorms and occur near a storm/low pressure edge. Strong winds form in advance of low-pressure systems, or as severe pressure gradients develop as high mountain air cools in close proximity to warmer valley air such as occurs with the Washoe Zephyrs along the eastern flank of the Sierra Nevada Mountains. FEMA considers wind speeds severe when velocities exceed 58 miles per hour.
- Tornadoes are high energy, rotating, columns of air which typically occur at the trailing edge of a very strong thunderstorm. The most violent tornadoes can produce wind speeds exceeding 250 miles per hour. Tornadoes can occur in any state, but because they are spawned by a cold air mass overriding a layer of warm air, they occur more frequently east of the Rocky Mountains. Figure 11 presents Tornadoes in and around the Portola area.
- Microbursts can produce wind damage (dry or wet) and localized flooding (wet) as intense rainfall concentrates in available channels such as streets, streams, and rivers.
- Monsoonal flows usually begin to develop off the coast of Baja and come up the desert across the Sierra Nevada from the east. The moist air flowing into New Mexico and Arizona hits the mountains and begins to rise, expanding and cooling. The air temperature decreases, releasing rain. Monsoonal flows can trigger large amounts of rain leading to an increase potential for isolated flooding.

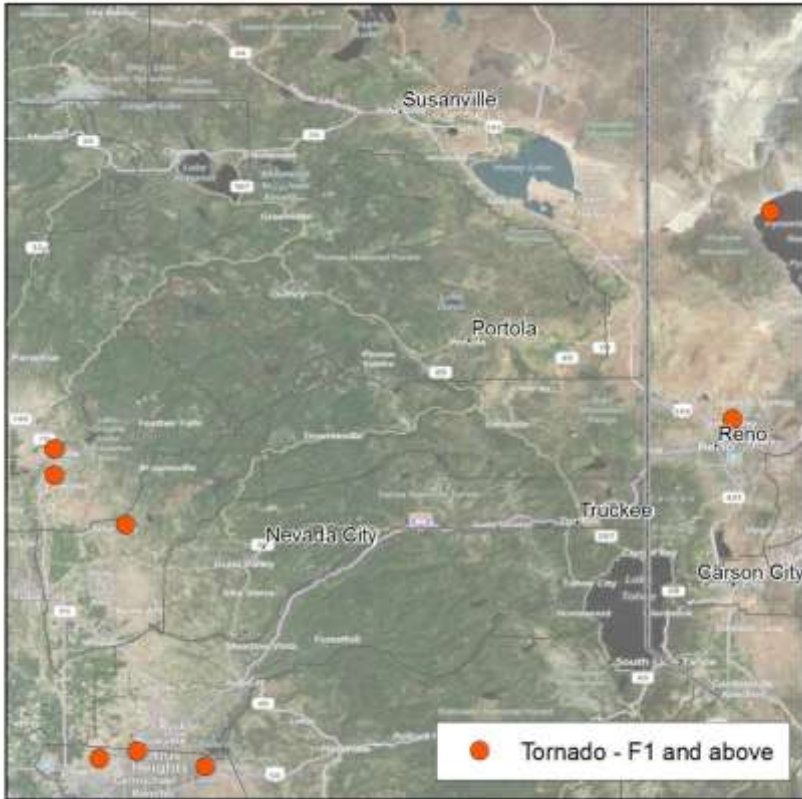


Figure 11 – History of Tornadoes in the Portola Vicinity

Subhazard: Hail

Vulnerability: Likely

Risk: Moderate

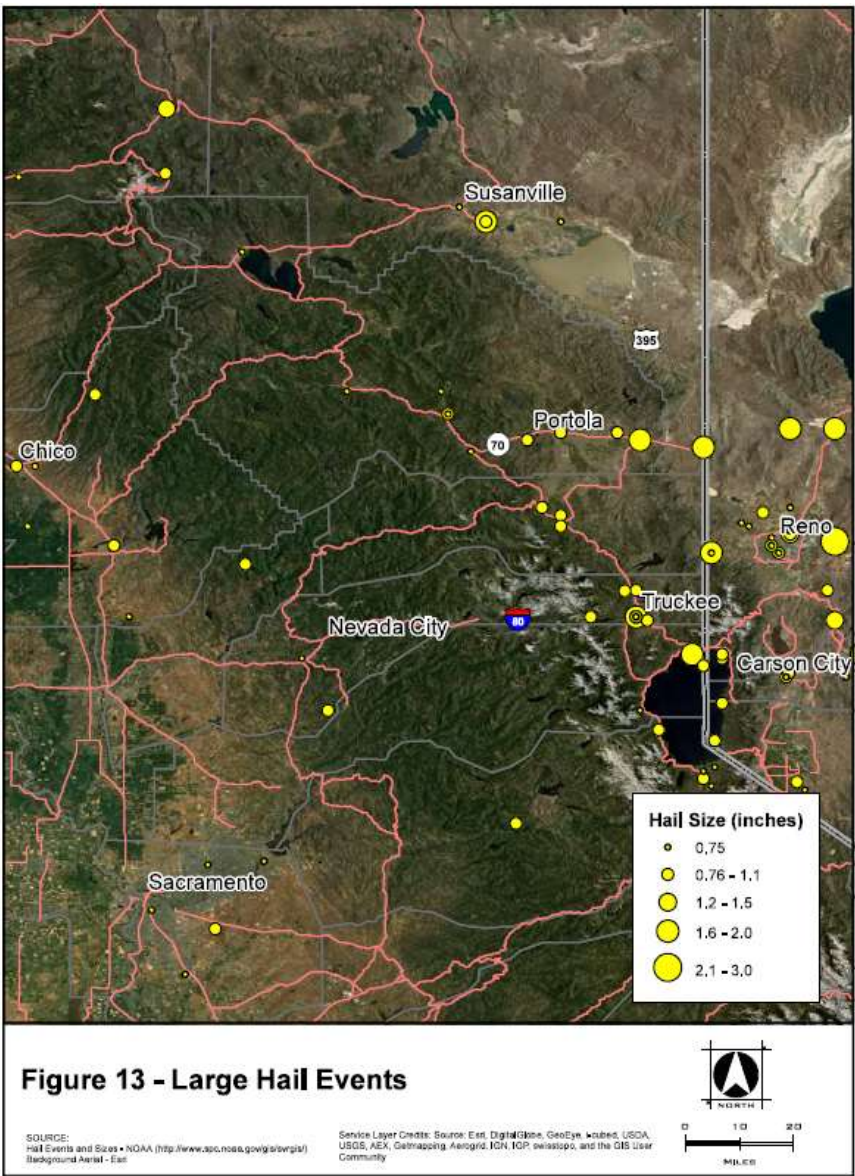
Hail is formed due to cyclical freezing and partial thawing as particles alternately fall and get carried back up in strong updrafts in an unstable air mass. FEMA considers a thunderstorm severe when hail exceeds $\frac{3}{4}$ inch. Figure 13 depicts large hail events around Portola, with several event with hail between .76 to 1.1 inches.

History

Table 6 presents historical data regarding injuries, fatalities, and property and crop damage for reported severe weather events within the County.

Table 6 – History of Reported Severe Weather Events						
Date	Hazard	Injuries	Fatalities	**Property Damage	**Crop Damage	Remarks
6/26/2000	Severe Weather	0	0	131.65	0	Hail
3/2/1962	Winter Storm	0.02	0.03	640.42	0	Hail
7/22/2003	Severe Weather	0	0	0	6,190.48	Wind, glaze, & hail

* Injuries and Fatalities reported as incidents.
 ** Property Damage in dollars, corrected to 2011 values.



Location, Extent & Probability of Future Events

Large hail events in Portola are generally associated with thunderstorms. The most damaging thunderstorms in the United States typically occur in the South and Midwest where thunderstorms frequently generate tornadoes and extremely large hail. While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience large hail and/or high winds (including windstorms and microbursts) would be considered low, however the potential severity would be considered moderate.

Subhazard: Windstorms

Vulnerability: Very Likely

Risk: Moderate

Windstorms form from both thunderstorms and occur near a storm/low pressure edge. Strong winds form in advance of low-pressure systems, or as severe pressure gradients develop as high mountain air cools in close proximity to warmer valley air such as occurs with the Washoe Zephyrs along the eastern flank of the Sierra Nevada Mountains. FEMA considers wind speeds severe when velocities exceed 58 miles per hour. Figure 12 depicts high wind events around Portola.

History

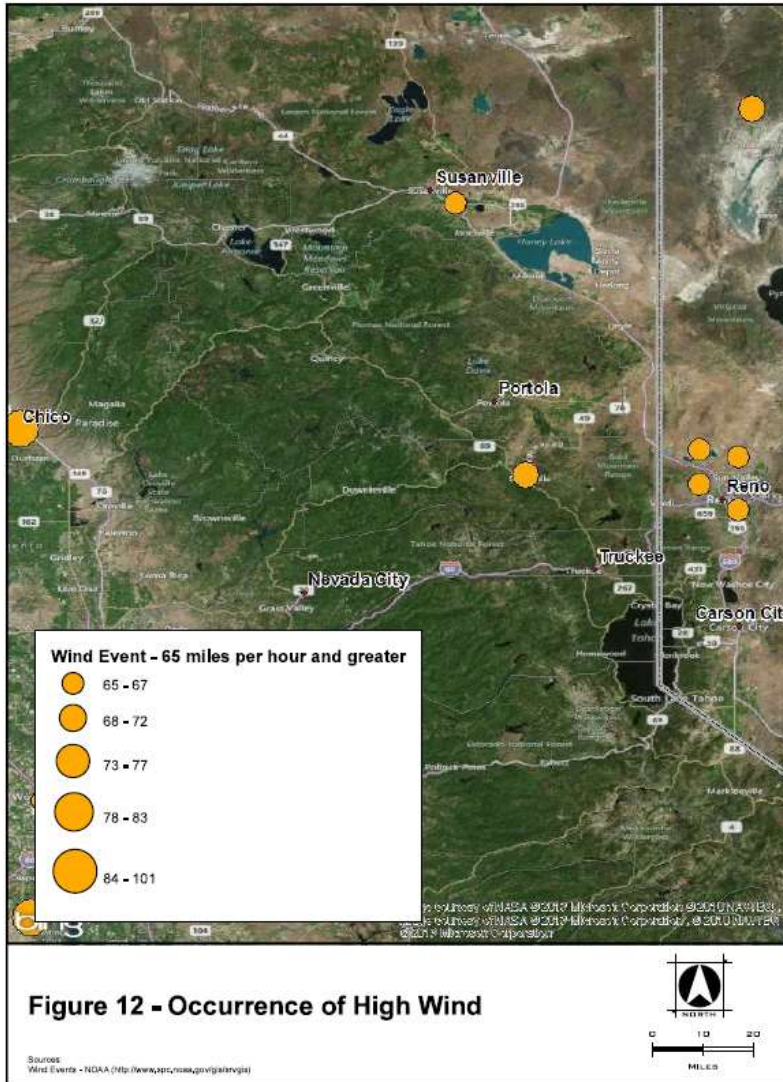
Table 5 summarizes the Beaufort Wind Scale which provides an indication to wind strength and level established for risk consideration.

Table 5 – Beaufort Wind Scale (Developed in 1805 by Sir Francis Beaufort of England)			
Force	Wind (mph)	WMO Classification	Appearance of Wind Effects on Land
0	Less than 1	Calm	Calm, smoke rises vertical
1	1 – 3½	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4½ – 7	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	8 – 11½	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	12½ – 18	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	20 – 24	Fresh Breeze	Small trees in leaf begin to sway
6	25 – 31	Strong Breeze	Larger tree branches moving, whistling in wires
7	32 – 38	Near Gale	Whole trees moving, resistance felt walking against wind

8	39 – 46	Gale	Twigs breaking off trees, generally impedes progress
Hazard Threshold @ 50 mph			
9	47 – 54	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	55 – 63	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	64 – 72	Violent Storm	Not Characterized
12	74+	Hurricane	Not Characterized
http://www.spc.noaa.gov/faq/tornado/beaufort.html			

Table 6 presents historical data regarding injuries, fatalities, and property and crop damage for reported severe weather events (wind) within the County.

Table 6 – History of Reported Severe Weather Events						
Date	Hazard	Injuries	Fatalities	**Property Damage	**Crop Damage	Remarks
6/26/2000	Severe Weather	0	0	131.65	0	Hail
3/2/1962	Winter Storm	0.02	0.03	640.42	0	Hail
7/22/2003	Severe Weather	0	0	0	6,190.48	Wind, glaze, & hail
* Injuries and Fatalities reported as incidents.						
** Property Damage in dollars, corrected to 2011 values.						



Location, Extent & Probability of Future Events

High wind events in Portola are generally associated with thunderstorms. The most damaging thunderstorms in the United States typically occur in the South and Midwest where thunderstorms frequently generate tornadoes and extremely large hail. While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience large hail and/or high winds (including windstorms) would be considered low, however the potential severity would be considered moderate.

Subhazard: Thunderstorms

Vulnerability: Very Likely

Risk: Moderate

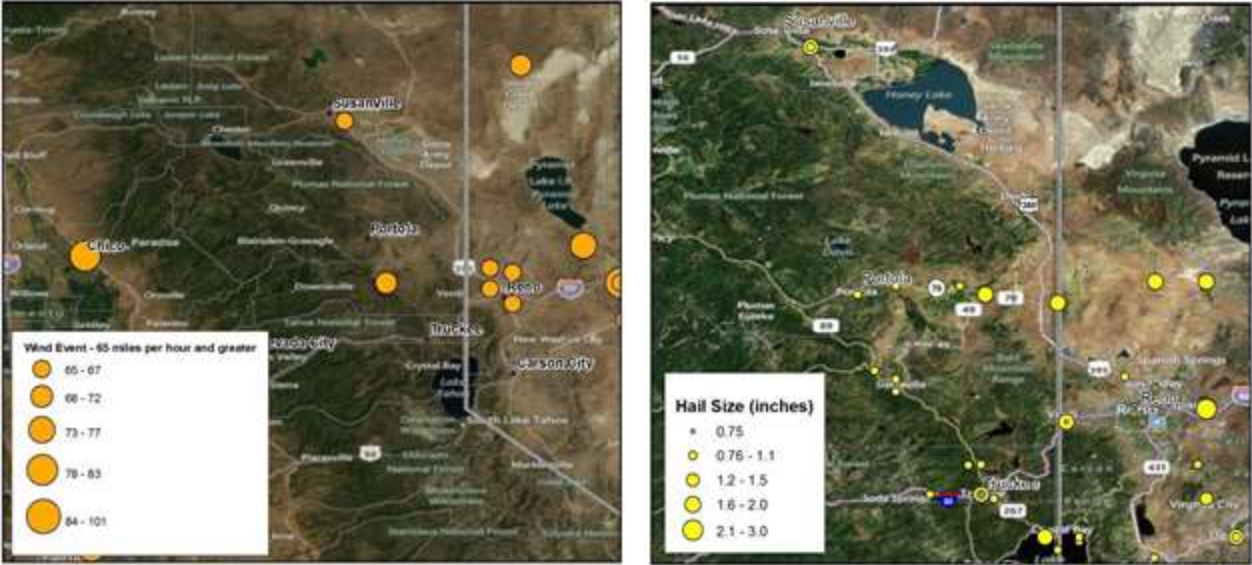
Moderate thunderstorms are a regular occurrence in the Plumas County region and have resulted in both injuries and deaths as reported by SHELUDS. Figures 12 and 13 (also above in windstorm and hail subhazards present specific incidents of large hail and high winds as reported by NOAA. However, because the incidents occurred separately, the frequency of events indicated in the graphics would not be equal to the frequency of severe storm events.

Lightning strikes present a relatively high incidence of occurrence; and a significant risk factor when considering the potential to ignite a wildfire (refer to the section on Wildfires for further discussion). Flash flooding, fueled by wet microbursts and downpours, although localized can cause extensive damage. However, the potential for an occurrence which would result in a significantly adverse impact to the overall community is low and flash floods are not considered to present a specifically identifiable risk that can be reasonably mitigated.

History

Table 6 presents historical data regarding injuries, fatalities, and property and crop damage for reported severe weather events (hail, windstorms, thunderstorms) within the County.

Table 6 – History of Reported Severe Weather Events						
Date	Hazard	Injuries	Fatalities	**Property Damage	**Crop Damage	Remarks
6/26/2000	Severe Weather	0	0	131.65	0	Hail
3/2/1962	Winter Storm	0.02	0.03	640.42	0	Hail
7/22/2003	Severe Weather	0	0	0	6,190.48	Wind, glaze, & hail
* Injuries and Fatalities reported as incidents.						
** Property Damage in dollars, corrected to 2011 values.						



Figures 12 & 13 – Occurrence of High Wind and Large Hail Events around Portola
 Ref: <http://www.spc.noaa.gov/gis/svrgis/>

Location, Extent & Probability of Future Events

The most damaging thunderstorms in the United States typically occur in the South and Midwest where thunderstorms frequently generate tornadoes and extremely large hail. While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience thunderstorms would be considered moderate.

Lightning strikes present a relatively high incidence of occurrence; and a significant risk factor when considering the potential to ignite a wildfire (refer to the section on Wildfires for further discussion). Flash flooding, fueled by wet microbursts and downpours, although localized can cause extensive damage. However, the potential for an occurrence which would result in a significantly adverse impact to the overall community is low and flash floods are not considered to present a specifically identifiable risk that can be reasonably mitigated.

Wildfire

Vulnerability: Very Likely

Risk: High

Wildfire is an uncontrolled fire that spreads through forests, and across mountains and deserts. Unfortunately, land use, weather patterns, and climate change have altered natural fire regimes. In addition, historical practices of fire suppression are now viewed to have resulted in creating forests with large fuel loads that are primed to burn. Figure 14 indicates the City of Portola is surrounded by woodlands with moderate to very high fuel loads. Vegetation type, fuel moisture values, and fuel density around a community affect the potential fire behavior. Areas with dense, continuous, vegetative fuels carry a higher hazard rating than communities situated in areas of irrigated, sparse, or non-continuous fuels. Several consecutive years of above normal precipitation can result in excessive growth and ground litter which offsets the benefits of increased participation by providing an additional fuel source.

In addition to local weather conditions, topographic features also influence fire behavior. Fire usually burns upslope with greater speed and with longer flame lengths than on flat areas. Fire also burns downslope, but usually burns downhill at a slower rate and with shorter flame lengths, making steeper slopes more critical. West and south facing aspects are subject to more intense solar exposure, which preheats vegetation and lowers the moisture content of fuels. Canyons, ravines, and saddles are topographical features that are prone to higher wind speeds than adjacent areas. Fires pushed by winds grow at an accelerated rate compared to fires burning in non-windy conditions. Homes built mid-slope, at the crest of slopes, or in saddles are most at risk due to wind-prone topography in the event of a wildfire.

Post fire debris flows present a unique hazard in that the conditions that are necessary for the hazard to develop have not yet impacted the community or its immediate vicinity. Once wildfires burn and scar the topography flash floods and debris flows become critical. Deforestation and destabilization of the forest floor allows even small amounts of precipitation to lead to flash floods and debris flows. Runoff becomes heavily laden with sediment and rock and flows with increased velocities and can lead to the destruction of culverts, bridges, structures, and roadways. Mud and debris flows undermine culverts and drainage facilities, cover roadways, reroute water ways, choke channels with sediments and debris, threaten municipal surface water sources.

Portola has an active history of fire ignitions within the Wildland-Urban Interface (WUI), a five-mile buffer around the City. In 1988 a lightning caused fire burned 783 acres directly south of the high school, well within the City limits. In 2008 the "Cold" fire burned approximately ten square miles about fifteen miles to the west of Portola. Figure 14 presents a graphic of fire history and ignition points for areas in and around the City of Portola.

Ignition risks fall into two general categories, lightning and human caused. Human caused ignitions that have occurred within the WUI come from a variety of sources: equipment uses, debris burning, playing with fire, arson, and campfires. As can be seen in Figure 15, next to lightning strikes, campfires

and playing with fire present the greatest occurrences of ignition. Historical burn areas (red crosshatch) are also indicated in Figure 15.

Figure 14 – Fuel Loads (See Appendix 4)

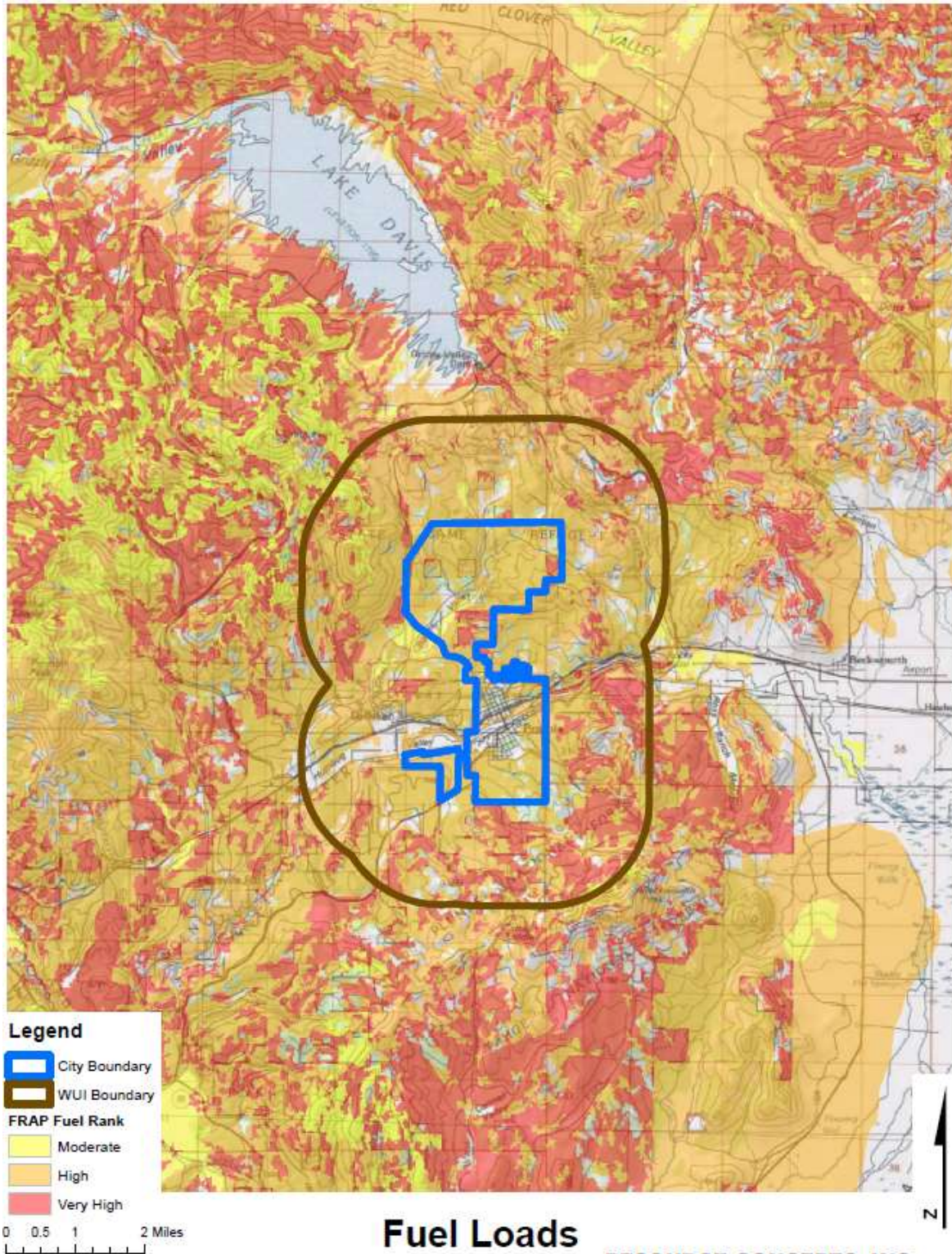
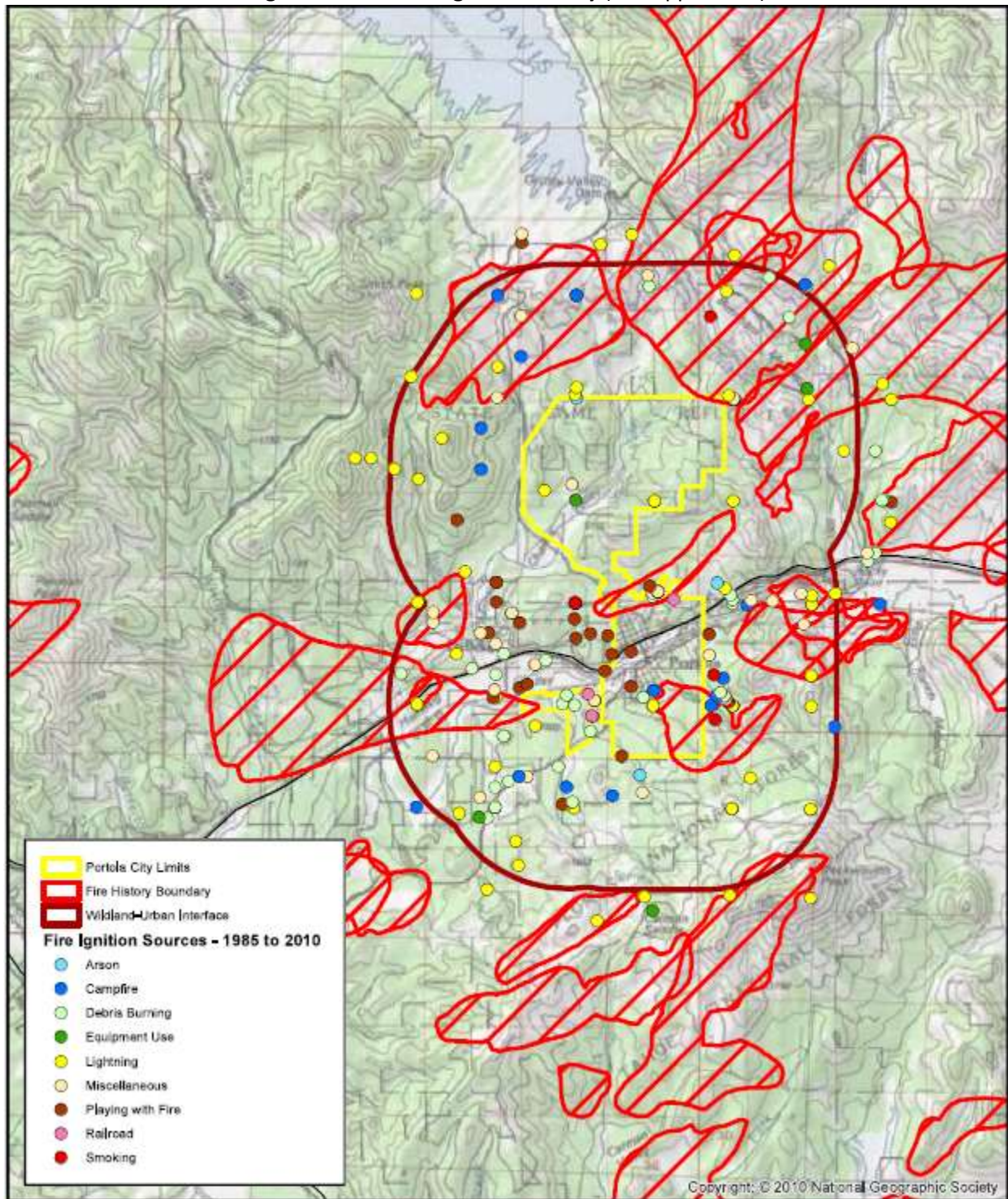


Figure 15 – Fire and Ignition History (See Appendix 4)



Location, Extent & Probability of Future Events

The worst-case scenario wildland fire in the Portola WUI would be wind driven crown fire late in the fire season when fuel moisture is at its lowest. These conditions in combination with hot and dry weather, steep slopes, or high winds can create a situation in which the worst-case fire severity scenario can occur. The ignition source could be either a lightning strike or structure fire. Given the frequency of lightning strikes, number of human driven ignitions, and frequency of historical events, the probability of future events should be considered high.

Depending on how closely the wildfire approaches Portola, the City could have much at risk. The high school and hospital are both near the perimeter of the town and therefore somewhat more exposed. Current proposed future development for the City is also located on the outside edge of the City, adjacent to woodland urban interfaces, increasing the fire risk. Incidental drainages and stream locations become more critical with post fire debris flows as they can serve as a main channel or conduit to funnel mud and debris to areas typically outside the stream's immediate influence area.

Winter Storm & Extreme Cold

Vulnerability: Very Likely

Risk: Low

Winter storms are relatively common in the Sierra Nevada Mountains and in the Portola area. Snow accumulations of 20 to 30 inches per event can occur. The maximum daily snowfall recorded since 1/1/1915 resulted in an accumulation of approximately 40 inches (Portola Western Regional Climate Center). Image 9 shows the effect of a notable winter event, as residents had to get out their shovels to remove snow from the rooftops.



Image 9 – Snow Removal from Rooftops on Gulling Street

Severe winter storms are classified as a blizzard if wind speeds exceed 38 mph and temperatures drop to less than 21°F. While extreme cold in the Sierras is not common, atmospheric conditions can occur which push temperatures below 0°F. Cold air outbreaks, extreme cold, have been characterized as two or more days more in which the daily mean temperature is more than 2 standard deviations below daily mean temperature for December, January, and February. Based on a crude examination of Figure 15, this would indicate two consecutive days with temperatures below 5 to 10°F. The WRCC data shows extreme low temperatures reaching -30°F, but the lowest average low is about 10°F. Winter storms and extreme cold can knock out power, immobilize travel and hamper service crews and repair vehicles, isolate residents in remote areas, and impede access to critical facilities and goods and services. Older structures, not consistent with current code requirements, can become distressed due to large snow loads.

History

Evidence or records of deaths or injuries due to winter storms or extreme cold have not been presented for the City of Portola as documented in SHELUDS. However, as indicated in Figure 15, isolated and relatively limited periods of extreme cold have occurred in the past. The average winter minimum temperature for Portola is typically between 10 and 20°F. All-time record low temperatures have been reported near -30°F and periods of extended temperatures below 30°F have occurred. Figure 7 provides an indication as to the frequency of extreme cold events since 1915.

Location, Extent & Probability of Future Events

Because of Portola's location and elevation (+/- 4850 feet), winter storms, wintertime freezing temperatures, and windows of extreme cold are to be anticipated. Portola's limited size and geographic setting will serve to make the impact on the community relatively uniform, although effects should be anticipated to worsen with elevation.

Heat, power, and communications can be knocked out by winter events and extreme cold. Alternate emergency energy sources, such as generators and kerosene heaters, can present a secondary hazard to the citizenry as both generate carbon monoxide. Alternative energy sources in combination with enclosed air spaces present a risk that can be more critical than cold or extreme weather. The surrounding mountains and passes will impede community access during moderate to extreme events. Extent and severity of winter storms is generally predicted several days prior to the first snowflakes falling, so ample time is available for preparation of public snow removal equipment and "stocking up" on necessities for residents.

2019 City of Portola Local Hazard Mitigation Plan Update

Climate Change Vulnerability Assessment

As California confronts mounting climate change impacts, local governments are now required, in accordance with SB 379, to include a climate change vulnerability assessment, measures to address vulnerabilities and comprehensive hazard mitigation and emergency response strategies.

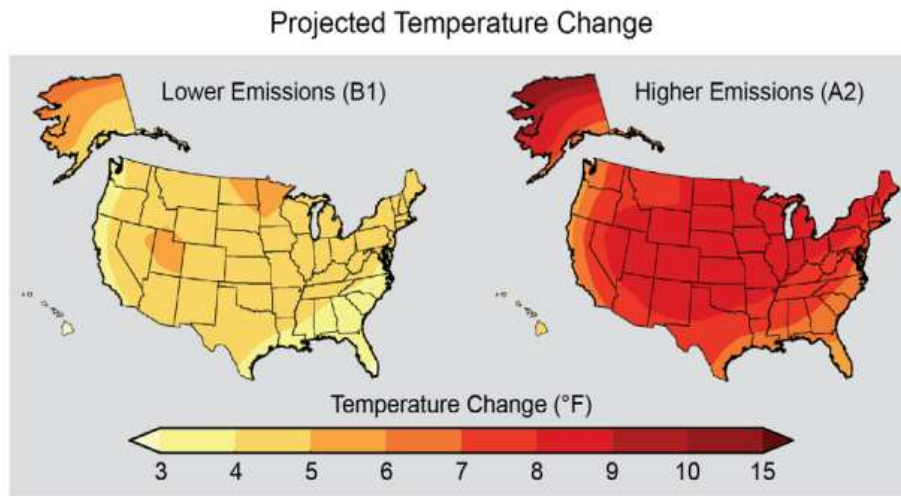
An increasingly important factor affecting disaster management functions is climate change. Climate change reflects new uncertainties and factors shaping and conditions hazard mitigation planning. The burning of fossil fuels (coal, oil, and natural gas) at escalating quantities has released vast amounts 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 in precipitation patterns, the global water cycle, melting glaciers and ice caps, and rising sea levels. According to the Intergovernmental Panel on Climate Change (IPCC), climate change will “increase the likelihood of severe, pervasive and irreversible impacts for people and ecosystems” if unchecked.

California is leading the efforts in the United States in introducing legislation and providing tools and incentives to local governments to help reduce greenhouse gases emissions. The state is also taking action to prepare for the impacts of climate change, including the increased likelihood of flooding and wildfires, which are high vulnerability risks for the City of Portola.

Among the initiatives being implemented in California is Senate Bill (SB) 379 (Jackson). This bill requires cities and counties to address climate adaptation and resiliency strategies applicable to the city or county. Local officials are given an option to enact the requirements of this bill, within the update of their Local Hazard Mitigation Plans on, or after January 1, 2017. Accordingly, the following vulnerability assessment for climate change within the City of Portola will discuss the risks climate change poses, as well as the impacts to existing vulnerabilities.

According to the California Natural Resource Agency (CNRA), climate change has already had an effect on California. It is projected that the effects will continue and will be seen through changes that include increased temperatures, sea level rise, a reduced winter snowpack, altered precipitation patterns, and more frequent storm events. Considering mitigation actions to help reduce the impacts from climate change will be noted in the mitigation actions section of this plan and will consider secondary consequences of climate change including the impacts on human health and safety, economic continuity, ecosystem integrity and provision of basic services.

Figure 1: Projected Temperature Change- Lower and Higher Emissions Scenario



Source: National Climate Assessment

The CNRA's 2014 Climate Adaptation Strategy (CAS) delineated how climate change may impact and exacerbate natural hazards in the future, including wildfires and flooding:

- Droughts are likely to become more frequent and persistent in the 21st century.
- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect California with more frequent and/or more extensive flooding.
- Storms and snowmelt may coincide and produce higher winter runoff from the landward side, while accelerating sea-level rise will produce higher storm surges during coastal storms. Together, these changes may increase the probability of floods and levee and dam failures, along with creating issues related to salt water intrusion.
- Warmer weather, reduced snowpack, and earlier snowmelt can be expected to increase wildfire through fuel hazards and ignition risks. These changes can also increase plant moisture stress and 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, watershed and water quality impacts, vegetation conversions and habitat fragmentation.

Figure 2: Summary of Cal-Adapt Climate Projects for the North Sierra Regions

EFFECT	RANGES
Temperature Change, 1990-2100	January increase in average temperatures: 2.5°F - 4°F by 2050 and 6°F - 7°F by 2100. The largest changes are observed in the southern part of the region. July increase in average temperatures: 4°F - 5°F by 2050 and 10°F by the end of the century, with the greatest changes in the northern part of the region. (Modeled average temperatures; high emissions scenario.)
Precipitation	Precipitation decline is projected throughout the region. The amount of decrease varies from 3" to 5" by 2050 and 6" to more than 10" by 2100, with the larger rainfall reductions projected for the southern portions of the region. (CSM3 climate model; high carbon emissions scenario.)
Heat Wave	Heat waves are defined as five consecutive dates over 83°F to 97°F depending on location. By 2050, the number of heatwaves per year is expected to increase by two. A dramatic increase in annual heat waves is expected by 2100, with to 10 more per year.
Snowpack	Snowpack levels are projected to decline dramatically in many portions of the region. In southern portions of the region, a decline of nearly 15" in snowpack levels- a more than 60% drop- is projected by 2090. (CCSM3 climate model; high carbon emissions scenario.)
Wildfire Risk	Wildfire risk is projected to increase in a range of 1.1 to 10.5 times throughout the region, with the highest risks expected in the northern and southern parts of the region. (GFDL climate model; high carbon emissions scenario.)

Public Interest Energy Research, 2011. Cal-Adapt (retrieved from <http://cal-adapt.org>)

VULNERABILITY ASSESSMENT

The California Adaptation Planning Guide (APG) provides further input on adaptation considerations for the North Sierra Region. The North Sierra is a mountainous region that is very sparsely settled with a few cities scattered along primary transport routes. The vast majority of the regional resident reside outside of Plumas County; +/- 20,000 of the region’s +/- 808,000 population live in Plumas County, with +/- 2,104 residents living in the City of Portola.

Climate change impacts that should be evaluated by communities located in the North Sierra region include the following:

- Increased temperature
- Decreased precipitation
- Reduced snowpack
- Reduced tourism
- Ecosystem change
- Sensitive species stress
- Increased wildfire

The North Sierra is rich in natural resources. It is the source for the majority of the water used by the State and home to a varied landscape supporting rich biodiversity.

In the past, this region relied on industries such as mining, timber production, and agriculture. Population growth in recent decades has shifted the region's economy to be driven by the provision of services, tourism, and second home development (Sierra Business Council, 2007). Today, the region's economy is primarily tourism-based. Climate change has the potential to disrupt many features that characterize the region, including ecosystem health, snowpack, and the tourist economy.

The specific regional impacts outlined in the APG include the following:

Ecosystems and Biodiversity

One of the biggest threats to the ecosystems of the North Sierra is development pressure, second home development, and agriculture (including timber). While these pressures are not caused by climate change, they interact with the changes in climate to further stress ecosystems and endemic species. Climate change can cause habitats to shift, creating conditions inhospitable to these species (CDFG, 2007). As a result, plant and animal species tend to migrate either up in elevation or farther north. Development can limit opportunities for migration and also introduce non-native species, which can further damage habitat. Timber practices have also had ecosystem consequences that are exacerbated by climate change. The timber industry has resulted in forests with trees of similar age, lacking snags and underbrush. These management practices reduce the diversity of the habitat. In addition, logging road construction and fire suppression has also altered these habitats (CDFG, 2007). The most altered habitat in the Sierra is aquatic and riparian systems. The causes of this change include development and water diversion (CDFG, 2007). Changes in hydrologic flow regime and increased temperature will further stress these systems, which are home to many special-status species. *** Limited impact/severity to Portola; hazard not reviewed.*

Reduced Snowpack and Flooding

The North Sierra snowpack serves as a reservoir for the rest of the state. The climate-related decrease in snowpack therefore will have dramatic consequences on the lowland area that depends on this water. In addition, the snowpack decrease may cause the North Sierra region to experience detrimental impacts from flooding, landslide, and loss of economic base (e.g., skiing). These flood events are likely to put additional pressure on water infrastructure and increase the chance of flooding along waterways. Flooding and damage to infrastructure can put large populations at risk (CDPH, 2008). The populations at risk include the elderly and children, who are isolated or dependent on others for evacuation. Populations that lack the resources or knowledge to prepare or respond to disaster due to language barriers or economic status, including having access to transportation, which would allow them to escape, at least temporarily, flooding also may be at risk (English et al., 2007). *** Flooding has been addressed as a high severity hazard in Portola and is reviewed in the LHMP with mitigation measures.*

Wildfire

Climate change is projected to result in large increases in wildfire frequency and size which will further compound the wildfire problem. In addition, potential impacts following fires, such as heavy rains causing landslide and erosion in post-burn areas can have significant consequences on waterways and entire watersheds. Despite the fact that the ecosystems in the North Sierra have evolved with recurring fire, there is a long history of fire suppression in the North Sierra region. Recently, fire has been recognized as a critical part of ecosystem function (CDFG, 2007). The challenge is twofold: (1) a century of built-up fuel due to suppression cannot be remedied quickly, and (2) the number of structures that

have been built throughout the region make it difficult to let fires burn. *** Wildfire has been addressed as a high severity hazard in Portola and is reviewed in the LHMP with mitigation measures.*

Public Health, Socioeconomic, and Equity Impact

Increased temperatures throughout the North Sierra can cause vulnerable populations to be at greater risk to these issues. In addition to the elderly population found in this region, people who work and play outdoors are also vulnerable. *** Limited impact/severity to Portola; hazard not reviewed.*

Future Development

The North Sierra region could see population fluctuations as a result of climate impacts relative to those experienced in other regions, and these fluctuations are expected to impact demand for housing and other development state and nationwide. For example, sea level rise may disrupt economic activity and housing in coastal communities, resulting in migration to inland areas. Other interior western states may experience an exodus of population due to challenges in adapting to heat even more extreme than that which is projected to occur here. While there are currently no formal studies of specific migration patterns expected to impact the City of Portola, climate-induced migration was recognized within the UNFCCC Conference of Parties Paris Agreement of 2015 and is expected to be the focus of future studies. *** Limited impact/severity to Portola; hazard not reviewed.*

Impact on Development

Research has shown the possibility for the increased demand for smaller homes that require fewer resources, use less energy, are easier to maintain and can be more readily adapted or moved in response to changing conditions related to climate change. Compact, mixed-use and infill developments that can help residents avoid long commutes and vulnerabilities associated with the transportation system will likely continue to grow in popularity. The value of open space and pressure to preserve it will likely increase, due in part to its restorative, recreational, environmental and habitat benefits but also for its ability to sequester carbon, help mitigate the accumulation of greenhouse gas in the atmosphere and slow down the global warming trend. Higher flood risks, especially if coupled with increased federal flood insurance rates, may decrease market demand for housing and other types of development in floodplains, while increased risk of wildfires may do the same for new developments in the urban-wildland interface. Flood risks may also inspire new development and building codes that elevate structures while maintaining streetscapes and neighborhood characteristics. *** Any impact from development is reviewed within each hazard.*

Stress on water resources

While the APG states that water is an issue in every region, it is particularly significant to the North Sierra. Drought, related to reduced precipitation, increased evaporation, and increased water loss from plants, is an important issue in many U.S. regions, especially in the West. Floods, water quality problems, and impacts on aquatic ecosystems and species are likely to be amplified by climate change. The ability to secure and provide water for new development requires on-going monitoring. It is recommended that the ability to provide a reliable water supply from the appropriate water purveyor, continue to be in the conditions for project approval, and such assurances shall be verified and in place prior to issuing building permits. Protecting and enhancing water supply: California's Sustainable Groundwater Management Act (SGMA) will contribute to addressing groundwater and aquifer recharge needs. Good groundwater management will provide a buffer against drought and climate change and contribute to reliable water supplies regardless of weather patterns. California depends on groundwater for a major portion of its annual water supply, and sustainable groundwater management is essential to a reliable and resilient water system. Protection of critical recharge areas should be

addressed across the County in the respective Groundwater Management Plans. Further, these plans should include provisions that guide development or curtail development in areas that would harm or compromise recharge areas. *** Limited impact/severity to Portola; hazard not reviewed.*

Protecting and enhancing water supply

California's Sustainable Groundwater Management Act (SGMA) will contribute to addressing groundwater and aquifer recharge needs. Good groundwater management will provide a buffer against drought and climate change and contribute to reliable water supplies regardless of weather patterns. California depends on groundwater for a major portion of its annual water supply, and sustainable groundwater management is essential to a reliable and resilient water system. Protection of critical recharge areas should be addressed across the County in the respective Groundwater Management Plans. Further, these plans should include provisions that guide development or curtail development in areas that would harm or compromise recharge areas. *** Limited impact/severity to Portola; hazard not reviewed.*

Effects on transportation

The transportation network is vital to the North Sierra and the region's economy, safety, and quality of life. While it is widely recognized that emissions from transportation have impacts on climate change, climate will also likely have significant impacts on transportation infrastructure and operations. Examples of specific types of impacts include softening of asphalt roads and warping of railroad rails; damage to roads; flooding of roadways, rail routes, and airports from extreme events; and interruptions to flight plans due to severe weather. Climate change impacts considered in the plan include: extreme temperatures; increased precipitation, runoff and flooding; increased wildfires; and landslides. Although landslides are not a direct result of climate change, these events are expected to increase in frequency due to increased rainfall, runoff, and wildfire. These events have the potential to cause injuries or fatalities, environmental damage, property damage, infrastructure damage, and interruption of operations. During flood events, trails serve as secondary transportation facilities when roadways are blocked or otherwise impassible. Including dual or multi-purpose facilities and amenities as part of all new development provides not just desirable community amenities but critical infrastructure for climate resiliency. *** Limited impact/severity to Portola; hazard not reviewed.*

Effect on Land Uses and Planning

Development could be impacted by climate change, shifting demographics and market conditions. Demand may increase for smaller dwellings that are less resource intensive, more energy efficient, easier to maintain and can be more readily adapted or even moved in response to changing conditions. Compact, mixed-use and infill developments that can help residents avoid long commutes and vulnerabilities associated with the transportation system will likely continue to grow in popularity. The value of open space, urban greening, green infrastructure, tree canopy expansion and pressure to preserve it will likely increase, due in part to its restorative, recreational, environmental, and habitat, and physical and mental health benefits but also for its ability to sequester carbon and cool the surrounding environment. *** Limited impact/severity to Portola; hazard not reviewed.*

Effect on Utilities

Utility efforts to deal with the impacts from climate change range from emergency and risk management protocols, to new standards for infrastructure design and new resource management techniques. California is already experiencing impacts from climate change such as an increased number of wildfires, sea level rise and severe drought. Utilities are just beginning to build additional resilience and redundancy into their infrastructure investments from a climate adaptation perspective

but have been doing so from an overall safety and reliability perspective for decades. Significant efforts are also being made in those areas that overlap with climate change mitigation such as diversification of resources, specifically the addition of more renewables to the portfolio mix, as well as implementation of demand response efforts to curb peak demand. Efforts are also under way to upgrade the distribution grid infrastructure, which should add significant resilience to the grid as well. Next, a guidance document may expand upon the vulnerability assessments phase and includes plans for resilience solutions including cost/benefit analysis methodologies. The outcomes of this work will help to inform next steps on how infrastructure, the grid and other related operations will be modified to address climate change. New development will have to adapt and incorporate these new approaches as they evolve. Existing and new development will be affected from impacts that includes not only diminished capacity from all of the utility assets from generation to transmission and distribution, but also the cost consequences resulting from prevention, replacement, outage, and energy loss. These have the potential for greatly impacting not just residential development but commercial and industrial and all utility users. *** Limited impact/severity to Portola; hazard not reviewed.*

Past Occurrences

Disaster Declaration History: Climate change has never been directly linked to any declared disasters.

Likelihood of Future Occurrence

Likely – Climate change is virtually certain to continue without immediate and effective action. According to NASA, 2016 was on track to be the hottest year on record, and 15 of the 17 hottest years have occurred since 2000. Without action to reduce greenhouse gas emissions, the Intergovernmental Panel on Climate Change (IPCC) concludes in its Fifth Assessment Synthesis Report (2014) that average global temperatures are likely to exceed 1.5 C by the end of the 21st century, with consequences for people, assets, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, water scarcity, sea level rise and storm surges.

RESILIENCY AND ADAPTATION STRATEGIES

Strategy	Description
1 Open Burning Ban	Reduced risk of escaped burns. Less GHG released to the air eliminating the burning of natural vegetation. Implemented by the end of 2019.
2 Wood Stove Changeout Program	Reduced GHG emissions released to the air due to more efficient burning in wood stoves. Less wood cut, less wood burned. Total of 600+ stoves. Additionally, fire risk is reduced by replacing degraded chimney pipe with code compliant pipe.
3 Reduce the risk of utility infrastructure starting wildfires in response to extreme weather	The City will support Liberty Utility in its efforts to reduce the risk of utility infrastructure starting wildfires. Liberty Utilities Emergency Management Plan is being rewritten to include de-energization events (shutting off power to the power lines in the affected area). De-energization can be a time-consuming process. De-energization events require specific emergency planning in order to minimize their impact on the community, and will be included in Portola’s Emergency Plan.

Strategy	Description
<p>4 Incorporate climate change adaptation into relevant local and regional plans and projects.</p>	<p>This is a long term goal that will help ensure that climate change adaption will become a standard consideration in local planning decisions. This long-term goal seeks to have consideration of projected climate impacts and potential consequence included in all relevant local policy. This can be achieved by bringing all other local plans into agreement with this Climate Change Vulnerability Assessment.</p>
<p>5 Establish a climate change adaptation public outreach and education program.</p>	<p>Long-term implementation of climate change adaptation requires community support. This support is only possible if the potential consequences of climate change are understood. A public outreach and community education program will seek to raise public awareness of the potential threats of climate change and the community benefits of acting. Emphasis will be placed on the tangible outcomes projected for a community, such as public safety (flooding and wildfire).</p>
<p>6 Build collaborative relationships between regional entities and neighboring communities to promote complementary adaptation strategy development and regional approaches.</p>	<p>Many climate change impacts have spatial extents that go beyond political boundaries are likely best addressed in collaboration with neighboring jurisdictions to ensure not only that the impacts are addressed efficiently, but also that actions taken in each community are complementary. Collaborative relationships will be facilitated between the City of Portola and Plumas County, the Plumas County Transportation Commission, and Northern Sierra Air Quality Management District.</p>
<p>7 Refine emergency preparedness and response to address health impacts.</p>	<p>The City will work to incorporate climate change risks into existing emergency preparedness plans and design and to augment preparedness measures for events likely to increase with climate change (e.g., heat waves, wildfires, floods). The city can ensure completeness and availability of identified emergency supplies and resources, including but not limited to items such as water main repair parts, generators, pumps, sandbags, road clearing, medical supplies and services, and communication facilities. The effort will include identifying and cataloging the current supply and procuring additional items and services to ensure preparedness in the event of a climate-related emergency.</p>
<p>8 Implement National Flood Insurance Program (NFIP) activities to minimize and avoid development in flood hazard areas.</p>	<p>The City uses Federal Insurance Rate Map (FIRM) data for the 100-year floodplain (area with 1 percent annual flood recurrence risk) as a source for determining general plan policies and zoning patterns and participates in the Community Rating Service system, which reduces rates for flood insurance purchasers.</p>
<p>9 Restore existing flood control and riparian corridors.</p>	<p>The City will continue to evaluate flooding potential, monitor and improve natural conditions to improve flood flow, reduce erosion, improve habitat, and protect adjacent neighborhoods. There is an additional benefit of expanding active recreation areas.</p>

Strategy	Description
<p>10 Implement general plan safety elements through zoning and subdivisions practices that restrict development in floodplains and landslide hazard areas.</p>	<p>This strategy includes a combination of a variety of commonly used zoning and subdivision practices, including: (1) restricting allowable residential densities in hazardous areas, reducing the potential number of structures at risk; (2) clustering development or setting it back from flood hazard areas to reduce exposure; (3) transferring allowable density from hazardous sites to safer areas; (4) adopting slope-density formulas limiting the number of dwellings on hillsides subject to slippage or subsidence; (5) modifying proposed parcel boundaries and street locations to avoid hazardous areas; and (6) requiring multiple ingress and egress points for emergency access and evacuation.</p>
<p>11 Develop, adopt, and implement integrated plans for mitigating wildfire impacts in wildland-urban interface (WUI) areas.</p>	<p>The City of Portola continues to ensure that the Local Hazard Mitigation Plan, Community Wildfire Protection Plan, and General Plan Safety Element and associated documents continue to be implemented and integrated. Such plans provide a policy and programmatic foundation for hazard mitigation actions, such as adjusting construction, land use, and fuel management practices to reduce fire spread in existing and new development in WUI areas.</p>
<p>12 Manage fuel load through thinning and brush removal.</p>	<p>Past fire suppression practices have resulted in increased fuel load. Thinning and brush removal are approaches to reducing this load and associated fire risk. Thinning can vary in scale and intensity; the City's thinning activities have included mechanical thinning, hand thinning, and brush removal. The City has collaborated with the Fire Wise Council, CAL FIRE, and other local entities to identify high fire risk and high value areas.</p>

Hazard Profile Summary

Based on the hazards as profiled, Table 7 presents our anticipated extent, impact, and probability of occurrence for those hazards. It should be noted that the stated probability is a qualitative assessment roughly characterized as:

- Unlikely – Not likely to occur within the next 50 years when considering standard recurrence intervals for the stated hazard or based on historical frequency.
- Likely – Likely to occur within the next 50 years when considering standard recurrence intervals for the stated hazard or based historical frequency.
- Very Likely – Likely to occur within the next 10 years when considering standard recurrence intervals for the stated hazard or based on historical frequency.

Table 7 – Identified Hazard Summary			
Hazard	Extent	Impacts	Probability
<p>Dam Failure</p> <p>As long as the dam continues to be evaluated and sufficiently maintained by the California Department of Water Resources’ Division of Safety of Dams, the potential hazard associated with a dam break or breach would be considered unlikely for naturally occurring events. Manmade hazards may elevate the level of risk, but given the size of the dam, remote location, and lack of high value impact the potential for a successful targeted attack would also be considered unlikely. The probability regarding the likelihood of a dam break or breach would be addressed more specifically and comprehensively in the Division of Safety of Dams’ assessment.</p>	California DWR – Dept. of Safety of Dams	Community Wide Contact CaDWR	<p>Unlikely</p> <p>Contact CaDWR</p> <p>Although the vulnerability is unlikely and the risk is low, this hazard has continued to be profiled in this update, to ensure that the City continues to coordinate with the California Department of Water Resources, Division of Safety of Dams.</p>
<p>Earthquake</p> <p>The City of Portola is located in an area of potentially moderate seismic activity. The nearest active faults are the Mohawk Valley fault, located about 8.5 miles to the west, and the Honey Lake fault, located 21 miles to the east. The Mohawk Valley fault (MCE 7.0) is characterized as being less than 130,000 years old and the Honey Lake Fault (MCE 7.8) is less than 15,000 years old. The bulk of events present a magnitude on the order of 4, with a couple event reaching as high as 6.2.</p>	PGA > 0.02g	Community Wide	Very Likely

<p>Ground Shaking</p> <p>For the City of Portola, the primary concerns are strong ground motion and strong ground motion combined with a potential for liquefaction and lateral spreading adjacent to the Middle Fork of the Feather River channel. Contemporary structural design protocols consider the impact of strong ground motions and require new construction to meet the performance rigors demanded by the seismic environment. However, due to the age of many of Portola’s structures, an increased potential for damage exists when compared to that of new construction.</p>		Community Wide	Very Likely
<p>Liquefaction and Lateral Spreading</p> <p>The Gulling Street Bridge crosses the Middle Fork of the Feather River, the UPRR corridor, and provides ready access between north and south Portola. The Gulling Street Bridge was constructed in 1954 and consists of 3 spans, constructed of steel with a cast-in-place concrete deck. 1954 was well before the ability to evaluate liquefaction and lateral spreading had been developed. Recent evaluations of the structure (2010, National Bridge Inventory, NBI Structure Number 09C0130) indicates that the structure is: <i>equal to present minimum criteria</i> but scour critical. It should be noted; <i>the evaluation protocol has not been refined to include evaluating bridge criticality as related to liquefaction and/or lateral spreading.</i> Because the structure spans the Feather River, and the soils have been superficially assessed as potentially liquefiable, lateral spreading and liquefaction should be assumed to present a meaningful risk during a significant seismic event until that hazard is specifically evaluated and the threat dismissed.</p>		Community Wide, Floodplain + Floodplain Margins	Likely
<p>Extreme Heat</p> <p>Periods of elevated summertime high temperatures are certain to occur in the City of Portola. However, as a mountainous environment with a nearby river, the City of Portola is not generally subject to extreme heat as defined by FEMA.</p>	Heat Index >105°F predicted for more than 2 days.	Medium	Unlikely Profiled due to impact on Wildfire

<p>Flood Areas within the 100-year flood zone are considered high flood hazard areas as previously indicated in Figure 10. The City of Portola participates in the National Flood Insurance Program (NFIP). As a result, all new development within the floodplain requires certification that the proposed development within floodplain will be raised above the 100-year water surface and that any proposed structures will not increase flood depths or velocities on adjacent properties. In addition, the NFIP requires owners of property within the designated flood zones to purchase flood insurance. No NFIP structures have been reported as experiencing repetitive claims from flooding.</p>	<p>FEMA 100 Year Flood Zone</p>	<p>Medium</p>	<p>Likely to Very Likely</p>
<p>Severe Weather: Hail Large hail events in Portola are generally associated with thunderstorms. While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience large hail and/or high winds (including windstorms and microbursts) would be considered low, however the potential severity would be considered moderate.</p>	<p>> ¾" Diameter</p>	<p>Community Wide</p>	<p>Likely</p>
<p>Severe Weather: Windstorms High wind events in Portola are generally associated with thunderstorms. While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience large hail and/or high winds (including windstorms) would be considered low, however the potential severity would be considered moderate.</p>	<p>Wind > 58 mph (50 knots)</p>	<p>Community Wide</p>	<p>Very Likely</p>
<p>Severe Weather: Thunderstorms While thunderstorms, with hail, will continue to occur in the Portola area (predominantly in the spring and summer months), their intensity and magnitude infrequently approach or exceed the severe thunderstorm/high wind designation threshold. Therefore, the probability for the City of Portola to experience thunderstorms would be considered moderate.</p>	<p>Severe, wind > 58 mph & hail > ¾"</p>	<p>Community Wide</p>	<p>Very Likely</p>

<p>Wildfire The worst-case scenario wildland fire in the Portola WUI would be wind driven crown fire late in the fire season when fuel moisture is at its lowest. These conditions in combination with hot and dry weather, steep slopes, or high winds can create a situation in which the worst-case fire severity scenario can occur. The ignition source could be either a lightning strike or structure fire. Given the frequency of lightning strikes, number of human driven ignitions, and frequency of historical events, the probability of future events should be considered high.</p>	Moderate	Community Wide	Very Likely
<p>Debris Flow (Post Fire)</p>	Independent Study Required after Wildfire Event	To be Determined After Occurrence of Event	Potential Addressed After Occurrence of Wildfire Event
<p>Winter Storms & Extreme Cold Because of Portola’s location and elevation (+/- 4850 feet), winter storms, wintertime freezing temperatures, and windows of extreme cold are to be anticipated. Portola’s limited size and geographic setting will serve to make the impact on the community relatively uniform, although effects should be anticipated to worsen with elevation.</p> <p>Heat, power, and communications can be knocked out by winter events and extreme cold. Alternate emergency energy sources, such as generators and kerosene heaters, can present a secondary hazard to the citizenry as both generate carbon monoxide. Alternative energy sources in combination with enclosed air spaces present a risk that can be more critical than cold or extreme weather. The surrounding mountains and passes will impede community access during moderate to extreme events. Extent and severity of winter storms is generally predicted several days prior to the first snowflakes falling, so ample time is available for preparation of public snow removal equipment and “stocking up” on necessities for residents.</p>	Definition for Cold Air Outbreak	Community Wide	Very Likely

Vulnerability

In summary, the following hazards have been characterized for the community: earthquake, extreme heat, flood, severe weather, hail, windstorms, thunderstorms, wildfire, and winter storms and extreme cold. Hazus (Hazards United States) was used in formulation of our vulnerability analyses. Hazus is a nationally accepted standardized computer method that models potential loss from

earthquakes, floods, and hurricanes. Hazus graphically shows the limits of high risk locations which allows communities to visualize and understand spatial relationships between their citizens, physical community assets, and hazard impact; it essentially highlights and helps prioritize areas of concern.

For the purposes of this LHMP, we selected Hazus to evaluate earthquake hazards on a Census Tract basis. The City of Portola is in tract 060630003000, which is significantly larger than the City limits; however, because development outside the City limits proper is fairly limited, financial risk should not be significantly skewed. The total number and value of structures exposed were taken directly from the 2010 census data (County Assessors' records do not contain data regarding structure count or value.).

The following matrix (Table 8) presents those hazards and identifies structures, improvements, and community features which may be adversely impacted by those hazards. For many of the hazards listed in Table 8, it is impossible to determine the specific impacts to the listed vulnerable elements. For example, impacts of debris flow, earthquake, severe weather and winter storm cannot be predicted with the accuracy necessary to determine the specific features that are most likely to be impacted. However, for hazards with defined boundaries, potential impacts to distinct features, like critical facilities, can be predicted. For flood inundation, FEMA provides a boundary for the 100-year flood, and it is a simple matter of intersecting the critical facilities with the 100-year flood zone. According to this analysis, the Veterans Memorial Hall and the Waste Water Treatment Facility have the potential to be impacted by flood. A similar analysis was completed for wildfire impacts using the CalFire high/very high fire hazard classes, and the following essential facilities are within that zone: Portola Hospital, Portola City Hall, Gulling Street Bridge, Portola Water Treatment Center, Portola High School, Portola Elementary School, Superior Court of California, Veterans Memorial Hall, Waste Water Treatment Facility and Williams House. Wildfire has the potential to cause the greatest impact to both "economic elements" and "historic, cultural and natural resource areas" because the City of Portola depends largely on "historic, cultural and natural resource areas" for economic sustainability. These elements include the rural mountain atmosphere (fresh air, big trees, hiking trails and wildlife), Lake Davis for outdoor recreation, and other historic monuments scattered within the City of Portola, all of which would be severely impacted by a major wildfire.

Table 8 – Vulnerability Matrix & Structure Impact	
BS – Building Stock, CF – Critical Facility, TS – Transportation System, LUS – Lifeline Utility Systems, EE – Economic Elements, HCNRA – Historic, Cultural, and Natural Resource Areas	
Hazard & Vulnerability Methodology	Vulnerability Inventory
Dam Failure	BS, TS (Gulling Bridge), LUS, HCNRA
Earthquake (Hazus)	BS, CF, TS (Gulling Bridge), LUS, HCNRA
Earthquake- Ground Shaking (Hazus)	BS, CF, TS (Gulling Bridge), LUS, HCNRA
Earthquake- Liquefaction and Lateral Spreading (Hazus)	BS, CF, TS (Gulling Bridge), LUS, HCNRA
Extreme Heat	LUS
Flood (Hazus, 100 Year)	BS, CF, TS (Gulling Bridge, Railroad), LUS, HCNRA
Severe Weather- Hail	BS, CF, TS, LUS, HCNRA
Severe Weather- Windstorms	BS, CF, TS, LUS, HCNRA
Severe Weather- Thunderstorms	BS, CF, TS, LUS, HCNRA
Wildfire (Threat Area, CalFire)	BS, CF, TS, LUS, EE, HCNRA
Winter Storms & Extreme Cold	CF, TS, LUS

Estimated numbers of residential and nonresidential buildings and replacement values for those structures, as shown in Table 9, were obtained from the U.S. Census, the City, and Hazus- MH by census block. A total of 1,134 residential and mixed use buildings were considered in this analysis, including single-family dwellings, mobile homes, multifamily dwellings, temporary lodgings, institutional dormitory facilities, and nursing homes. A total of 87 nonresidential buildings were also analyzed, including industrial, retail trade, wholesale trade, personal and repair services, professional and technical services, banks, medical offices, religious centers, entertainment and recreational facilities and theaters. Specific electronic data, available for inclusion into the Hazus model, is very limited and therefore a Level 1 analysis was performed using the data included with the Hazus software package. Should more detailed analyses be desired, building configuration, building value, and elevation data will be required.

Table 9 – Population & Structure Distribution and Values				
Population (2010 Census)	Residential / Mixed Use Buildings		Nonresidential Buildings	
	Total Buildings	Value (millions)	Total Buildings	Value (millions)
2,104	1,134	48,355	87	28,375

When considering earthquake damage, impacted buildings were assumed to have sustained moderate, extensive or complete damage based on the following rubric and the knowledge that the bulk of the structures within the City were not designed, built, or retrofitted to meet current building codes:

- Brick structures, mostly residential with some commercial – complete damage
- Masonry building and older concrete structures with large spans and open bays - extensive damage
- Wood framed structures, mostly residential with some commercial – moderate damage

When considering liquefaction and lateral spreading, the number of potential structures that could be impacted has been reduced to 10% of the predicted due to variability in how the hazards are manifested within the delineated zones.

Table 10 presents a summary of impacted structures, residential and non-residential, as it relates to prospective hazards in their specific hazard zones. Table 10 also indicates the methodology employed for the assessment of the specific threat. For estimating losses from a wildfire, areas of high hazard areas for wildfire were developed using GIS mapping, field visits and onsite communication with firefighting personnel. The high hazard areas were overlaid on the City parcel map and those parcels which fall within the high hazard area were analyzed for loss.

Table 10 – Impacted Structure Count vs. Hazard			
Hazard	Methodology	Residential	Non-Residential
Earthquake	Hazus	85**	10**
Flood	Hazus – 100-year	60***	22***
Fire*	Threat area	1369	129
<p>*Values for fire hazard are based on CalFire Hazard Zones and methodologies described herein. **High hazard areas for liquefaction are based on potentially liquefiable zones as established and characterized by the California Division of Mines and Geology. ***Hazus considers all structures within the Census block for flooding in lieu of actual structure impacted.</p>			

As previously discussed, analysis and risk assessment associated with failure of the Grizzly Valley Dam must be obtained via the California Department of Water Resources, Department of Safety of Dams. The potential for post fire debris flows must be assessed after the occurrence of the event.

The remaining identified hazards, Extreme Heat, Severe Weather, and Winter Storms & Extreme Cold, present risks that are typically greater to human life and comfort than to structures. Fortunately, these hazards are somewhat foreseeable and can allow for the community to respond to and plan for their potential impact. Severe weather, such as microbursts, can adversely impact structures but the extent is typically isolated and so random it renders further planning or establishing a specific course of action moot.

Residential properties make up the bulk of the exposed personal property value within the City. Community property such as roads, bridges, schools and hospitals also present a significant asset value. Table 11 below presents the estimated value of development in hazard areas when considering earthquake, flood, and fire. The disproportionate level of risk as related to various hazards is also highlighted by Table 11.

Table 11 - Estimated Value of Development in High Hazard Areas by Building Type				
	All Event Max	Earthquake**	100-year flood	Fire*
Total Value	170,384 (1453)	170,269 (1453)	31,490 (79)	183,600 (1369)
Residential	124,700	124,585	21,290	137,551
Commercial	32,485	32,485	6,853	20,561
Industrial/Other	13,199	13,199	3,347	25,488
*Values for fire hazard are based on CalFire Hazard Zones **High hazard areas for liquefaction are based on potentially liquefiable zones as established and characterized by the California Division of Mines and Geology. When considering liquefaction, reduce number of units to 10% of count provided. ***Numbers in () indicate total number of structures in hazard zone. ****Value in millions				

The vulnerability estimates provided herein use currently available data and methodologies. Methodologies employed result in and assume an approximation of risk. Uncertainties are inherent due to incomplete scientific knowledge regarding the identified hazards and their potential effects on structures and improvements. These uncertainties are compounded due to the simplifications necessary to develop community wide analyses.

Note that analyses address only buildings and physical improvements and assigns qualitative assessments. Loss of life projections have not been considered or projected in formulation of this Plan.

NFIP Repetitive Damage to Structures

Within the City of Portola there are 7 properties in the NFIP, which enforces approximately \$1.5 million in coverage. To date, there have been 3 paid losses totaling approximately \$38,000. Repetitive loss properties have two or more losses of at least \$1,000 each. There are currently no repetitive loss structures. Given the magnitude of the payment spread over the number of houses, it is unlikely all 3 received improvements that would completely mitigate the potential for future flooding. There are no severe repetitive loss properties in the community (FEMA, <https://isource.fema.gov/cis/insurance>).



ELEMENT C - MITIGATION STRATEGY

Mitigation strategy development establishes how to reduce or eliminate the loss of life or property damage as a result of naturally occurring hazard. Armed with the knowledge and understanding of the hazards, potential risks, and identified vulnerabilities, the City of Portola can examine various methods to avoid, minimize, or safely deal with the impacts of these hazards. The Mitigation process considers the risks identified in this plan and moves toward implementing strategies and developing action plans that will reduce or hopefully eliminate the community's exposure to specific hazards.

The Mitigation process is categorized into the following four basic components:

- Assess community resources, i.e. community assets and abilities available to facilitate this Plan;
- Identify goals and objectives, i.e. provide vision and direction on where community wants to be;
- Develop mitigation strategies that move the City toward the established goals;
- Prioritize key ideas and begin to implement the crucial strategies through various action items;

Community Resource Assessment

The Resource Assessment is broken down into the following distinct components:

1. Review of legal and regulatory capabilities, including ordinances, codes, and plans needed to address hazard mitigation activities.
2. Description of the administrative and technical capabilities available to the agency.
3. An analysis of the City's fiscal capability and financial resources to implement proposed mitigation strategies.
4. Review of the physical assets available to the community in the event of an emergency.

Legal and Regulatory Resources

The City's applicable Municipal Code, Housing Element, and other regulatory development guidelines provide specific support to hazard mitigation activities within the communities. This includes the General Plan with its Land Use, Development Guidelines, Floodplain management ordinances, and the Safety Element, which provide additional authority for the City of Portola to regulate and support many mitigation strategies.

Administrative and Technical Resources

The City has a small but experienced and competent administrative and technical staff in place to help facilitate the mitigation strategies identified for the community; however, the City's staff is very small with few full time and limited part time City staff employees. This requires the City worker to prioritize various tasks and focus on the most pressing items and needs for the City. Due to the limited time and resources available to the staff it will be necessary to provide additional support

to effectively implement the full extent of the mitigation plan and to reach the goals the City has outlined to accomplish.

Financial Resources

Funding is a vital aspect in order to achieve the goals and objectives of the Mitigation Strategy. The following funding sources could be utilized in assisting the City to with various mitigation measures:

- Federal and State Entitlements
- Federal and State Grants,
- City's General Fund
- Sales and Property Taxes
- Infrastructure User Fees
- Impact Fees
- New Development Impact Fees
- Private Sector Grants and Funding to provide matching funds to Government grants.

The City has many of the necessary budgetary tools and practices in place to facilitate handling appropriate funds, however, funding sources are very limited. A summary of potential grant sources is presented in Appendix 5. We also anticipate administrative grants will be necessary to provide the community the support necessary to implement, maintain, and develop this LHMP. Concrete mitigation strategies will likely require support in the form of grants and/or matching funds. The community finance and administrative structure will be strained under the demands of implementing and monitoring many of the hazard mitigation items identified in this plan. However, the City is ready to step forward and provide what services it can as well as develop innovative ways to cost-effectively provide education and ancillary support activities.

Physical Resources

State Highway 70 will provide ready ingress and egress to the community. Fire is the only identified hazard that can present a direct identified risk to this highway. When not considering fire, it is anticipated that even with a significant event of any of the other remaining hazards, the majority of local roads can remain open to provide access. Heavy equipment belonging to the Public Works Department can be used to clear roads and properties as necessary.

In addition, two fire houses, and a volunteer force provide the City with fire prevention and suppression services. The City of Portola has a mutual aid agreement in place with the US Forest Service and other fire districts in eastern Plumas County.

Portions of the City's water supply could become compromised during a flood or seismic event. Water demand during a wildfire could also compromise the system. However, because the system relies on three separate water sources (two wells, and the Lake Davis Water Treatment Facility), the potential for a complete service failure of the system is significantly reduced.

The sewer treatment facility lies within the flood plain and could become compromised during a 100-year flood event.

Assuming the hospital, fire stations and sheriff station comply with current code and seismic retrofit standards, these critical facilities should be available during and after a hazard event. The EOS approved evacuation centers should be evaluated for potential hazard impact and priority modified as necessary for different events.

Eastern Plumas Health Care Hospital is currently in the process of retrofitting the Boiler Plant Building to be SPC 2 compliant. The project has an anticipated completion date of 12/31/2014. This action is a hazard mitigation measure.

The nearby hospitals in Loyalton and Quincy can help service the community in the event the Eastern Plumas District Hospital becomes compromised or overloaded. Additional planning is needed at the City and county levels to identify and coordinate with ancillary health facilities in the region, including: pharmacies, doctor and dentist offices, business facilities that sell hearing aids and eye glasses, dialysis centers, and urgent care clinics. Currently state law does not require these ancillary facilities to be in structurally sound buildings, or that they have business continuity plans.

While hospitals are licensed by the State, ancillary facilities obtain their building permits and business licenses from local municipalities and counties, ensuring that this effort remains local. Therefore, there is a critical need for coordination of business recovery planning between City government, facility operators, and owners.

Schools are critical to community recovery following an earthquake or other major disaster. While the principal mission of a school, prior to a disaster, is education – the school's mission becomes more complex after a disaster hit. The City and community rely on schools to: shelter those displaced from their homes, to serve as conduits for information and supplies to parents and others in the community, including post- disaster information.

Portola Junior/Senior High School is located south of the Middle Fork of the Feather River and maintains ready access to the Eastern Plumas Health Care Hospital during and after a hazard event. The Carmichael Elementary School however is located north of the river and hospital access would be limited to helicopter in the event the Gulling Street Bridge became compromised. As previously discussed, following the designated evacuation route would result in a travel distance approximately equal to heading to hospitals in Loyalton or Quincy.

NFIP Compliance

The National Flood Insurance Program (NFIP) offers flood insurance to homeowners, renters, and business owners for communities that participate. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding. Due to the flood hazards in and around the City, an emphasis has been placed on continued compliance with the NFIP.

Participating communities must adhere to the following to be part of the NFIP:

- Issue/deny floodplain development and/or building permits based on NFIP or stricter requirements by enforcing the latest NFIP Maps and Data, requiring permits for all development in the Special Flood Hazard Areas, and requiring that all development not increase the flood hazard on other properties.
- Inspect all development to assure compliance with the local ordinance (which must meet or exceed NFIP requirements).
- Maintain all records of floodplain development which requires that all new, substantially improved or substantially damaged buildings be protected from damage by the base flood. This includes reduced exposure to flood damage to all public utilities and facilities such as sewer, water, gas and electrical systems. Sewer systems should minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and locate onsite waste disposal systems to avoid impairment to them or contamination during flooding.
- Assist residents and businesses obtain information on flood hazards, floodplain map data, flood insurance and proper construction methods.

In addition, the community also agrees to work with FEMA in the following ways:

- Assist the FEMA Administrator to delineate the regulatory floodplain.
- Provide information concerning uses and occupancy of the regulatory floodplain.
- Maintain for public inspection and furnish upon request, for the determination of applicable flood insurance risk premium rates within all areas having special flood hazards, elevation and flood proofing records on new construction.
- Cooperate with agencies and firms which undertake to study, survey, map, and identify flood plain areas and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent aggravation of existing hazards. If riverine watercourses are to be altered, notify adjacent communities and the State Coordinating Office prior to any alteration and assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- Notify the FEMA administrator whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed or no longer has the authority to adopt and enforce floodplain management regulations for a particular area.

The City's Floodplain Ordinance, Chapter 17.47 of the Portola, California Municipal Code, identifies each of these conditions/requirements and provides a means of enforcement. The City has an appointed Floodplain Administrator, who is ultimately responsible for granting or denying development, managing updates to damaged buildings, inspection, and agency notification.

FEMA Floodplain mapping for the City of Portola was originally done in 1985 and updated in 2005. The city mapping currently has base flood elevations mapped through the City along the Middle Fork Feather River in almost all developed areas. Development along the river has been minimal since 2005, however if new development occurs along the floodplain, updated mapping through map

revisions is required by the developer in order to ensure that the City and the development meets all NFIP standards.

Currently the City does not have an official assistance programs in place to help mitigate those within the floodplain however for those that inquire about assistance, the City will help by provide information on how to better flood protect their property and inform them of other state and federal programs that may be available.

Mitigation Goals and Objectives

Team members reviewed the previous sections of this document, including the hazard profiles and risk assessment results in order to develop the mitigation goals and objectives contained in this section. Mitigation goals are general guidelines that define what a community wants to achieve in terms of hazard and loss prevention. Goal statements are policy-oriented statements representing community-wide visions to be achieved in the long term. Objectives detail how a community's goals will be achieved. The identified goals are generally met by first defining strategies or implementation steps. Then using the Communities assessed hazards, City of Portola General Plan 2020 as a guideline, the Hazard Mitigation Team developed a number of goals with associated objectives to reduce or avoid long-term vulnerabilities to the identified hazards.

Four Goals have been established for the City of Portola.

1. Increase public awareness of potential natural hazards and self-reliant mitigation actions.
2. Reduce risk of loss of life/injuries due to natural hazards
3. Reduce risk of loss to property, both public and private
4. Maintain and increase funding for natural disaster preparedness, planning and response

Once the community and Hazard Mitigation Team developed the goals for the City, objectives were discussed and compiled. Focus was given to items that would provide the best benefit to the City, which still could be accomplished with the assets, financial means and other resources available.

Potential Mitigation Strategies

Potential mitigation strategies have also been identified by the HMT in order to assist the City in mitigating the impact of the previously identified natural hazards. Mitigation strategies are defined as activities, measures, or projects that help achieve the goals and objectives of a mitigation plan. Mitigation strategies can generally be grouped into six broad categories: prevention, property protection, public education and awareness, natural resource protection, emergency services, and structural projects. Mitigation ideas are specifically presented in the Prioritizing and Implementing Potential Mitigation Strategies and Action Items section of this Plan.

The Hazard Mitigation Team reviewed the City's General Plan Safety Element as a basis for developing potential mitigation strategies. In addition, particular emphasis was placed on actions that reduced the effects of the identified hazards on all existing and future buildings and infrastructure. The hospital is currently undergoing improvements to bring it to required standards. Studies have been performed on the Gulling Street Bridge and additional work may or may not be

required. Steps should be taken to ascertain our schools are also consistent with the requirements of current codes.

Some mitigation strategies have already been implemented and have actively involved the public. The City of Portola has met the certification requirements of the Federal Emergency Management Administration (FEMA), in order to obtain flood insurance for its residents. It should be considered whether it would be beneficial to become Community Rating System (CRS) compliant. CRS is the part of the NFIP program which provides incentives through reduced insurance premiums for communities that take proactive steps to further mitigate potential flood hazards beyond NFIP base requirements. FEMA has approved communities for CRS even with limited properties still within the floodplain (City of Tehama, CA).

Prioritizing and Implementing Potential Mitigation Strategies and Action Items

Proposed mitigation strategies were evaluated using the following questions in order to more accurately assess and identify the mitigation strategies that would allow the City to meet its mitigation goals, that is reducing or eliminating vulnerabilities to the identified hazards.

- Does the strategy mitigate assets identified as vulnerable in the LHMP's Risk Assessment?
- Is the strategy economically feasible (either through a grant or current funding sources)?
- Are proper laws, ordinances, and resolutions in place to implement the strategy?
- Is political and public support enough to implement the strategy and ensure its success?

This process assisted the Hazard Mitigation Team in identifying mitigation strategies to be included in the LHMP action plan. Once identified, the Hazard Mitigation Team prioritized the strategies based on a ranking system of high, medium, and low. The rankings were evaluated based on:

- Available resources (Staff, Financial, and Infrastructure)
- Ease of implementation;
- Multi-objective strategies;
- Time to implement; and
- Benefits vs. Costs – BCA will need to be performed for the more complicated mitigation items. These items will typically require a comprehensive study to evaluate potential mitigation strategies for identified deficiencies. These type items are typically more costly and additional funding will be required. FEMA BCA evaluation tools will be required when submitting for FEMA funded grants. Additionally, the Hazard Mitigation Team identified how the strategy will be implemented and administered, including the responsible departments or, existing and potential funding sources, and time frame.

The Hazard Mitigation Implementation Strategy Worksheets (Appendix 3) detail the strategy, implementation ideas and action items for each hazard, and identifies the Agency and Department responsible along with a contact name and phone number.

Listed below are specific hazard mitigation goals and objectives with possible supporting strategies. For each goal, one or more objectives have been identified that provide strategies to attain the goal. Where appropriate, the City has identified a range of specific strategies to achieve the objective and goal.

Goal 1. Increase public awareness of potential natural hazards and self-reliant mitigation actions.

Priority: Medium

Responsible Agency: City of Portola (Planning Department), Lauren Knox, City Manager

Supporting Agency: Plumas Unified School District

Hazard: Earthquake, Ground Shaking, Liquefaction and Lateral Spreading, Flood, Wildfire

Objective 1.1 Involve the public in disaster planning and promote individual mitigation and preparedness measures.

Strategy 1.1.1 Educate public about potential hazards and high hazard areas within the community in the event of a natural disaster.

Strategy 1.1.2 Encourage property owners to actively participate in education programs, access resources, and develop personal mitigation measures as they relate to natural hazards specific to the community and personal property.

Strategy 1.1.3 Provide online access to awareness/protection materials relevant to City of Portola residents.

Strategy 1.1.4 Educate the public on the Citywide Emergency Evacuation Plan and Emergency Action Plan.

Strategy 1.1.5 Educate the public on living with fire and fire safe requirements in the General Plan Safety Element and the Wildfire Protection Plan.

Strategy 1.1.6 Create a public notification plan to provide a means to educate, inform, and alert the community regarding changes in hazard identification, occurrence, and mitigation processes and options.

Strategy 1.1.7 Maintain an outreach protocol with the American Red Cross.

Goal 2. Reduce risk of loss of life/injuries due to natural hazards

Priority: High

Responsible Agency: City of Portola (Planning Department); Lauren Knox, City Manager

Supporting Agencies: Plumas County Sheriff Department (Portola substation), City of Portola Fire Volunteer Department, Army Corps of Engineers, California Department of Water Resources Division of Safety of Dams, US Forest Service, Plumas County Fire Departments

Hazard: Dam Failure, Debris Flow, Earthquake, Ground Shaking, Liquefaction and Lateral Spreading, Extreme Heat, Flood, Severe Weather, Hail, Windstorms, Thunderstorms, Wildfire, Winter Storm and Extreme Cold

Objective 2.1 Establish Public Community Warning system in the event of a natural disaster. (ALL)

Strategy 2.1.1 Provide hazard warning and forecasting information to City residents.

Strategy 2.1.2 Establish a rapid communication system for the community in the event of a natural disaster (Television, Radio, Emergency alert, & Local Citizen Network with Low Watt Transmitters)

Strategy 2.1.3 Actively participate in the development of Plumas County’s Safety Element to ascertain Portola’s concerns are addressed.

Objective 2.2 Reduce possibility of injury or loss of life due to flooding (DAM FAILURE, FLOOD)

Strategy 2.2.1 Coordinate with the California Department of Water Resources (Dam Safety Division) for mitigation measures within the community as a result of a dam failure inundation.

Strategy 2.2.2 All Development within floodway shall meet FEMA Standards.

Objective 2.3 Minimize Injury or loss of life due to seismic or geologic hazards (EARTHQUAKE)

Strategy 2.3.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC).

Strategy 2.3.2 Prioritize and evaluate essential facilities for seismic evaluation and potential retrofit

Strategy 2.3.3 Monitor and continue to regulate grading and slope development standards to reduce potential landslide and slope movement events.

Objective 2.4 Minimize Injury or loss of life due to wildfire (WILDFIRE, DEBRIS FLOW)

Strategy 2.4.1 Enforce compliance with open space and fuel break requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section

Strategy 2.4.2 Review and update mutual aid agreements with the forest service, CAL Fire, and other surrounding fire departments and agencies.

Strategy 2.4.3 Adopt California PRC 4290 and PRC 4291 legislation

Strategy 2.4.4 Evaluate and update the existing Citywide Emergency Evacuation Plan to include present roadway and development conditions.

Strategy 2.4.5 Adopt and complete steps to meet FEMA’s Fire-Adapted Communities requirements or become a ‘Fire Wise Community.

Strategy 2.4.6 Seek opportunities to reduce high fuel hazards and create fuel breaks.

Goal 3. Reduce risk of loss to property, both public and private

Priority: High

Responsible Agency: City of Portola (Planning Department), Lauren Knox, City Manager

Supporting Agencies: Plumas County Sheriff Department (Portola substation), City of Portola Volunteer Fire Department, Army Corps of Engineers, California Department of Water Resources, Division of Safety of Dams, US Forest Service, Plumas County Fire Departments

Hazard: Dam Failure, Debris Flow, Earthquake, Ground Shaking, Liquefaction and Lateral Spreading, Extreme Heat, Flood, Severe Weather Hail, Windstorms, Thunderstorms, Wildfire, Winter Storm and Extreme Cold

Objective 3.1 Establish Public Community Warning system in the event of a natural disaster. (ALL)

- Strategy 3.1.1 Provide flood & event warning and forecasting information to City residents.
- Strategy 3.1.2 Establish a rapid communication system for the community in the event of a natural disaster (Television, Radio, Emergency alert)
- Strategy 3.1.3 Actively participate in the development of Plumas County’s Safety Element to ascertain Portola’s concerns are addressed.
- Objective 3.2 Protect existing public infrastructure (ALL)**
- Strategy 3.2.1 Evaluate potential impacts of identified hazards on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities for mitigation based on risk level and criticality to community and/or criticality to emergency evacuation routes.
- Strategy 3.2.2 Ensure that all essential facilities (hospitals, schools, evacuation centers, and other emergency facilities) are evaluated for specific risks and where risk is identified prioritize for analysis and mitigation.
- Objective 3.3 Pursue flood control solutions which minimize environmental impacts (FLOOD)**
- Strategy 3.3.1 Continue to combine water quality, open space, recreation projects within flood measures where feasible.
- Strategy 3.3.2 Maintain natural stream courses and adjacent habitat, where feasible during flood control improvements.
- Objective 3.4 Regulate Land Use and Development within flood areas (FLOOD)**
- Strategy 3.4.1 Establish zoning and land use ordinances that limit development in flood prone areas
- Strategy 3.4.2 Ensure the impacts of flooding are adequately analyzed when considering areas for future urban development or significant improvements to existing facilities or structures.
- Strategy 3.4.3 Ensure that flood mitigation measures are incorporated into repairs, new development, major alterations, and new redevelopment applications.
- Strategy 3.4.4 Enforce compliance with the City of Portola Master Drainage Plan and Floodplain Management Ordinance.
- Strategy 3.4.5 Pursue a regional approach to flood issues
- Objective 3.5 Reduce property damage due to seismic and geologic hazards (EARTHQUAKE)**
- Strategy 3.5.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC).
- Strategy 3.5.2 Prioritize and evaluate essential facilities for seismic evaluation and potential retrofit
- Strategy 3.5.3 Monitor and continue to regulate grading and slope development standards.
- Strategy 3.5.4 Educate and encourage residents to adopt seismic safety protocols as their time and resources allow.
- Objective 3.6 Minimize loss of property due to wildfire (WILDFIRE, DEBRIS FLOW)**
- Strategy 3.6.1 Enforce compliance with open space and fuel break requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section
- Strategy 3.6.2 Review and update mutual aid agreements with Forest Service, CAL Fire, and other surrounding fire departments and agencies.
- Strategy 3.6.3 Adopt California 4290 and 4291 legislation.

- Strategy 3.6.4 Evaluate and update the existing Citywide Emergency Evacuation Plan to include present roadway and development conditions.
- Strategy 3.6.5 Adopt and complete steps to meet FEMA’s Fire-Adapted Communities requirements or become a ‘Fire Wise Community.’

Goal 4. Maintain and increase funding for natural disaster preparedness, planning and response.

Priority: High
Responsible Agency: City of Portola (Planning Department), Lauren Knox, City Manager
Supporting Agencies: CalEMA, FEMA, Other Grant Sources, Community Civic Groups and Churches
Hazard: Dam Failure, Flood, Wildfire

Objective 4.1 Cooperate with other local agencies, jurisdictions or non-profit organizations involved in disaster planning or response so that efforts to secure funding are coordinated and will work toward maximum benefits. (ALL)

- Strategy 4.1.1 Secure a grant that would provide support staff to aid in the implementation and execution of the LHMP.
- Strategy 4.1.2 Apply for grants specific to identified action items, including scientific studies and evaluation of existing improvements.
- Strategy 4.1.3 Cross train staff with Plumas County personnel and adopt uniform protocols where applicable.
- Strategy 4.1.4 Work toward securing multi-jurisdiction grants and funding for disaster planning and response.
- Strategy 4.1.5 Create a community network for emergency response alternatives including churches, and civic meeting halls.

Objective 4.2 Support efforts put forth by other agencies where funding for mitigation efforts presents the potential to benefit the City. (ALL)

- Strategy 4.2.1 Continue involvement in the update to the Plumas County LHMP;
- Strategy 4.2.2 Apply for grants that may help fund improvements beyond the City limits; e.g. fire safety and wildfire hazard mitigation, channel and water quality improvements to the Middle Fork of the Feather River, etc.

Objective 4.3 Evaluate and improve current training for response personnel and equipment. Consider increased training for first responders and updating outdated equipment. (ALL)

- Strategy 4.3.1 Review existing training protocol and update/upgrade as necessary.
- Strategy 4.3.2 Begin to search grant/funding opportunities for upgrade of fire equipment & training opportunities.
- Strategy 4.3.3 Utilize County, State, and other regulatory agency opportunities for cross and specialty training modules.

Funding Sources

The fiscal capabilities of the City are limited. The City would like mitigation items to be funded through a variety of sources as it would be difficult for the City to financially manage all Goals and

Objectives outlined in the plan. When opportunities are available the City will seek federal, state and other grants where possible.

City staff and funding will be prioritized by the City Council in accordance with the Planning Commission's recommendation in the City's annual budget. Each mitigation measure would be a line item within a specific department; although the Planning Department is expected to be the impacted department. Staff time is funded annually; it is expected that staff time from the Planning and Building Departments will be spent implementing mitigation measures and assisting the Planning Commission throughout the monitoring and implementing the plan.

Prioritization of Mitigation Strategies

The Mitigation strategies were prioritized based upon, 1) overall life threat, 2) the STAPLEE criteria which factor into account the social, technical, administrative, political, legal, economic and environmental concerns, and 3) a cost-benefit review of prioritized strategies. Key stakeholders utilized these criteria to establish ratings of HIGH, MEDIUM and LOW for each goal and the Implementation Worksheets (See Appendix 3) rate each mitigation strategy. As typical for most cities, Portola's needs will evolve due to economic, cultural, and natural events, the City's priorities will evolve and change also. The Planning Commission will review the plan and implementation progress during a bi-annual review of the LHMP and re-assess the priorities at that time.

Implementation Strategy and Monitoring

Once the LHMP has received formal adoption by the City, the City Planning Commission and any Mayor appointed members will champion the overall plan and review the strategies and short-term goals on a bi-annual basis or as deemed necessary by the Commission. The following strategy will be used to ensure the Plan is fully implemented and remains an active and relevant document, addressing the ever-changing environments and needs for the City:

- Implementation worksheets will be used as a tool to continually target high priority strategies and help the City focus on manageable short-term goals and objectives. See Appendix 3.
- Review previous goals and tasks as outlined in the Plans implementation worksheets as developed in previous Hazard Mitigation meetings. They should highlight success and try to address concerns or difficulties in its implementation.
- Re-evaluate each goal and strategy's priority to better conform to the City's changing needs and abilities to implement the various parts of the Plan.
- Assign new goals and tasks to City staff, community volunteers, or other groups involved in the implementation of the plan.

It is also the City's strategy to integrate these actions into existing planning documents and projects, such as the City General Plan (currently being updated), the development of a Community Wildfire Protection Plan, and the City Capital Improvement Project (CIP). With proper integration, implementing mitigation strategies will result in a cost-benefit that can help to further refine projects and the prioritization of each strategy. This will remain an ongoing effort and ensure this LHMP remains a living document that will be maintained in accordance with the requirement of this LHMP,

Cal EMA, and FEMA. As more information becomes available the strategies, coordinating agencies, funding, constraints, or even the priority may change however the focus should always be to provide measures that mitigate and reduce natural hazards and their impacts to the City.



ELEMENT D – PLAN ADOPTION

Incorporation into Planning Mechanisms

After the adoption of the LHMP, the City planner or the safety committee will ensure that the LHMP, in particular the mitigation strategies, is incorporated into existing planning mechanisms. This incorporation will be achieved through the following steps:

- Review the General Plan Safety Element and ensure that it is consistent with the risk assessment and action plan in the LHMP, and update, if necessary;
- Work with other area agencies to expand and keep current safety-related information. The City will use sufficiently detailed analysis of hazards, and will update the City 's Emergency Operations Plan as new information becomes available; and,
- Keep current and implement its Emergency Operations Plan as required by the California Emergency Services Act.
- After each State and/or Presidential declaration that impacts the City, a review shall be made of the LHMP for updating or reprioritizing the strategies.



REFERENCES

- City of Portola. City of Portola General Plan, Safety Element. <http://www.ci.portola.ca.us/>.
- City of Portola. City of Portola, California, Citywide Emergency Evacuation Plan. <http://www.ci.portola.ca.us/>.
- California Public Resources Code, Sections 4290 and 4291. http://www.fire.ca.gov/fire_prevention/downloads/Title_14.pdf
- California Fire and Resource Assessment Program. <http://frap.fire.ca.gov/>.
- FEMA. 2001. How-To Guide #2: Understanding Your Risks – Identifying Hazards and Estimating Loss Potential. U.S. Department of Homeland Security, Federal Emergency Management Agency. FEMA 386-2. <http://www.fema.gov/library/viewRecord.do?id=1880>.
- FEMA. 2002a. 44 CFR Parts 201 and 206, RIN 3067-AD22, Hazard Mitigation Planning and Hazard Mitigation Grant Program, Interim Final Rule. In Federal Register 67, No. 38. U.S. Department of Homeland Security, Federal Emergency Management Agency. http://www.fema.gov/pdf/fima/fr02_4321.pdf.
- FEMA. 2002b. State and Local Plan Interim Criteria Under the Disaster Mitigation Act of 2000 – Final Draft. U.S. Department of Homeland Security, Federal Emergency Management Agency. http://www.fema.gov/fima/planning_toc4.shtm.
- FEMA. 2002c. How-To Guide #1: Getting Started: Building Support for Mitigation Planning. U.S. Department of Homeland Security, Federal Emergency Management Agency. FEMA 386-1. http://www.fema.gov/fima/planning_toc5.shtm.
- FEMA. 2003a. How-To Guide #3: Developing The Mitigation Plan; Identifying Mitigation Actions and Implementing Strategies. U.S. Department of Homeland Security, Federal Emergency Management Agency. FEMA 386-3.
- FEMA. 2003b. How-To Guide #4: Bringing The Plan to Life; Implementing the Hazard Mitigation Plan. U.S. Department of Homeland Security, Federal Emergency Management Agency. FEMA 386-4. December.
- FEMA. 2004. Multi-Hazard Mitigation Planning Guidance Under the Disaster Mitigation Act of 2000. http://www.fema.gov/doc/fima/part_3_031904.doc.
- FEMA. The Federal Emergency Management Agency's (FEMA's) Methodology for Estimating Potential Losses from Disasters. <http://www.fema.gov/hazus/>.

National Fire Protection Association, Firewise Communities. <http://www.firewise.org/communities.aspx>

Plumas County Fire Safe Council. Plumas County Fire Plan.
http://www.plumasfiresafe.org/fire_plan.htm.

Spatial Hazard Events and Losses Database for the United States(SHELDUS).

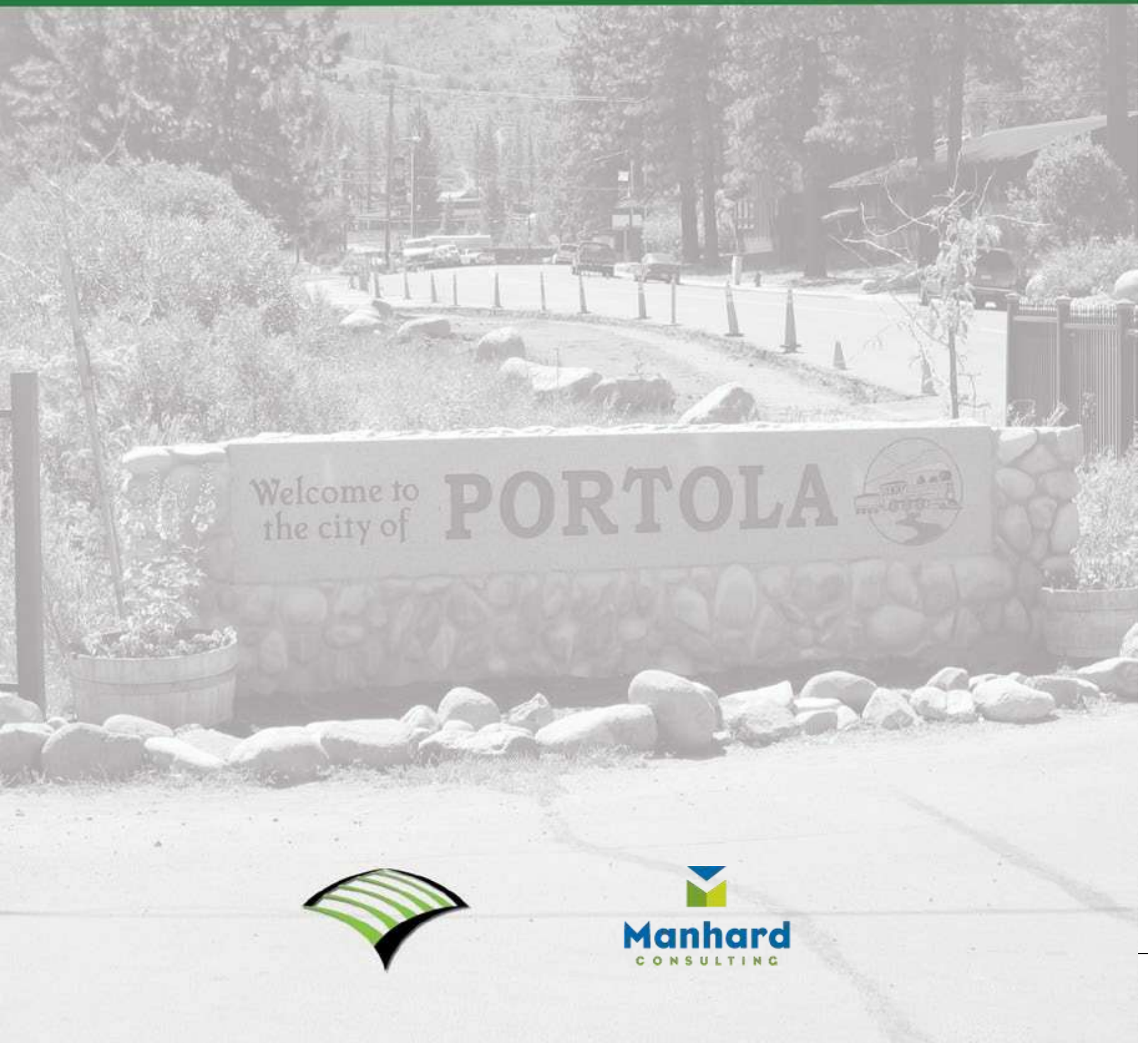
<http://webra.cas.sc.edu/hvri/products/sheldus.aspx>

United States Census Bureau. 2005. American Fact Finder Fact Sheet. <http://factfinder.census.gov>.

Western Regional Climate Center. Climate Summary for Portola, California.
<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7085>.

National Oceanic and Atmospheric Administration. <http://www.spc.noaa.gov/gis/svrgis/>

The Fire Safe Council. <http://www.firesafecouncil.org/>



APPENDIX 1



CITY COUNCIL RESOLUTION AND ADOPTION PORTOLA LOCATION HAZARD MITIGATION PLAN

Adoption Resolution

City Council, City of Portola

Resolution # _____ RESOLUTION ADOPTING THE CITY OF PORTOLA LOCAL HAZARD
MITIGATION PLAN

WHEREAS, The City of Portola is subject to various natural hazards including wildfires, floods, earthquakes, severe weather, and;

WHEREAS, The City of Portola seeks to increase disaster resistant measures and reduce the potential loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from disasters, and;

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires all cities, counties and special districts to have adopted a Local Hazard Mitigation Plan to receive disaster mitigation funding from the Federal Emergency Management Agency (FEMA), and;

WHEREAS, The City of Portola Local Hazard Mitigation Plan was submitted and reviewed by the California Emergency Management Agency (Cal-EMA) in _____ and the plan was forwarded to FEMA for approval, and;

WHEREAS, FEMA completed an initial review of the City of Portola Local Hazard Mitigation Plan and determined it was approved pending adoption.

RESOLVED, The City of Portola, on behalf of the residents, adopt the City of Portola Local Hazard Mitigation Plan, and further directs that the city staff assist in informing the public and community of the hazard mitigation strategies recommended by the plan, as well as periodically updating the plan to ensure that it remains timely and relevant.

ADOPTED this _____ day of _____, 2013.

APPENDIX 2

ACRONYM SUMMARY

Acronym Summary

APEFZA – Alquist-Priolo Earthquake Fault Zoning Act
BAER – Burned Area Emergency Response
BCA – Benefit Cost Analysis(es)
Cal EMA – California Emergency Management Agency
Caltrans – California Department of Transportation
CEEP – City of Portola, Citywide Emergency Evacuation Plan
CFR – Code of Federal Regulations
City – City of Portola
CRS – Community Rating System
DMA2K – Disaster Mitigation Act of 2000
DRI – Disaster Recovery Initiative
EEP – Emergency Evacuation Plan
FEMA – Federal Emergency Management Agency
GIS – Geographic Information Systems
GPLUE – City of Portola, General Plan Land Use Element
GPSE – City of Portola, General Plan Safety Element
Hazus – Hazards – United States
HMT – Hazard Mitigation Team
LHMP – Local Hazard Mitigation Plan
NCDC – National Climatic Data Center
NOAA – National Oceanic Atmospheric Administration
NBI – National Bridge Inventory
NFIP – National Flood Insurance Program
NWS – National Weather Service
PPP – Public Participation Plan
SHMA – Seismic Hazard Mapping Act
SHELDUS - Spatial Hazard Events and Losses Database for the United States
UPRR – Union Pacific Railroad
USGS – United State Geological Survey
USFS – Untied State Forest Service
WUI – Wildland-Urban Interface

APPENDIX 3

HAZARD MITIGATION IMPLEMENTATION WORKSHEETS

Hazard Mitigation Implementation Strategy

Strategy

1.1.1 Educate public about potential hazards and high hazard areas within the community in the event of a natural disaster.

HAZARD(S) IDENTIFIED: All

Priority

- High
 Medium
 Low

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Update City Website to contain information on natural hazards facing the city (Link to Websites Cal OES, FEMA ready.gov)
- 2) Setup a text and e-mail notification system that residents can sign up for on the Website
- 3) Target specific residents in high potential hazard areas with education and community workshops
- 4) Provide fliers and handouts to local schools, churches and other civic organizations about hazards facing the city
- 5) Promote education and upcoming meetings with City road banners
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

1.1.2 Encourage property owners to actively participate in education programs, access resources, and develop personal mitigation measures as they relate to natural hazards specific to the community and personal property.

HAZARD(S) IDENTIFIED: All

Priority

- High
 Medium
 Low

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Provide booths at local events with information regarding natural hazards and ways the residents can participate in mitigation.
- 2) Provide incentives at local meetings to encourage residents to attend (raffle- dinner or other prizes)
- 3) Target specific residents in high potential hazard areas with education and community workshops
- 4) Provide flyers and handouts to local schools, churches and other civic organizations about hazards facing the City and workshops.
- 5) Keep the City Website current with upcoming meetings and highlight ways the residence can get involved.
- 6) In lieu of relying only on mailings and flyers, phone invitations will be presented to service groups and the Chamber of Commerce.
- 7) Encourage homeowners to have a 72 hour emergency preparedness kits

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs **Contact #:** 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

1.1.3 Provide online access to awareness/ protection materials relevant to City of Portola residents.

HAZARD(S) IDENTIFIED: All

Priority

- High
 Medium
 Low

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Update City website with upcoming meetings, highlight ways the residents can get involved, links to information on local Hazards
- 2) Provide link on City of Portola web page when LHMP is approved.
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

1.1.4 Educate the public on the Citywide Emergency Evacuation Plan and Emergency Action Plan.

HAZARD(S) IDENTIFIED: All

Priority

- High
 Medium
 Low

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review current evacuation plan; revise or update as needed. Provide easy links in City Website to evacuation plan.
- 2) Identify City emergency evacuation sites with signs
- 3) Consider mailing final document to civic groups, church groups, & businesses for public postings.
- 4) Consider incorporating age appropriate lessons to school curriculum.
- 5) Offer to make presentations to civic groups and churches on the emergency evacuation plan and to garner support.
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input checked="" type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input checked="" type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

1.1.5 Educate the public about living with fire and fire safe requirements in the General Plan Safety Element.

- Priority**
- High
- Medium
- Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Focus efforts on residents near forested areas or in identified high fire hazard areas.
- 2) Educate homeowners on current city, state codes and regulations relating to fire protection and local burn ordinances.
- 3) Add open space and defensible space requirements to Safety Plan & web page.
- 4) Consider incorporating age appropriate lessons to school curriculum.
- 5) Consider incorporating age appropriate lessons to school curriculum.
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: _____

Name: _____ Contact #: _____

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Building Department	<input checked="" type="checkbox"/> _____	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Caltrans	<input checked="" type="checkbox"/> U.S. Forest Service
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

1.1.6 Create a public notification plan to provide a means to educate, inform, and alert the community regarding changes in hazard identification, occurrence, and mitigation processes and options.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Establish a list of contacts for Schools, Churches, Community Organization, and other civic groups
- 2) Add a notification link to Safety Plan web page for automatic emails when updates occur.
- 3) Consider sending update notices to civic groups, church groups, & businesses when updates for major milestones are completed.
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.1.1, 2.1.2, 3.1.1, 3.1.2 Provide hazard warning and forecasting information to City residents & establish a rapid communication system for the community.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Reverse 911 through Plumas County
- 2) Low Watt Transmitters, for emergency broadcast.
- 3) Educate public on location/website to go to get information when the city siren sounds.
- 4) Educate public on state wide emergency alert system.
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.1.3, 3.1.3 Actively participate in the development of Plumas County's Safety Element to ascertain Portola's concerns are addressed.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Assign appropriate staff to attend meetings and review documents.
- 2) Seek citizen involvement to supplement & support from either the County or from the City of Portola.
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.2.1 Coordinate with the California Department of Water Resources (Dam Safety Division) for mitigation measures within the community as a result of a dam failure inundation.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Dam Failure

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Contact DWR and establish a contact and begin information sharing and communication regarding the dam.
- 2) Establish a method to implement mitigation measures. Work with DWR to coordinate and fund mitigation strategies.
- 3) Review current mitigation strategies, modify to include dam failure safety.
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> DWR	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.2.2 All Development within floodway shall meet FEMA Standards.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Establish a monitoring protocol to identify construction or non-permitted activity in floodway.
- 2) Train/update staff on current Flood Plain Management Ordinance Codes and requirements.
- 3) Review Current FEMA Floodway Standards and Update Flood Plain Management Ordinance as needed.
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.3.1, 3.5.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC).

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.3.2, 3.5.2 Prioritize and evaluate essential facilities for seismic conditions and potential retrofit.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Earthquake

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Prioritize City essential facilities.
- 2) Perform seismic review of essential facilities and identify potential retrofit needs.
- 3) Secure funding to support staff in development of grant requests for analysis & prioritization study.
- 4) Perform Benefit: Cost analyses as part of the prioritization and selection protocol.
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
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| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.3.3, 3.5.3 Monitor and continue to regulate grading and slope development standards to reduce potential landslide and slope movement impacts.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Establish review protocols for new development to ensure slope development standards are met.
- 2) Train/update staff on current slope development standards.
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.4.1 Enforce compliance with open space and fuel break requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review existing ordinances. Train/educate staff on current code and enforcement measures.
- 2) Draft and adopt more stringent policies, including fee or assessment for properties that do not comply.
- 3) Search for funding for property owners that do not have the means to keep in compliance with ordinance.
- 4) Encourage property owners to seek funding for Fuel Break/Fire Safety improvements.
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE?

Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.4.2 Review and update mutual aid agreements with Forest Service, Calfire, and other surrounding fire departments and volunteer agencies.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review possibilities for multi-jurisdictional grants and funding.
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.4.3 Adopt California PRC 4290 and PRC 4291 code

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review Title 14 and the defensible space requirements set forth in PRC 4290 and 4291.
- 2) Hold public meetings regarding the fire codes in PRC 4290 and 4291 and highlight the effects, positive and negative to the City.
- 3) Vacant Lot Standards for the city should reviewed.
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.4.5 Adopt and complete steps to become a NFPA Fire-Adapted Community or a 'Fire Wise Community.'

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review the National Fire Protection Agencies policies in becoming a Fire wise, Fire Adapted Community.
- 2) Participate and adopt Portola Community Wildfire Protection Plan.
- 3) Seek education opportunities as outlined in Goal 1, increasing public awareness of potential hazards
- 4) Look into opportunities for forest management assistance.
- 5) Encourage and facilitate property owners to share equipment necessary to protect/improve property.
- 6) Create a neighborhood level fuel reduction plan. Identify tactical areas & areas of vulnerability.
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input checked="" type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

2.4.6 Seek opportunities to reduce high fuel hazards and create fuel breaks.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Wildfire

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Seek funding for fuel reduction projects.
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.2.1 Evaluate potential impacts of identified hazards on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities for mitigation based on risk level and criticality to community and/or criticality to emergency evacuation routes.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Evaluate need for Gulling Street Bridge (Scour Protection)
- 2) City lift station is within Floodplain, review potential impacts to water system in the event of a flood.
- 3) Waste Water Treatment Plant near or within the floodplain. Identify flood impact to treatment and discharge.
- 4) Identify water and sewer lines which could be impacted by an earthquake.
- 5) Adopt utility mitigation protocol to replace old lines and services.
- 6) Seek environmental funding/support for sanitary sewer line replacement if required.
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

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| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.3.1 Continue to combine water quality, open space, and recreation projects within flood measures where feasible.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.3.2 Maintain natural stream courses and adjacent habitat, where feasible during flood control improvements

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
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<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.4.1 Establish zoning and land use ordinances that limit development in flood prone areas.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Review Ordinances currently in place and evaluate future development standards near or within flood prone areas.
- 2) Review current allocations/approvals for development that impact flood prone areas.
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
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| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.4.2 Ensure the impacts of flooding are adequately analyzed when considering areas for future urban development or significant improvements to existing facilities or structures.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Train/update staff on City development standards and requirements for improvements or new development in floodplains.
- 2) Keep current on FEMA Mapping requirements
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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Constraints

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| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.4.3 Ensure that flood mitigation measures are incorporated into repairs, new development, major alterations, and new redevelopment applications

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.4.4 Enforce compliance with the City of Portola Master Drainage Plan and Floodplain Management Ordinance.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Train City staff who deal with permitting.
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
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| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
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| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.4.5 Pursue a regional approach to flood issues

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Flood

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
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| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

3.5.4 Educate and encourage homeowners residents to adopt seismic safety protocols as their time and resources allow.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: Earthquake

Implementation Ideas & Action Items

Target
Implementation Date

- 1) Educate residents about the benefit of securing hot water heaters and other items in the event of an earthquake.
- 2) Establish strap water heater Program
- 3) Inform public about Disaster Assistance.gov a Federal disaster assistance program offering loans and additional support.
- 4) Educate/inform about preventive strategies and link the public to www.ready.gov/earthquakes for proactive strategies.
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
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Constraints

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| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.1.1 Secure a grant that would provide support staff to aid in the implementation and execution of the LHMP.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
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<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

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|--|---|
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| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.1.2 Apply for grants specific to identified action items, including scientific studies and evaluation of existing improvements.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.1.3 Cross train staff with Plumas County personnel and adopt uniform protocols where applicable.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.1.4 Work toward securing multi-jurisdiction grants and funding for disaster planning and response.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1) See appendix of LHMP for grant opportunities.
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.1.5 Create a community network for emergency response alternatives including churches, and civic meeting halls.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.2.2 Apply for grants that may help fund improvements beyond the City limits; e.g. fire safety and wildfire hazard mitigation, channel and water quality improvements to the Middle Fork of the Feather River, etc.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.3.1 Review existing hazard response training protocol and update/upgrade as necessary.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

<u>City</u>	<u>Community Services</u>	<u>Civic/Churches</u>	<u>County/State</u>	<u>Other</u>
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.3.2 Begin to search for grant/funding opportunities for upgrade of fire equipment & training opportunities.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs

Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
<input type="checkbox"/> Building Department	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Caltrans	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
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| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

Hazard Mitigation Implementation Strategy

Strategy

4.3.3 Utilize County, State, and other regulatory agency opportunities for cross and specialty training modules.

Priority

- High
 Medium
 Low

HAZARD(S) IDENTIFIED: All

Implementation Ideas & Action Items

Target
Implementation Date

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)

Coordinating Departments/Agencies

Agency/Dept. Responsible: City Planning Dept.

Name: Karen Downs Contact #: 530-832-6808

City	Community Services	Civic/Churches	County/State	Other
<input type="checkbox"/> City Council/Mayor	<input type="checkbox"/> Volunteer Fire Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> Plumas School District	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Public Works Dept.	<input type="checkbox"/> Sheriffs Office	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> Plumas Fire	<input type="checkbox"/> _____
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<input checked="" type="checkbox"/> City Planning Dept.	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Constraints

- | | |
|--|---|
| <input type="checkbox"/> Staffing Capabilities | <input type="checkbox"/> Legal Restrictions |
| <input type="checkbox"/> Funding | <input type="checkbox"/> Maintenance/Operations |
| <input type="checkbox"/> Technical Expertise | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Community Acceptance | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Political Support | <input type="checkbox"/> _____ |

Total Cost _____ \$

IS A FUNDING SOURCE AVAILABLE? Yes No

- | | |
|---|--|
| <input type="checkbox"/> City General Fund | <input type="checkbox"/> Federal Grant/Funding |
| <input type="checkbox"/> Tax/Special Assessment | <input type="checkbox"/> _____ |
| <input type="checkbox"/> State Grant/Funding | <input type="checkbox"/> _____ |

Mitigation Goals Addressed

- Increase public awareness of potential natural hazards and self-reliant mitigation actions.
- Reduce risk of loss of life/injuries due to natural hazards
- Reduce risk of loss to property, both public and private
- Maintain and increase funding for natural disaster preparedness, planning and response

APPENDIX 4

FIGURES

Figure 1	Portola City Limits
Figure 2	Essential Facilities Map
Figure 3A-3B	City of Portola Land Use Map
Figure 4	Future Development
Figure 5A-5C	Survey Data Result Graphics
Figure 6	Grizzly Valley Dam Location
Figure 7	Earthquake Epicenters
Figure 8	Probability of Earthquake Occurrence
Figure 9	Threshold Occurrences of Extreme Heat Events
Figure 10	FEMA Flood Zone Map w/ Land Use
Figure 11	Histories of Tornadoes
Figure 12	Occurrence of High Wind
Figure 13	Large Hail Events
Figure 14	Wildfire Fuel Loads
Figure 15	Fire & Ignition History
Supplemental Figure 16	Landslide Hazards
Supplemental Figure 17	Geologic Risk Areas
Supplemental Figure 18	Flood/Fire/Geologic Risks Areas

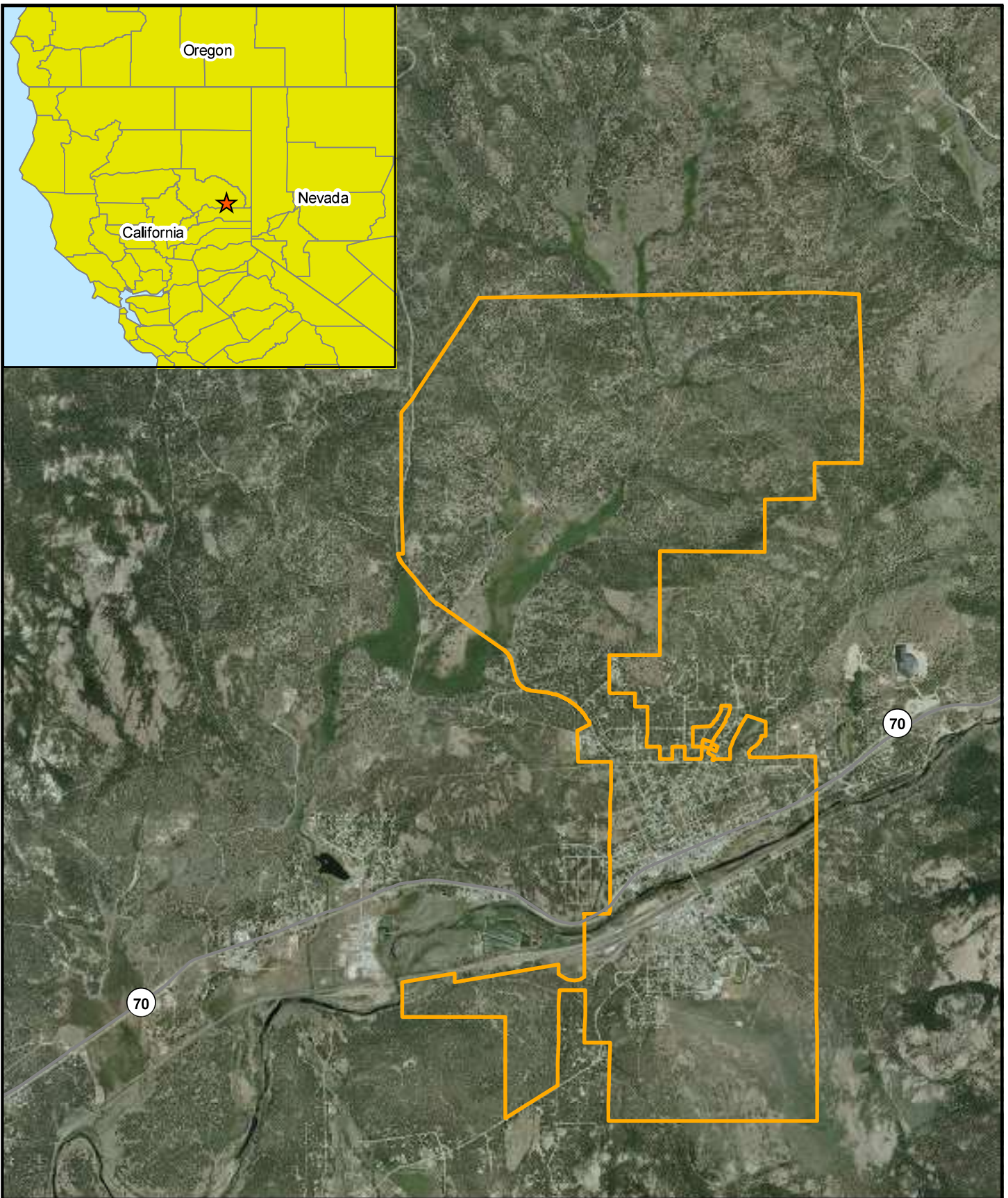
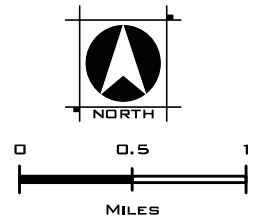


Figure 1

 Portola City Limits



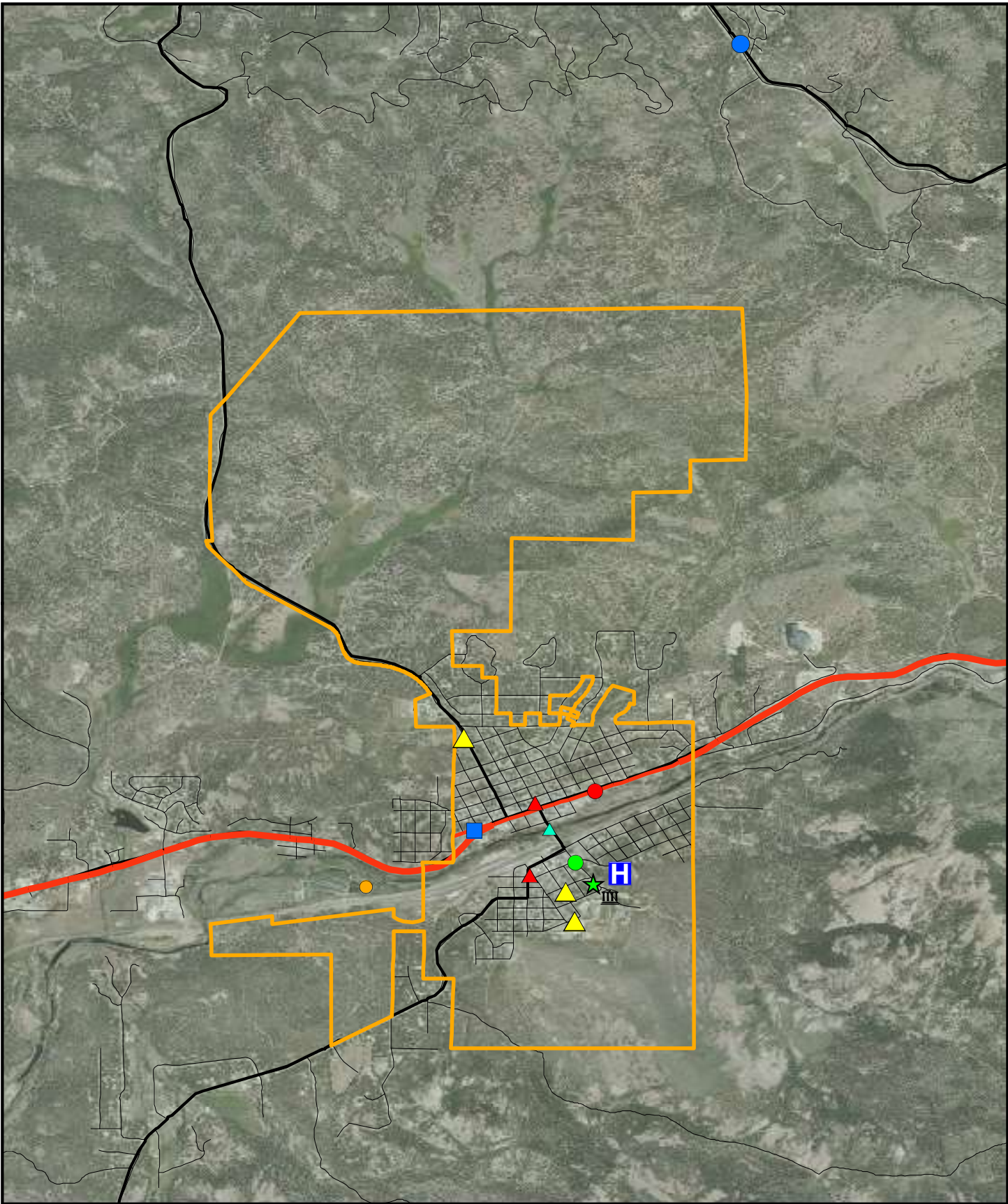



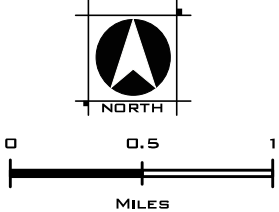


Figure 2

	Portola City Limits		Waste Water Treatment Facility
Essential Facilities			
	Gulling Street Bridge		Potable Water Facility
	Sheriff Sub-Station		School
	Superior Court of California		Emergency Center
	Veterans Memorial Hall		Care Facility
	Williams House		



A north arrow pointing upwards, labeled "NORTH". Below it is a scale bar showing 0, 0.5, and 1 mile, labeled "MILES".

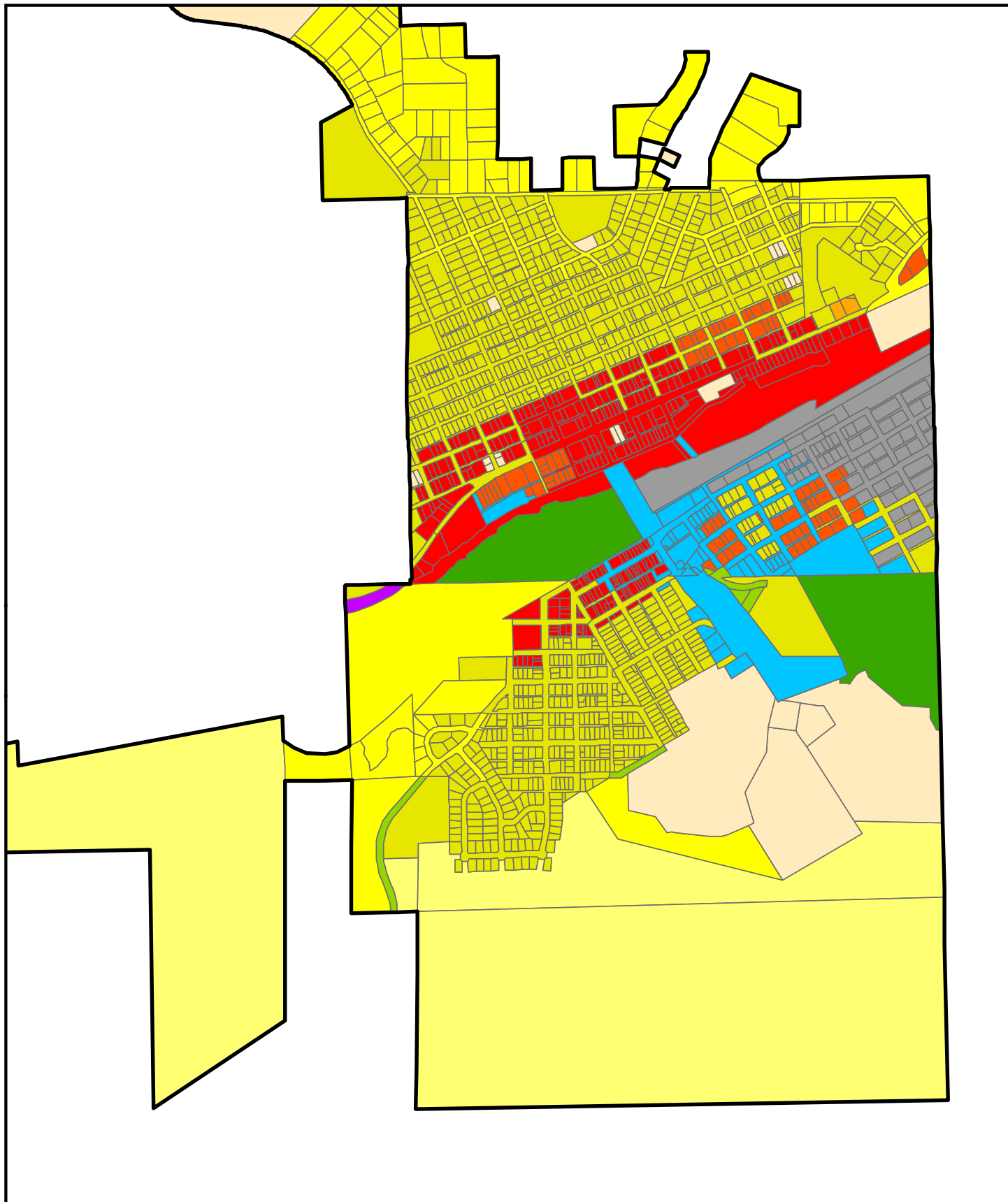


Figure 3A

SOURCE:
Land Use Description - City of Portola

Portola City Limits	NOT SPECIFIED
Land Use	BUSINESS PROFESSIONAL/LIGHT INDUSTRIAL
MEDIUM DENSITY RESIDENTIAL - 1 TO 8 UNITS PER ACRE	COMMERCIAL MIXED USE
OPEN SPACE	CORE COMMERCIAL
PARKS	HIGH DENSITY RESIDENTIAL - 8 TO 12 UNITS PER ACRE
PUBLIC/QUASI-PUBLIC	LOW DENSITY RESIDENTIAL 1 TO 5 AC. MIN. PARCEL
RURAL RESIDENTIAL - 5 AC. MIN. PARCEL	
UTILITIES	

NORTH

0 1,000 2,000
 FEET

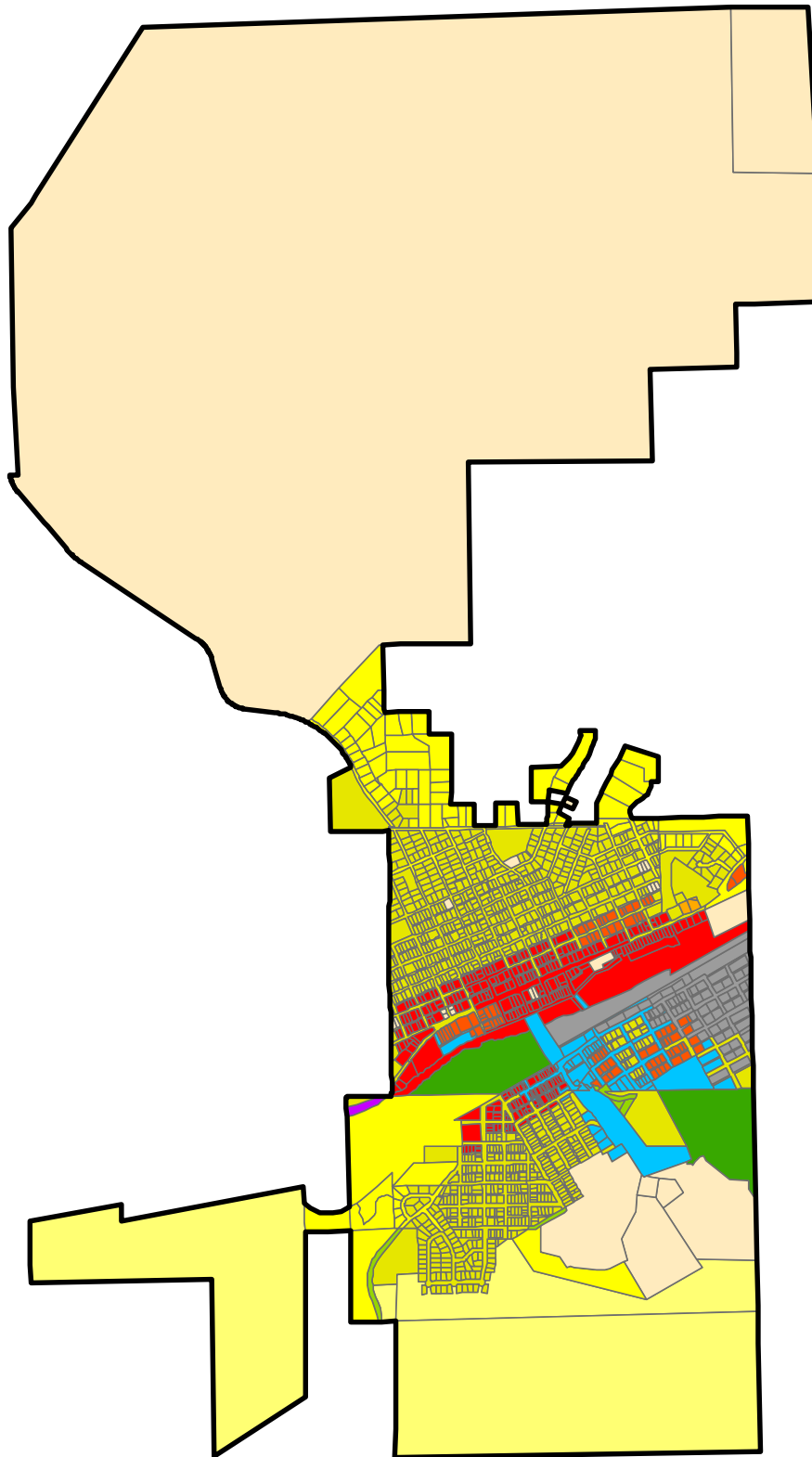
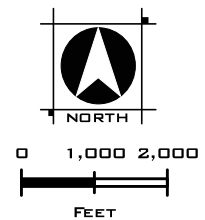
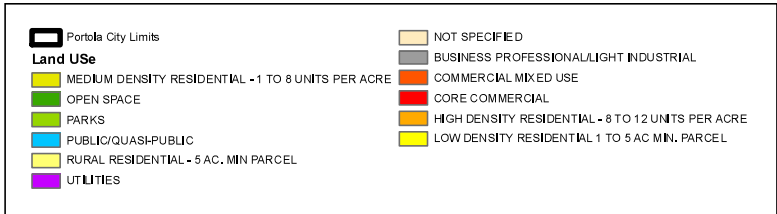


Figure 3B

SOURCE:
Land Use Description - City of Portola



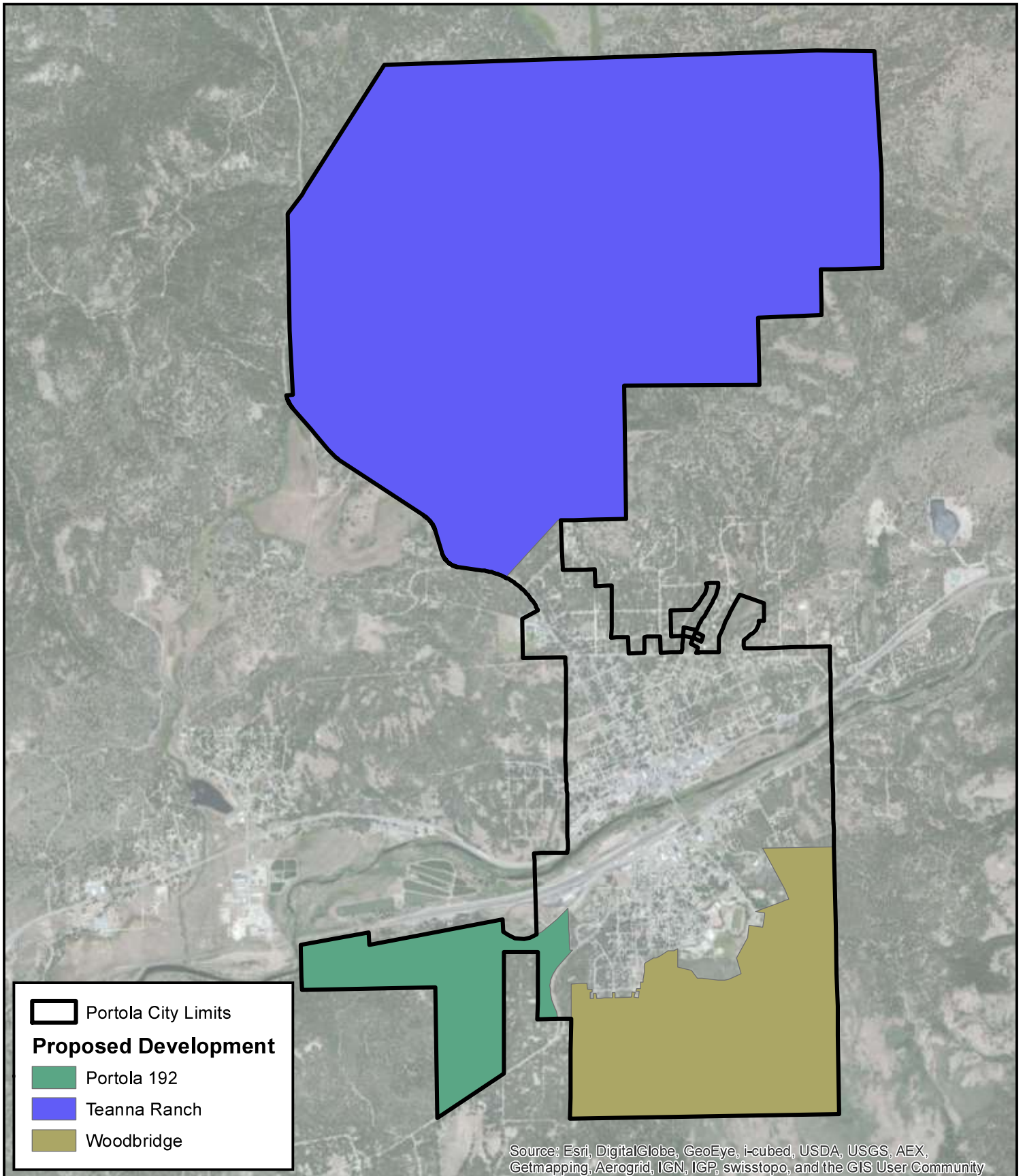


FIGURE 4

FUTURE DEVELOPMENT
CITY OF PORTOLA LHMP

NOTES

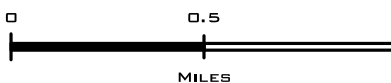


Figure 5A
Percent of Survey Respondents who have Experienced a Specific Hazard Event vs. Those who are Concerned about a Specific Hazard Event

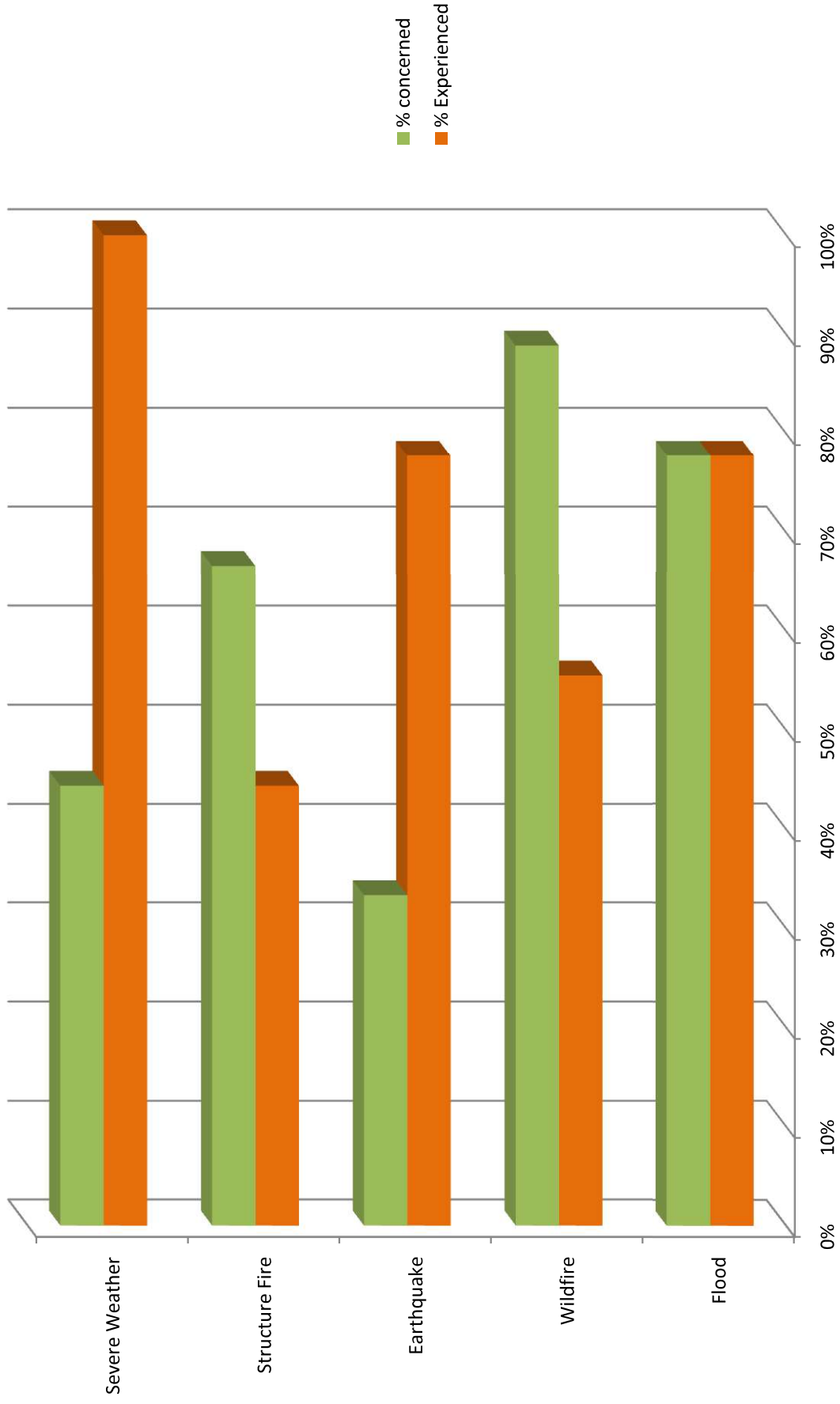


Figure 5B
Percent of Survey Respondents Who Felt they Experienced a Specific Hazard Event

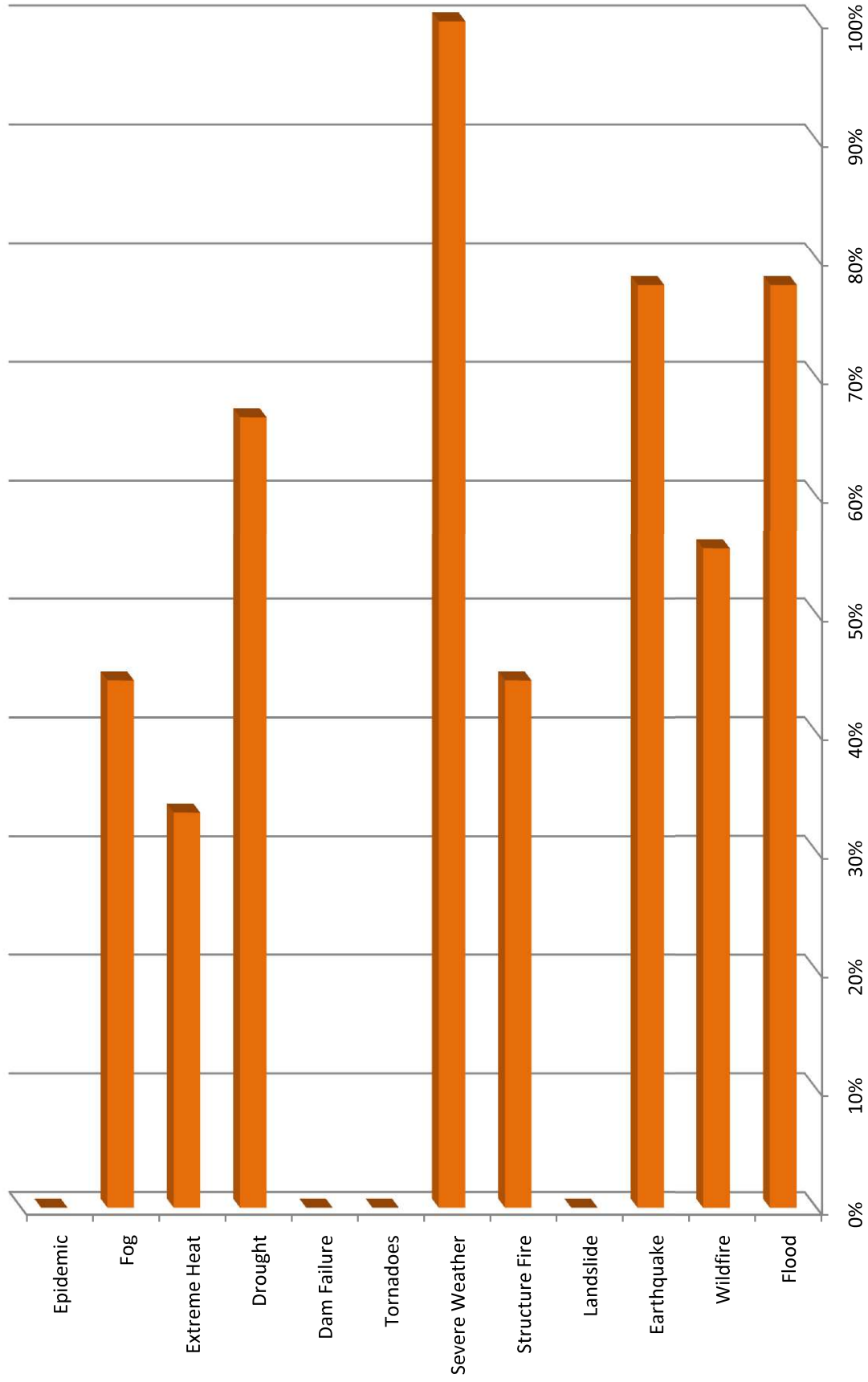


Figure 5C
Percent of Survey Respondents Concerned About a Specific Hazard

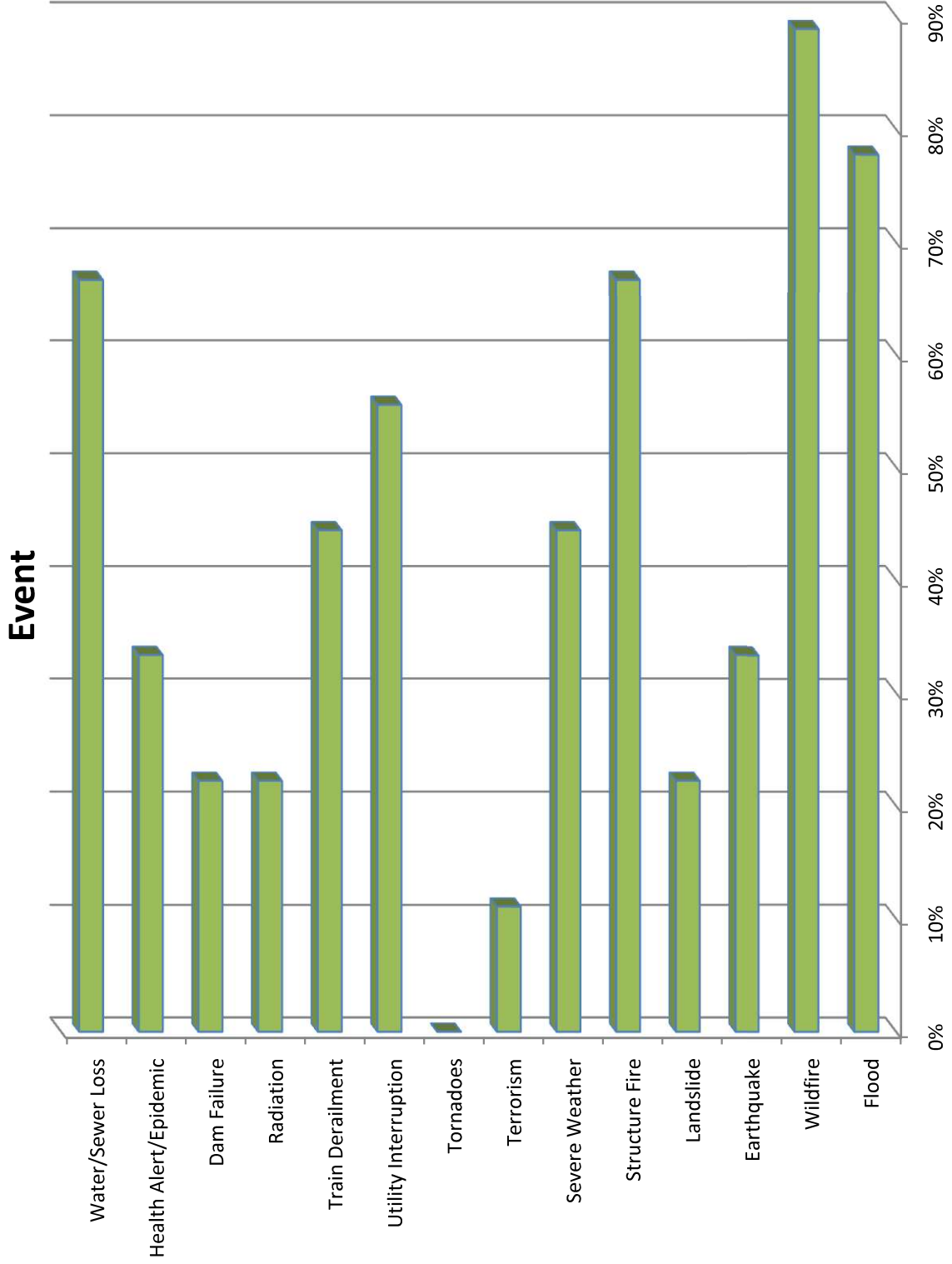
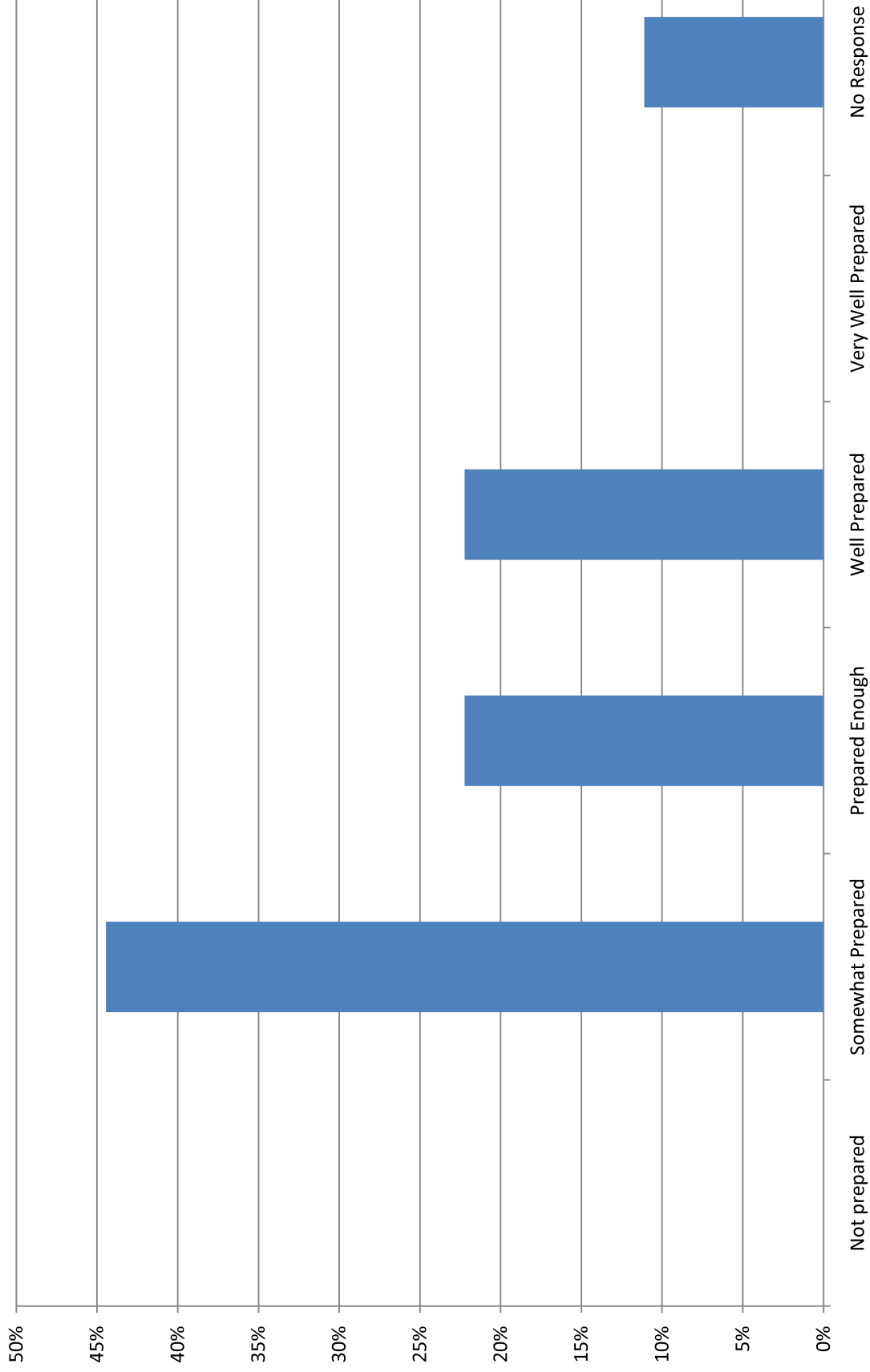


Figure 5D
Percent of Survey Respondents Feeling Prepared for a Natural or Man-Made Hazard Event



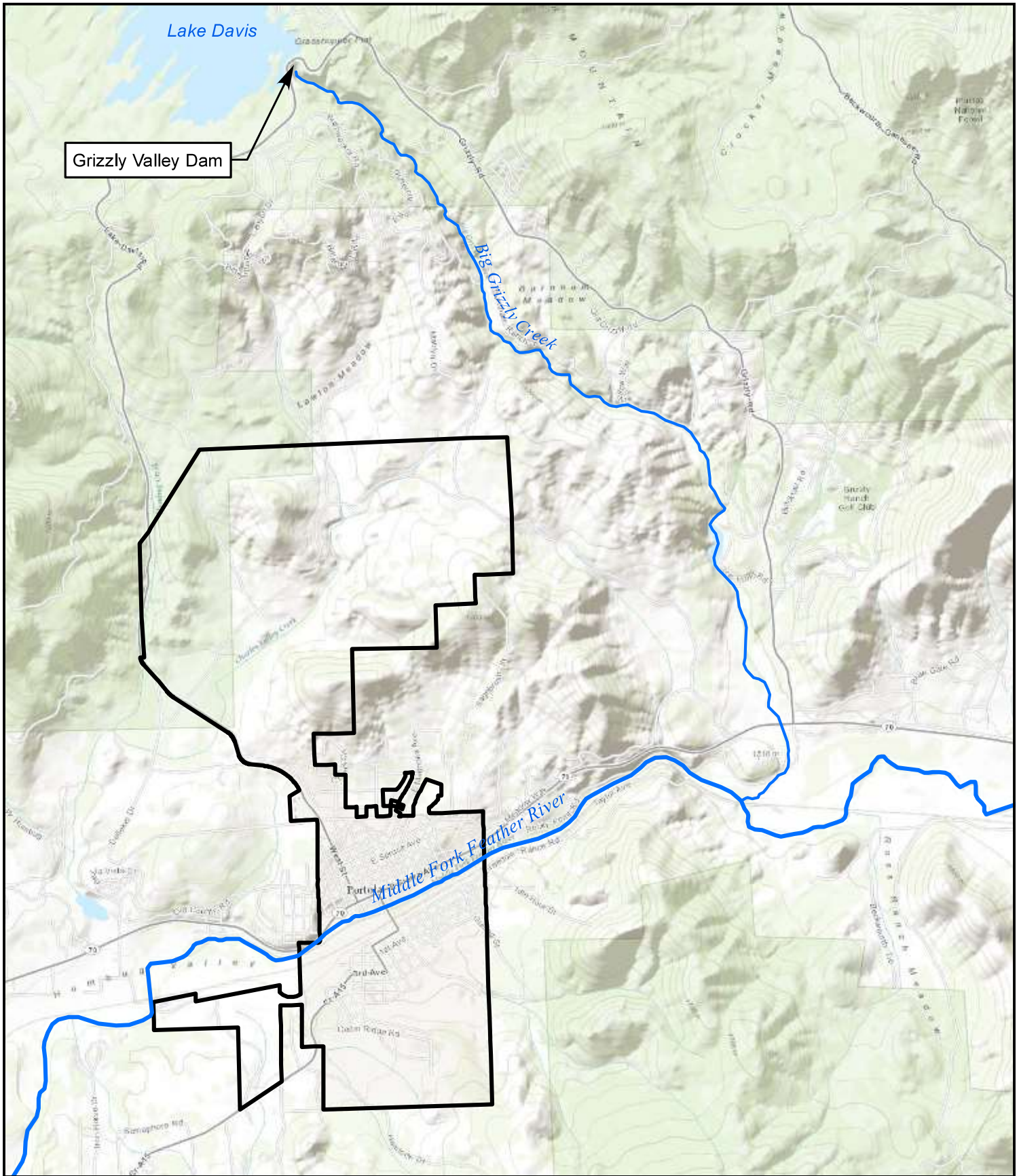
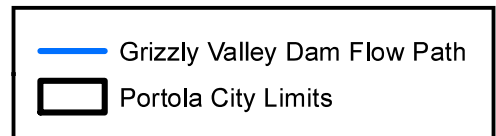
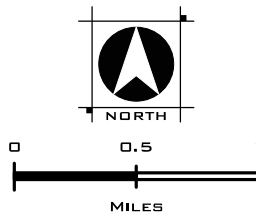


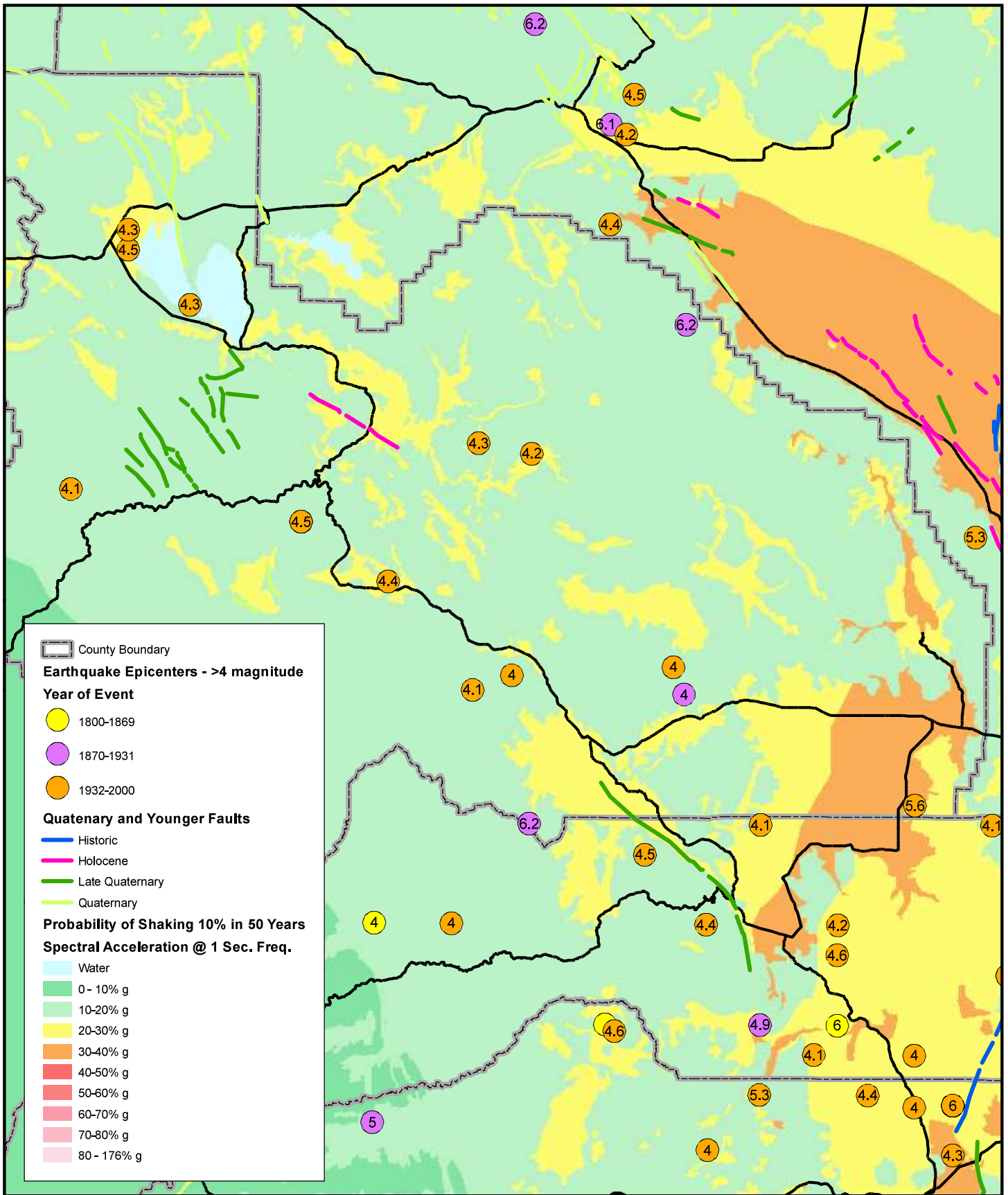
FIGURE 6

GRIZZLY VALLEY DAM LOCATION

NOTES

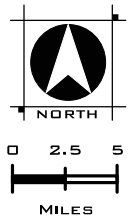
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong





**Figure 7 -
Probability of Earthquake Occurrence**

NOTES:
Probability of Shaking and earthquake epicenters from California OES, www.ca.oes.gov



PROBABILITY OF OCCURRENCE

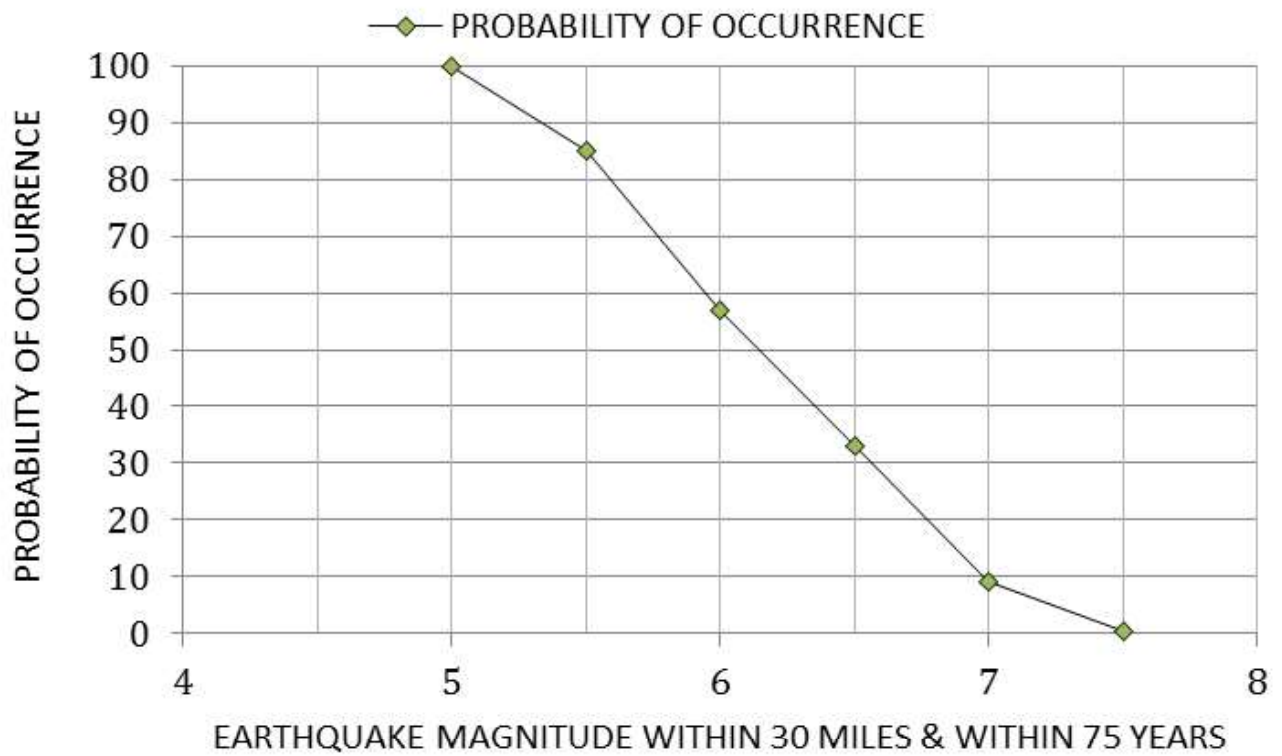
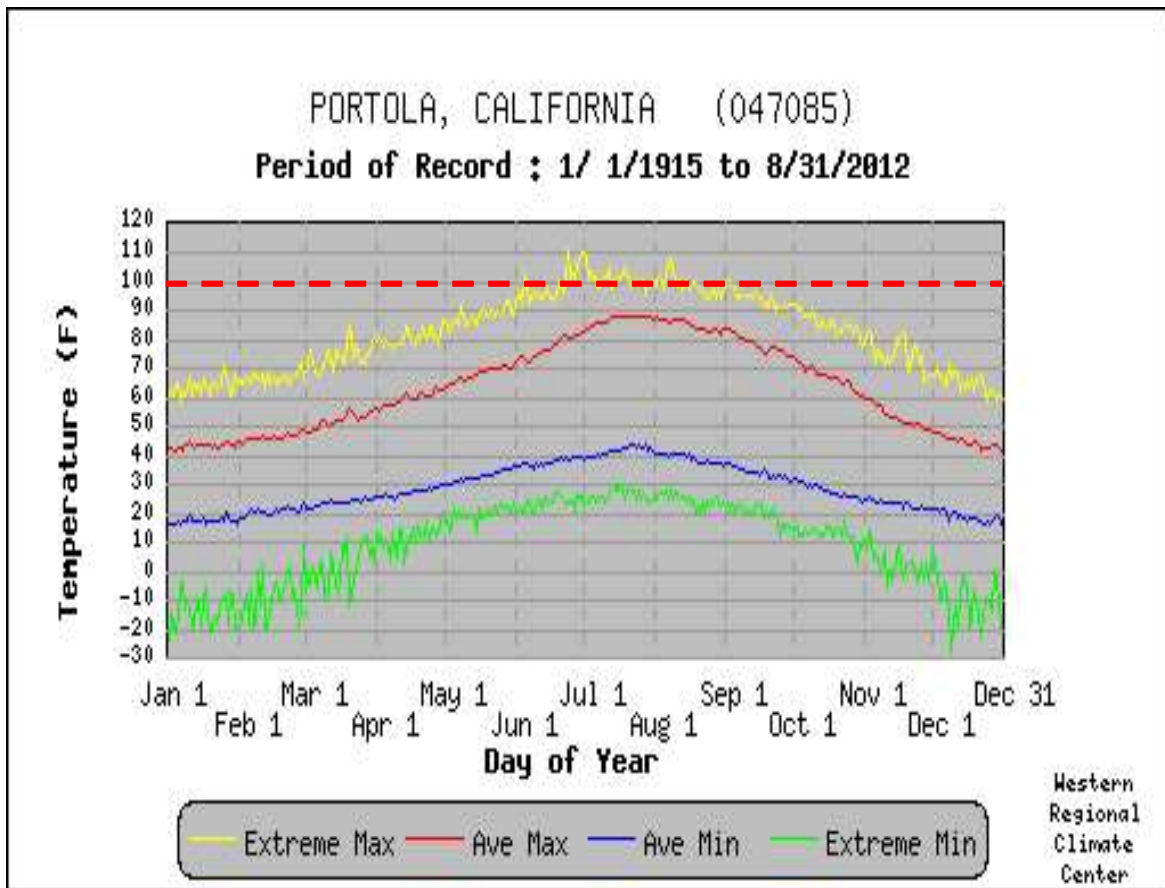


Figure 8 - Probability of Earthquake Occurrence



LEGEND

Extreme Max. - Maximum of all daily maximum temperatures recorded for the day of the year.

Ave. Max. - Average of all daily maximum temperatures recorded for the day of

Figure 9 - Threshold Occurrences of Extreme Heat Events

Portola City Limits

Essential Facilities within FEMA 100-year Flood Zone

- Veterans Memorial Hall
- Gulling Street Bridge

FEMA Flood Zone

- 100-year floodplain without established flood elevations
- 100-year floodplain with established flood elevations

Land Use

- NOT SPECIFIED
- BUSINESS PROFESSIONAL/LIGHT INDUSTRIAL
- COMMERCIAL MIXED USE
- CORE COMMERCIAL
- HIGH DENSITY RESIDENTIAL - 8 TO 12 UNITS PER ACRE
- LOW DENSITY RESIDENTIAL - 1 TO 5 AC MIN. PARCEL
- MEDIUM DENSITY RESIDENTIAL - 1 TO 8 UNITS PER ACRE
- OPEN SPACE
- PARKS
- PUBLIC/QUASI-PUBLIC
- RURAL RESIDENTIAL - 5 AC. MIN PARCEL
- UTILITIES

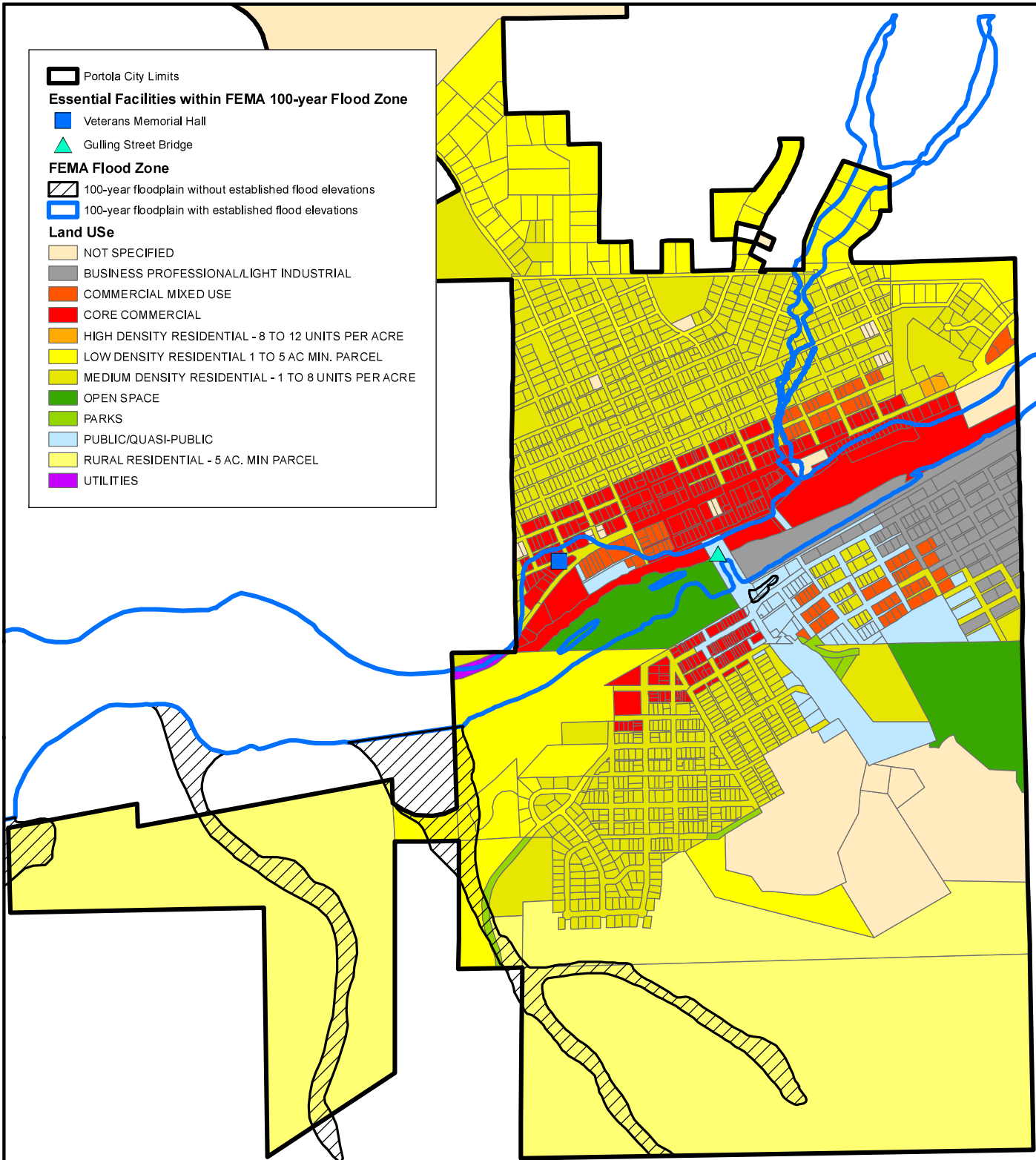


Figure 10 - FEMA Flood Zones and Land Use

SOURCE:
Land Use Description - City of Portola

NORTH

0 500 1,000

FEET

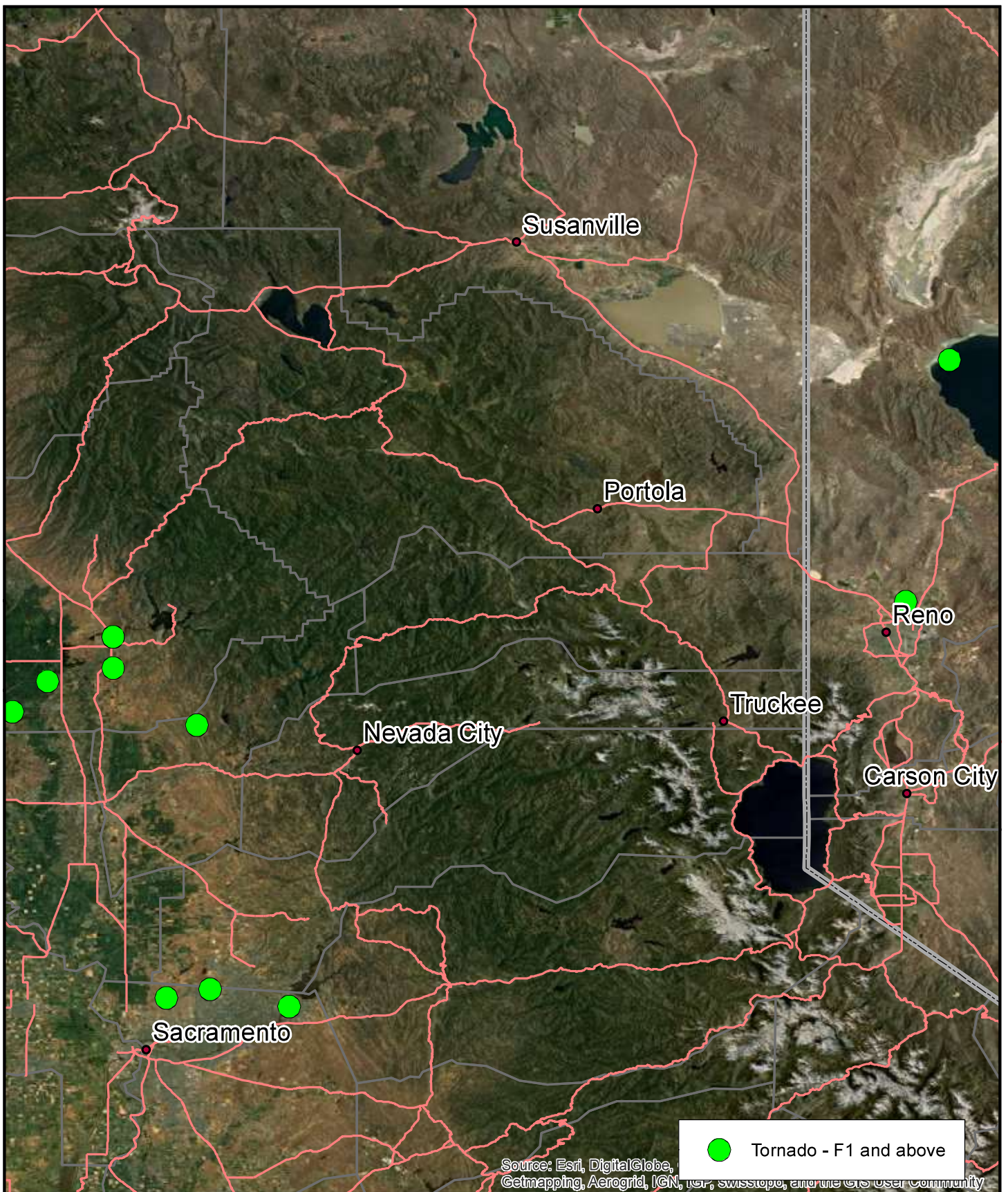
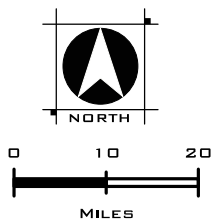


Figure 11 - History of Tornadoes

SOURCE:
 Wind Events - NOAA (<http://www.spc.noaa.gov/gis/svrgis/>)
 Background Aerial - Esri



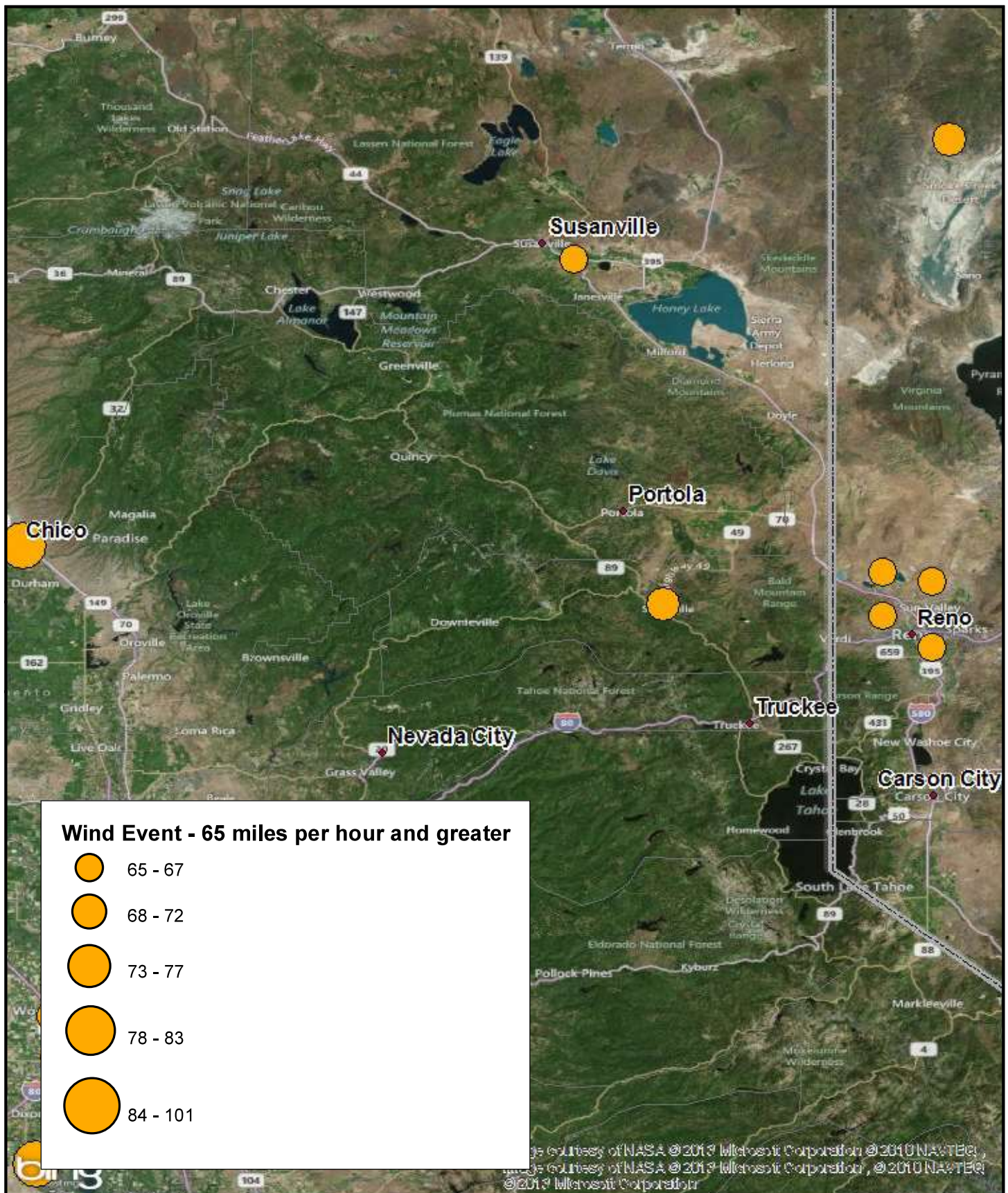
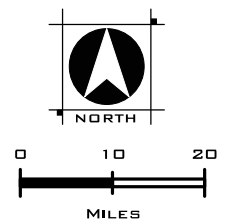


Figure 12 - Occurrence of High Wind

Sources:
 Wind Events - NOAA (<http://www.spc.noaa.gov/gis/srvgis>)



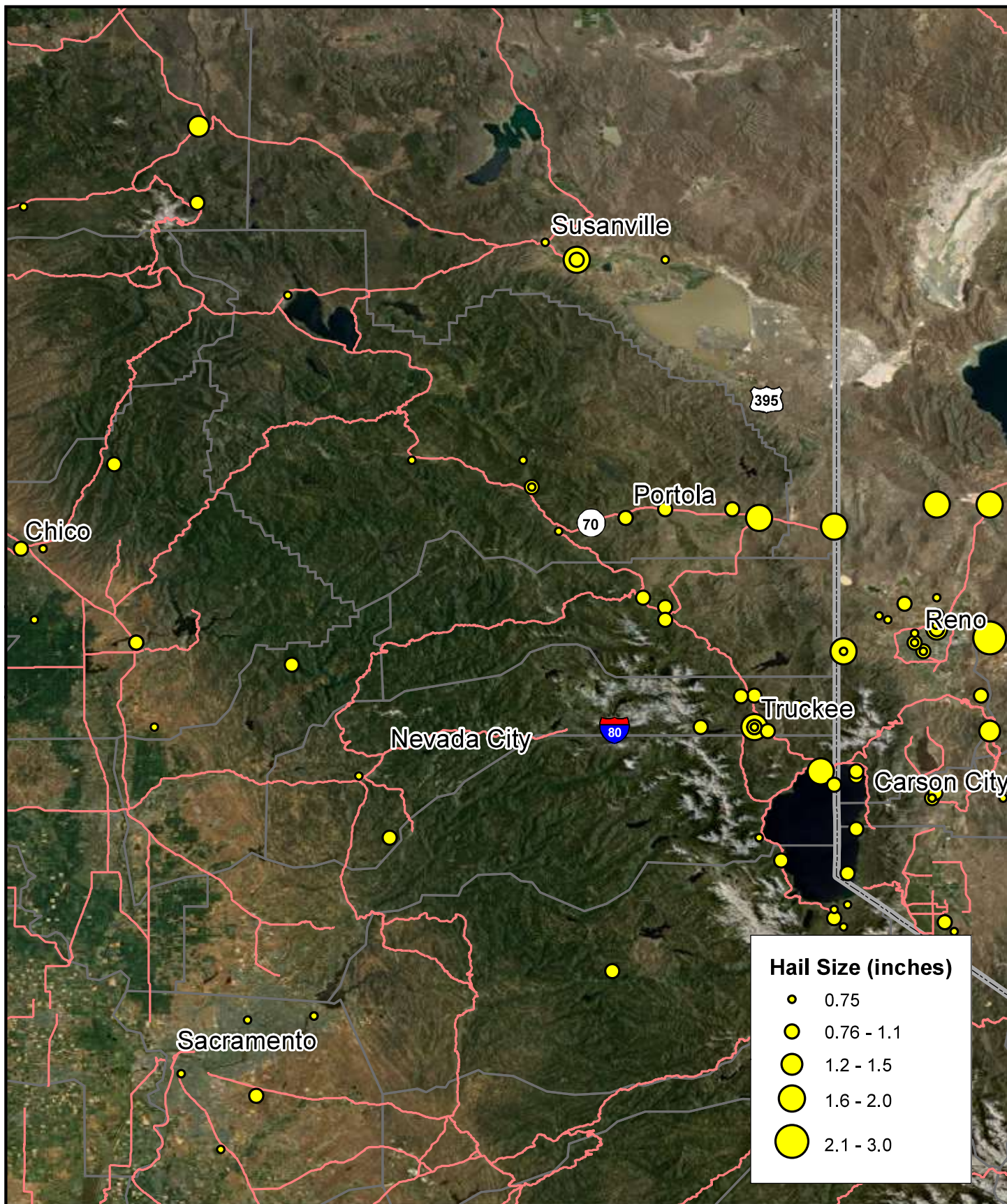
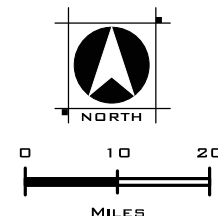
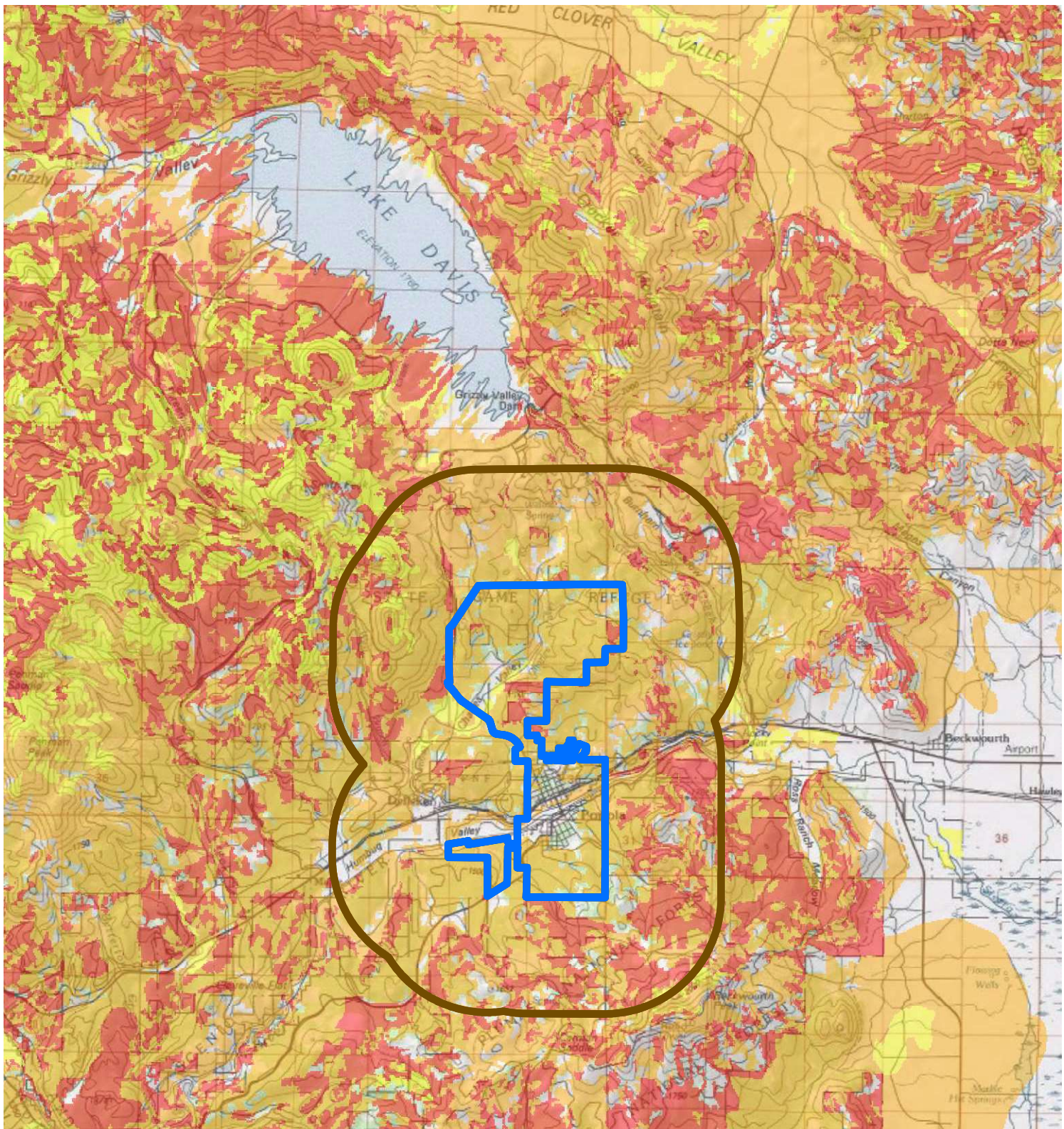


Figure 13 - Large Hail Events

SOURCE:
Hail Events and Sizes - NOAA (<http://www.spc.noaa.gov/gis/svrgis/>)
Background Aerial - Esri

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



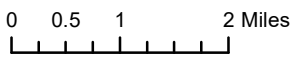


Legend

- City Boundary
- WUI Boundary

FRAP Fuel Rank

- Moderate
- High
- Very High



Fuel Loads

RESOURCE CONCEPTS, INC.



Path: R:\projects\wood_rogers\MXDs\Fuel_Loads.mxd

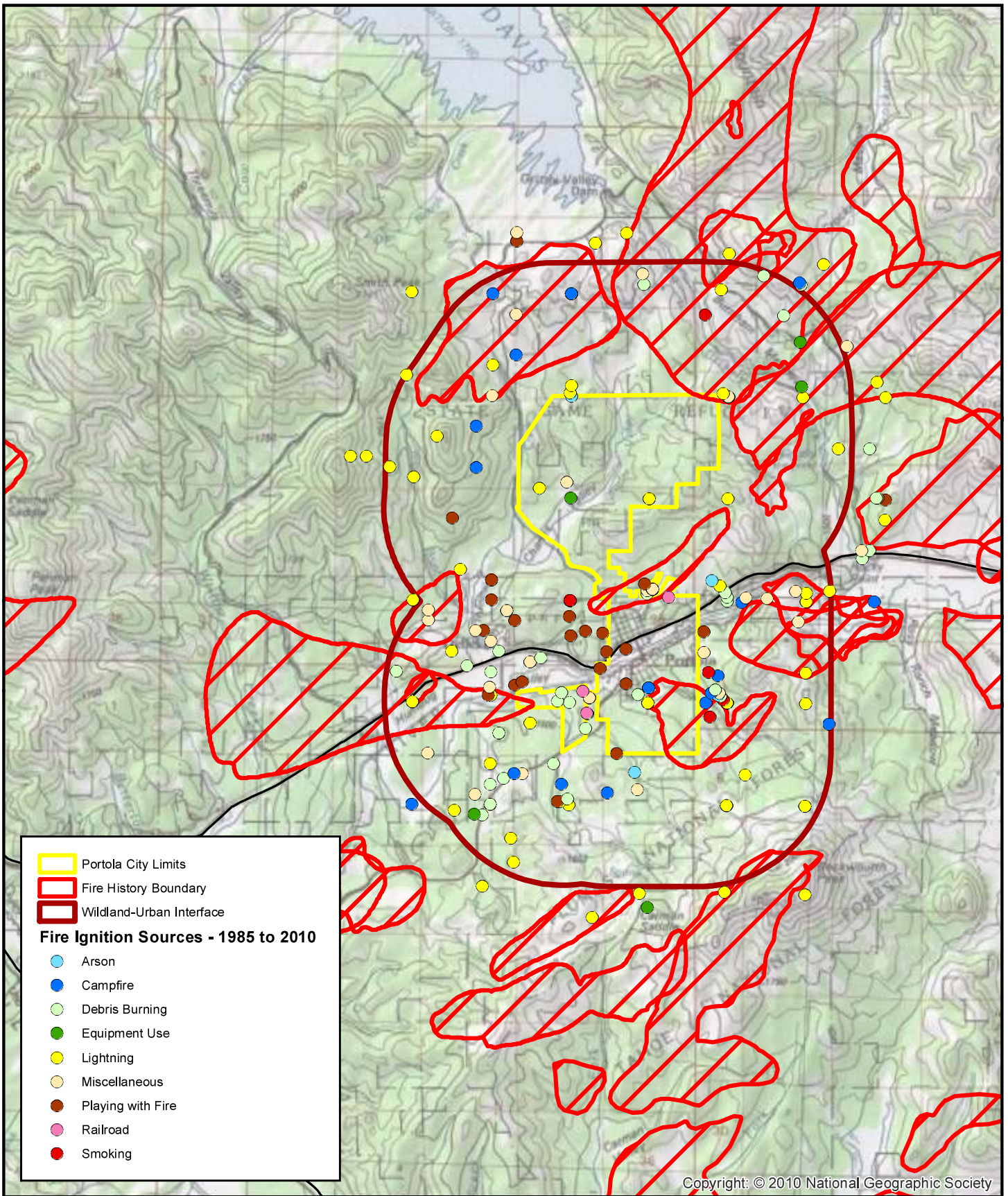
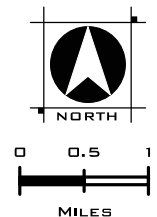


Figure 15 - Fire and Ignition History



NOTES

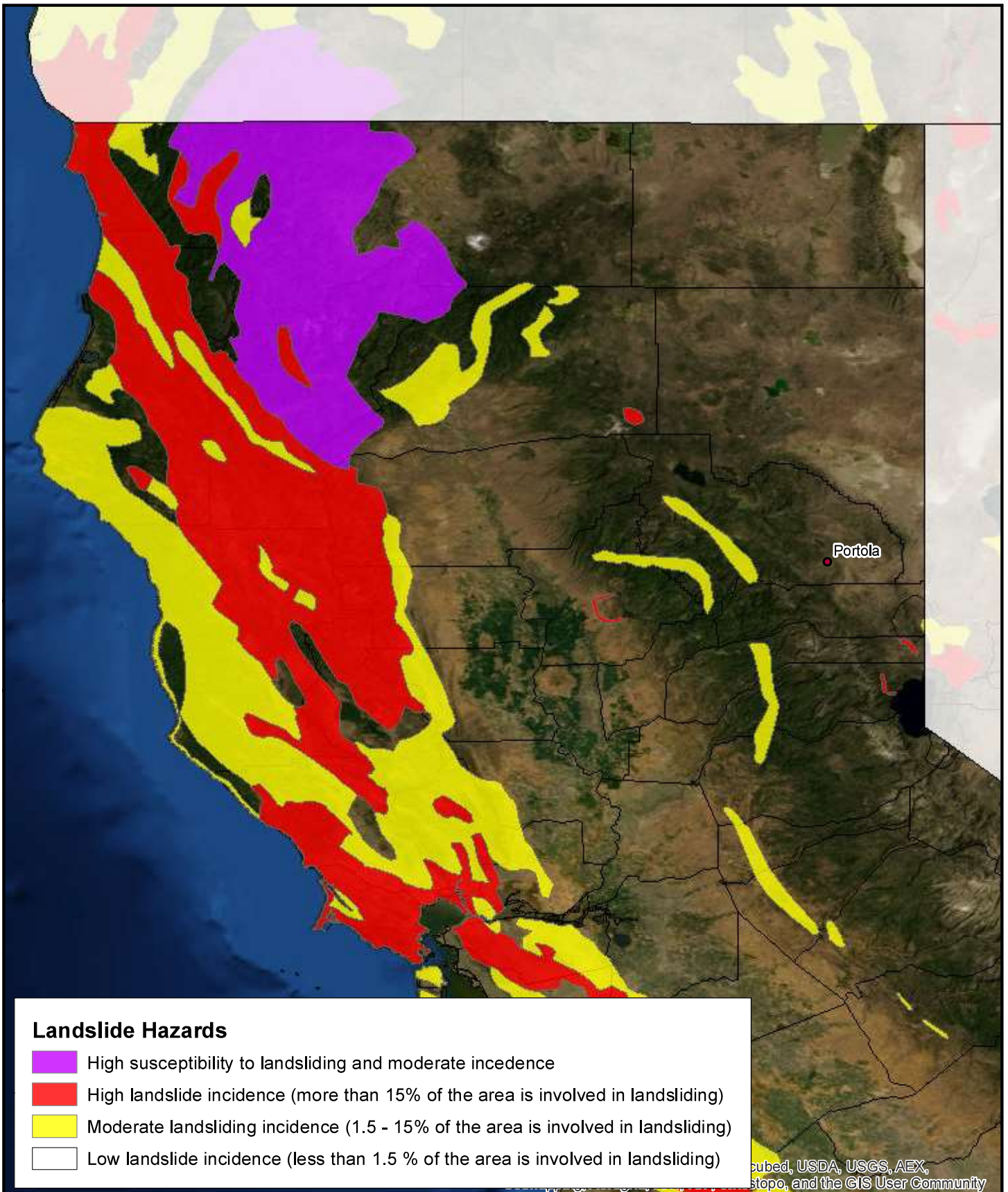
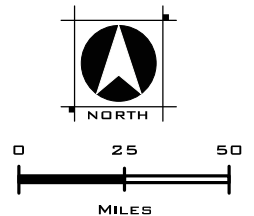


Figure 16 - Landslide Risk

Source:
U.S.G.S. Open-File Report 97-289



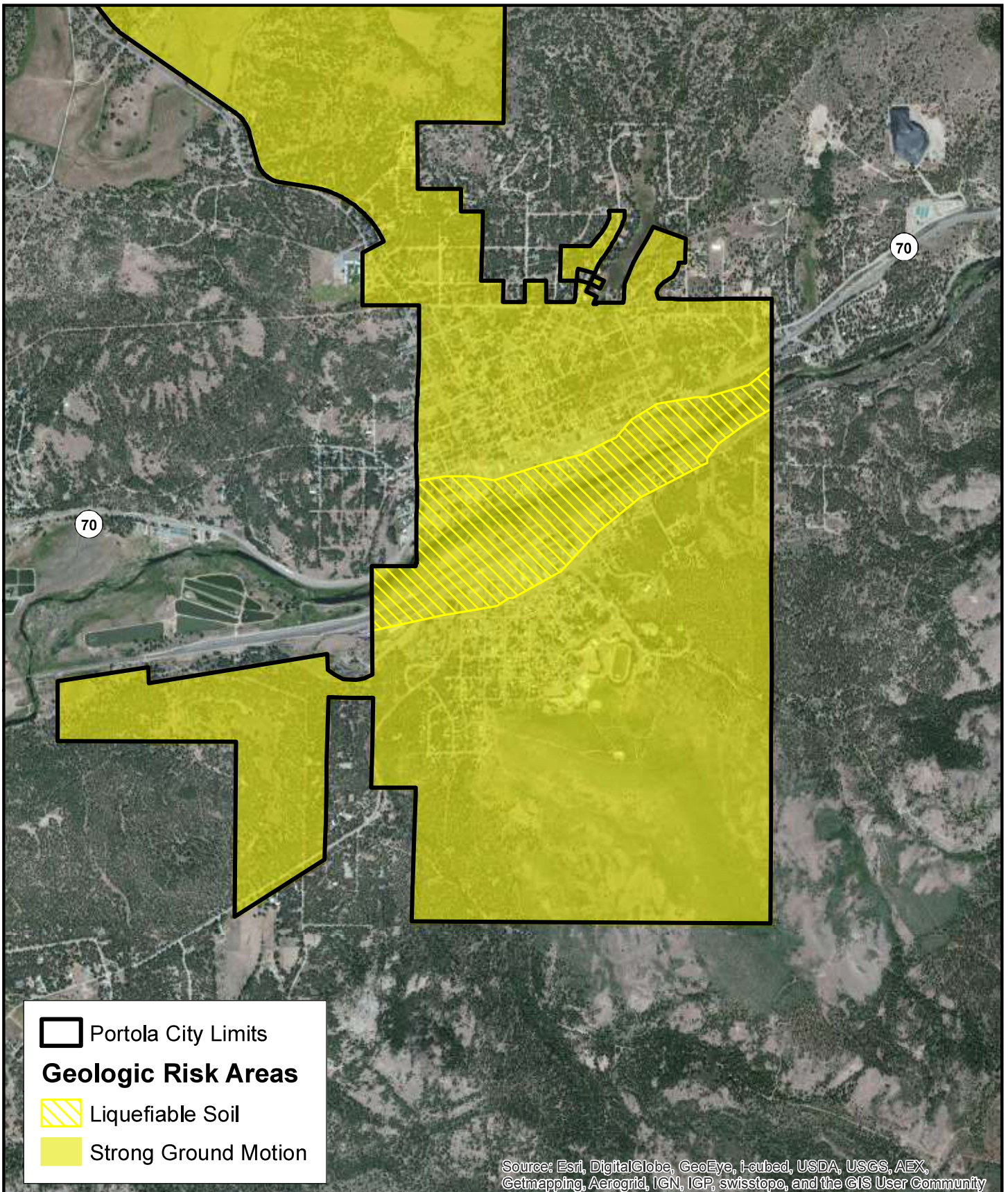
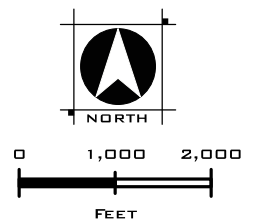


Figure 17 - Geologic Risk Areas



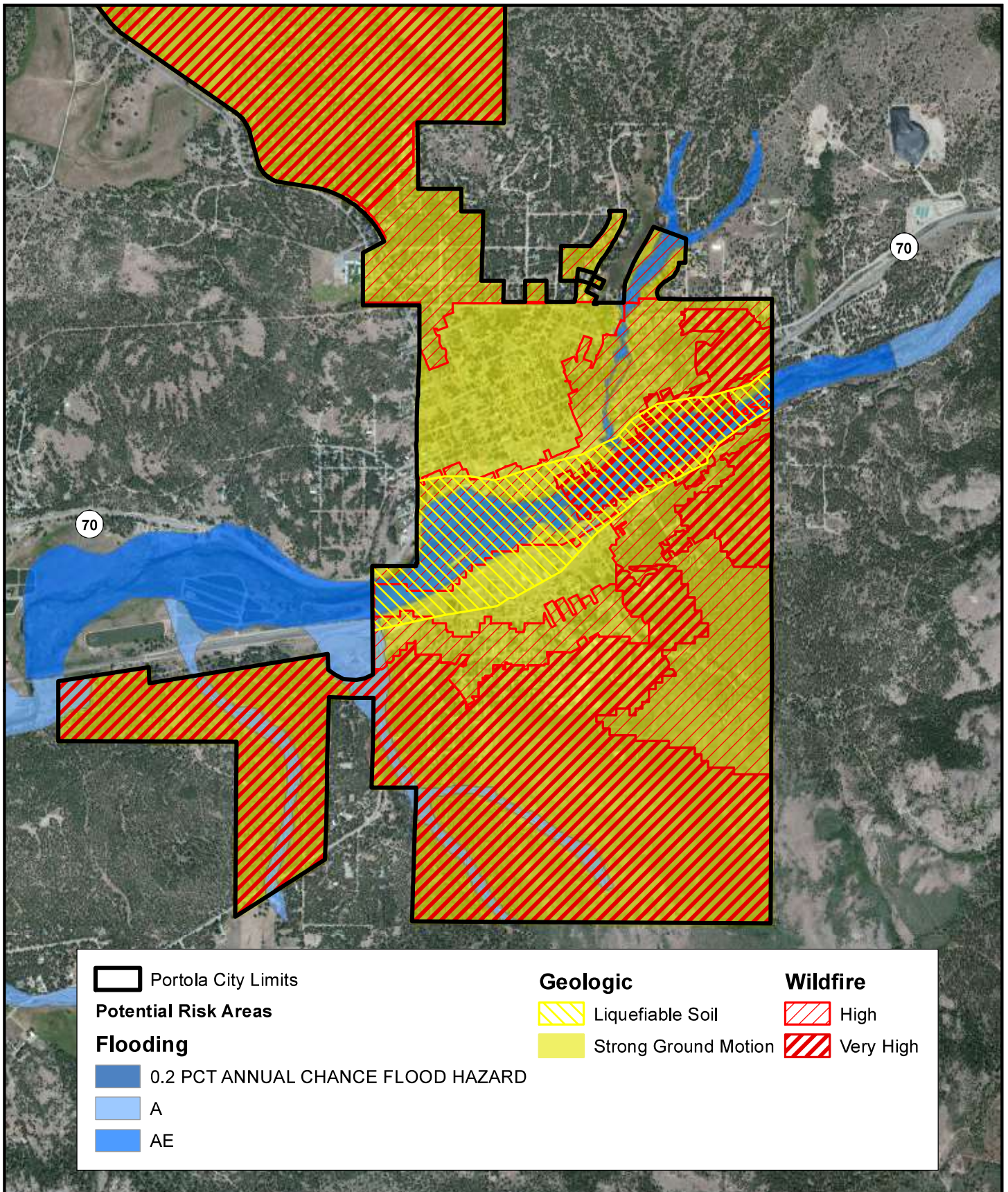
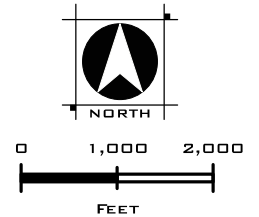


Figure 18 - Flood, Geologic and Wildfire Risks

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



APPENDIX 5

EMERGENCY MANAGEMENT GRANTS

“Emergency Management Grants” managed at the state level:

Emergency Management Performance Grant (EMPG)

<http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Emergency-Management-Performance-Grant-Documents.aspx>

Emergency Operations Center (EOC) Grant

<http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Emergency-Operations-Center-Grant.aspx>

Homeland Security Grant Program (HSGP)

<http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Homeland-Security-Grant-Program.aspx>

Interoperable Emergency Communications Center Grant Program

<http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Interoperable-Emergency-Communications-Center-Grant-Program.aspx>

Some “Hazard Mitigation Grants” managed at the state level:

Hazard Mitigation Grant Program (HMGP)

[http://www.calema.ca.gov/HazardMitigation/Pages/Hazard-Mitigation-Grant-Program-\(HMGP\).aspx](http://www.calema.ca.gov/HazardMitigation/Pages/Hazard-Mitigation-Grant-Program-(HMGP).aspx)

Pre-Disaster Mitigation (PDM)

[http://www.calema.ca.gov/HazardMitigation/Pages/Pre-Disaster-Mitigation-\(PDM\).aspx](http://www.calema.ca.gov/HazardMitigation/Pages/Pre-Disaster-Mitigation-(PDM).aspx)

Flood Mitigation Assistance (FMA) Grants

[http://www.calema.ca.gov/HazardMitigation/Pages/Flood-Mitigation-Assistance-\(FMA\)-for-Grants.aspx](http://www.calema.ca.gov/HazardMitigation/Pages/Flood-Mitigation-Assistance-(FMA)-for-Grants.aspx)

FloodSAFE California

<http://www.water.ca.gov/floodsafe/grants/>

Urban & Community Forestry Grants

http://www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry.php

California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) Wildland Urban Interface (WUI) Grants

<http://frap.fire.ca.gov/aboutfrap.html>

http://www.fire.ca.gov/resource_mgt/downloads/CALFIRE_UFGrants_Inventory_2012_2013.pdf

(example, these are funded on an annual basis)

OPSC Seismic Mitigation Program

<http://www.dgs.ca.gov/opsc/Programs/seismicmitigationprogram.aspx>

Some recovery grants managed at the state level:

OPSC Facility Hardship Program

<http://www.dgs.ca.gov/opsc/Programs/facilityhardshipprogram.aspx>

APPENDIX 6

PUBLIC PARTICIPATION PLAN

1. Public Participation Plan as outlined from the March 2012 HMT Meeting
2. List of Contacts for Distribution of notices for upcoming meetings and information
3. First Public Open House
4. Second Public Open House
5. List of Media event notices and Flyers sent to the public
6. HMT Meeting Minutes from various meetings throughout the project
7. Evaluation of the Public Involvement Process
8. Public Surveys & Results
9. Webpage snapshot

**Public Participation Plan as outlined from the
March 2012 HMT Meeting**

City of Portola

General Plan Safety Element & Local Hazard Mitigation Plan Update Public Participation Plan

1 - Introduction

The purpose of the City of Portola General Plan Safety Element and Local Hazard Mitigation Plan Public Participation Plan is to identify the strategy for effectively encouraging community participation in the plan update. It is the objective of Wood Rodgers and the City of Portola (herein after the “Project Team”) to involve members of the general public, stakeholder groups, local businesses, and interested state and local government agencies. A broad base of community input will contribute to the development of alternatives that provide the highest level of community acceptance and implementation of the plan.

This Public Participation Plan establishes goals and objectives to ensure that this planning endeavor is a collaborative effort with the community it serves.

2 – Goals and Objectives

The Project Team will provide the public with clear, relevant, timely and accurate information regarding the Local Hazard Mitigation Plan and General Plan Safety Element update process in readily accessible formats.

GOAL 1

The Project Team will continuously and actively seek public comment and provide meaningful opportunities for the public to participate in the development of alternatives for the final plan.

Objective 1.1

The Project Team will develop and maintain an up-to-date database of contacts, including but not limited to:

- Elected officials
- Federal, state, and local government staff
- Business owners
- Civic groups
- Health care centers
- Citizens who request information regarding plan update

Objective 1.2

The Project Team will provide e-mail distribution of notices of public participation opportunities to all persons on the contact list described in Objective 1.1

|

Objective 1.3

The Project Team will conduct all meetings of the City of Portola and its advisory committees (as applicable) in an open public forum in accordance with the State of California Open Meeting Law.

GOAL 2

The Project Team will provide clear, accurate, relevant information about the Safety Element and Local Hazard Mitigation planning process on a continuous basis.

Objective 2.1

The Project Team will make publications available to the public on the internet and in printed form at the City of Portola offices.

Objective 2.2

The Project Team will be available by telephone, e-mail, and in person (within reasonable limits) to answer questions from the public, and will be available by request to meet with civic groups, other governmental agencies and other organized groups within the study area.

Objective 2.3

A website will be established and maintained, which will provide general information about the study, public participation meetings and opportunities, project updates and contact information.

GOAL 3

The Project Team will ensure that public participation will be a continuous process from project kick-off, through alternatives development and final improvement of the plan.

Objective 3.1

The Project Team will actively assist the City of Portola in development and implementation of this public involvement processes.

GOAL 4

The Project Team will continuously work to refine and improve public participation in the study process.

Objective 4.1

Staff will conduct an evaluation of each public participation strategy that is implemented at appropriate intervals during the study.

3 - Public Participation Strategies

This section describes each strategy that the Project Team will use to implement this Public Participation Plan.

3.1 Website

A website for project will be created and online prior to the first public meeting. Project information will be made available on the project website. This website will also have a link on the City's website.

The website will include:

- An overview of the project
- Project updates
- Public meeting notices
- Contact information
- Public comment form
- Community Survey
- Selected presentations
- Other project related information

3.2 Contact List

A project contact list will be maintained and updated throughout the project. Information may be sent to individual lists or to the entire list, depending on the specific communication. Individual citizens may be added to the list upon request. The contact list will be used to notify interested parties of project updates and public involvement opportunities.

3.3 Press Releases

Public involvement meetings and releases of project recommendations will be announced in press releases to local print and broadcast media. Press releases will be coordinated by the City of Portola Project Manager.

3.4 Public Meetings

Depending on the specific issues and needs involved, staff will conduct two public meetings to communicate information and receive input and comments.

Public meetings will be structured in an open-house format where various issues regarding the project will be on display. Project staff will be on hand to where one on one interaction will answer questions and encourage public comment.

Public Meetings generally provide the public with an opportunity to provide direct input to the planning process, usually through exercises that involve marking up maps to identify problems, issues, and suggested actions and/or listing issues.

It is anticipated that each public meeting will occur:

- Open House #1 – This will occur early on in the study to introduce the project to interested and affected stakeholders and invite public comments to identify issues and

potential solutions, as well as provide citizens with an additional opportunity to complete the community survey

- Open House #2 – The purpose of the second public open house is to build consensus for safety element and hazard mitigation plan findings and mitigation recommendations. Participants will have the opportunity to comment on plan elements via interactive stations that will both inform and solicit responses that can be quantified and documented in the final report.

3.5 Stakeholder Group Meetings

By advance request and if necessary, The Project Team staff will meet with and make presentations to local stakeholder groups. Comment forms are distributed to these groups to document public involvement and comments.

3.8 Planning Commission and City Council Meeting

At the conclusion of the study, findings will be presented to the Planning Commission and City Council for approval.

3.9 Fact Sheets

Fact sheets will be developed to summarize information about the project in a very brief (generally one-page) document. The fact sheets will include a basic overview of the project, project timeline/milestones, contact information and website addresses for the project.

3.10 Flyers

Flyers will be developed to announce public meetings for the study. These flyers will be distributed by the City staff locally. They will also be distributed electronically to the project stakeholders list as well as the general project mailing list.

3.11 Comment Forms

A comment form will be made available at public presentations and meetings, and will be available electronically on the web. Comment forms may also be developed for each public meeting to garner feedback on the subject matter presented. Comments will be summarized and included in the final report of the study.

List of Contacts for Distribution of notices for upcoming meetings and information

Hazard Mitigation Team

Karen Downs, Planner

City of Portola
P.O. Box 1225 35 Third Avenue
Portola, CA 96122
530-832-6808
530-832-5418 fax
k.downs@ci.portola.ca.us

City of Portola

Community Service Officer
(Fire/Hospital/Eastern Plumas Health Care EMT1)
Leah Turner
530.832.6833
l.turner@ci.portola.ca.us

Plumas County

Jerry Sipe, Environmental Health/OES
270 County Hospital Road #127
Quincy, CA 95971
530-283-6367
quincylv@countyofplumas.com

Union Pacific Railroad

Carl Anderson
916-789-5134

City of Portola

Public Works Department
(Streets & Roads, Solid Waste, Sewer)
Todd Roberts
530-832-6804
t.roberts@ci.portola.ca.us

US Forest Service

Don Fregulia
ADFMO Fuels
(530) 836-7176
dfregulia@fs.fed.us

Plumas County Fire Safe Council

Jerry Hurley
PC FSC Coordinator
530-283-0829
jerry.hurley@sbcglobal.net

Additional agencies, jurisdictions, and districts

Eastern Plumas Health Care

500 1st Avenue,
Portola, CA 96122
530-832-6500

Eastern Plumas Chamber of Commerce

California 89
Blairsden, CA 96103
530-836-6811

Plumas Unified School District

Office of the Superintendent
50 Church Street
Quincy, CA 95971
530-283-6500

Civic Organizations, Churches, Schools, Other Groups

Rotary Club of Portola

390 California Street, Portola)

Portola Railroad Days Committee

Soroptimists

PO Box 919, Portola

Graeagle Lions Club

PO Box 1045, Graeagle 96103

Calpine BPO Elks Lodge

71292 Highway 70, Portola

Eastern Plumas Chamber of Commerce

PO Box 1043, Blairsden 96103

Portola Station Baptist Church

171 S. Gulling, Portola

Portola United Methodist Church

396 2nd Avenue, Portola

Holy Family Church

108 Taylor Avenue, Portola

The Upper Room Seventh Day Adventist Church

57 E. Sierra Avenue, Portola

Church of Jesus Christ of Latter Day Saints

683 West Street, Portola

St. Luke's Lutheran Church

201 W. Sierra Avenue, Portola

Assembly of God

72690 Highway 70, Portola

Jehovah's Witness

76500 Rocky Point Road, Portola

EPRFD

141 Delleker Drive, Portola

Beckwourth FD

180 Main Street, Beckwourth 96129

EPHC

500 1st Avenue, Portola

GLCSD

119 Delleker Rd, Portola

**Plumas National Forest,
Beckwourth Ranger District,
Deb Bumpus District Ranger,**
PO Box 7, Blairsden, 96103

Plumas-Sierra Rural Electric Cooperative

73233 Highway 70, Portola

**Portola Jr./Sr. High School,
Purple Pride Boosters**

155 6th Avenue, Portola

**Portola Jr./Sr. High School,
Sara Sheridan, Principal**

155 6th Avenue, Portola

Portola Family Resource Center

49 Commercial Street, Portola

Rebuilding Portola

jeannedansby@gmail.com

First Public Open House

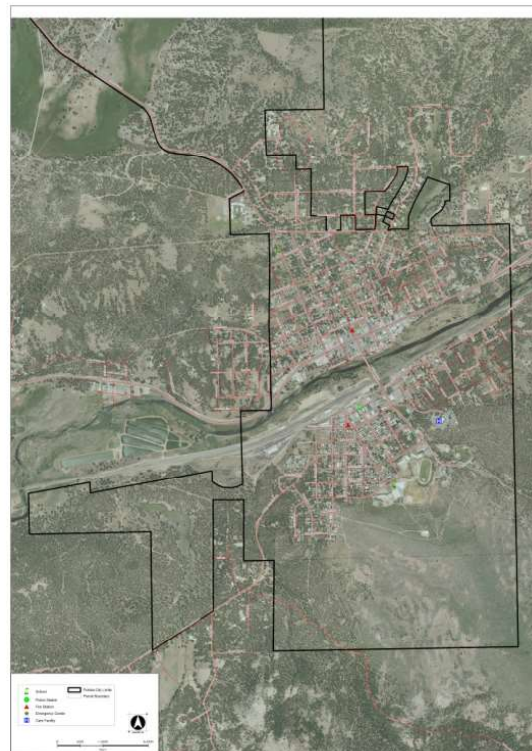
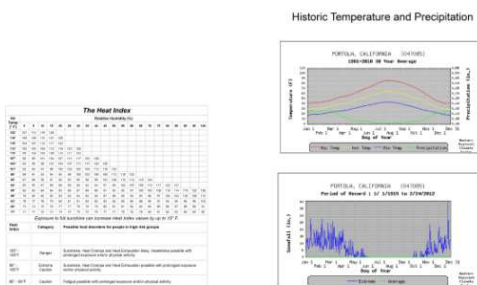
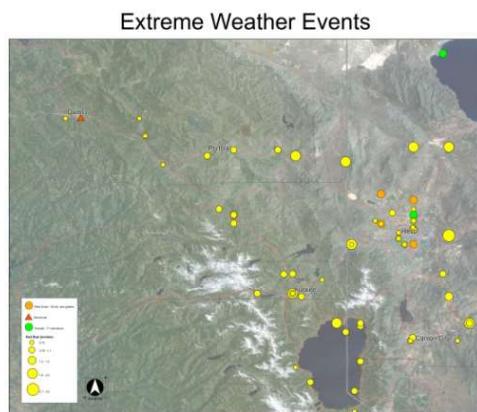
Public Meeting Summary – 5/10/2012

This meeting was scheduled prior to the regularly scheduled City Council Meeting to increase awareness and attendance. The meeting was also advertised on the project website, in the newspaper and using fliers placed around town (examples in section of the this Public Participation Plan). Attendance was limited, and the only attendees not on the Hazard Mitigation Team (HMT) were Juliana Mark and Phil Oels, both members of the Portola City Council.

Andy Durling of Wood Rodgers acted as the moderator and opened the meeting by explaining the LHMP process and goals. Next came the power Point presentation prepared by Wood Rodgers which showed the hazard specific research completed to date as well as solicited comments about specific hazards, past experiences with hazards and any concerns about future impacts. The web based comment form was shown and copies of the form were handed out to the participants.

Comments from the participants were very helpful as they were able to identify several additional essential facilities and specific hazard locations. In addition, they took several of the hazard surveys to hand out around town.

As part of the presentation, Wood Rodgers prepared large presentation boards (24x36) showing the community and hazard locations. Participants were provided with markers and encouraged to mark up the community map with areas of concern and additional essential facilities. Examples of the presentation boards are shown below:



City of Portola Local Hazard Mitigation Plan Public Comment Form

The City of Portola and other involved stakeholders value your feedback! Please provide your comments and suggestions below.

Contact Information (optional):

Name: _____

Address: _____
Number, Street or PO Box

City

State

Zip

Phone number: _____ Email: _____

Comments (continue on back as necessary):

Second Public Open House

Public Meeting Summary – 11/1/2012

This meeting was scheduled at City Hall. Flyers were sent out through the community with direct invitations to civic groups and churches in hopes of getting an increase awareness and attendance. The meeting was also advertised on the project website, in the newspaper and using fliers placed around town. Attendance was limited, and the only five residents were in attendance including city staff.

Sheila Anderson and Jim Reinhardt with RCI reviewed the draft Community Wildfire Protection Plan (CWPP) with the group. They discussed the fire history, ignition types and location around the city, fire suppression abilities, and the overall fire danger within Portola. A number of recommendations for the City were discussed, including defensible space, fuel reduction treatments, community/state/federal coordination, education, and measures bolster the Volunteer Fire Department. A group voiced concern about location in the city that may need to be thinned, masticate brush and reduce fuels. Many of these locations identified including, Woodbridge Development, Teanna Ranch are private property makes it difficult enforce or mandate treatment measures. Various programs and assistance was discussed and identified as means for help meet these goals, however it would still involve homeowner cooperation. Ordinance adoption was also discussed however this has a financial and political impact that the resident may have a hard time accepting

Mickey Smith and Jon Simpson with Wood Rodgers then reviewed the Mitigation Goals and objectives for the city. There was an overall agreement with the group that they seem



acceptable and no changes were identified. We then went briefly over some of the mitigation strategies that have been developed by the HMT. There was also a general acceptance for these items. It was discussed that these are a starting point for the City and that the document would continue to evolve and modify as funding and city staff, local capabilities were available. Funding for these was questioned. We highlighted the Emergency Grants available in the document that could be used but also

noted that this was not the only place that the city could try and find additional funds to help initiate and move forward with the various mitigation strategies. Community involvement was then discussed. Various way to try and engage the participation of the resident were identified. Comments from the participants were very helpful as they were able to identify several concerns and potential means to begin getting the community behind the LHMP.

As part of the presentation, Wood Rodgers prepared large presentation boards (24x36) showing the various mitigation goal, objectives and strategies. Participants were provided with draft documents. The Draft LHMP was placed on the website and precipitants were

encouraged to go to the website, tell friends and family, to review the strategies and add comments. The poster boards and material was left at City hall to be displayed for residents that visit on other business so that they might see and comment on the plan. Examples of the presentation boards are shown below:

Goal 1

Increase public awareness of potential natural hazards and self-reliant mitigation strategies

Involve the public in disaster planning and promote individual mitigation and preparedness measures.

- Educate public about potential hazards.
- Encourage property owners to actively participate in education programs.
- Provide online access to awareness/protection materials.
- Educate the public about your resources and planning efforts.
 - Citywide Emergency Evacuation Plan and Emergency Action Plan.
 - General Plan Safety Element
 - Wildfire Protection Plan.
- Create a public notification plan regarding changes in hazards and policies.

Goal 2

Reduce risk of loss of life/injuries due to natural hazards

Establish Public Community Warning system in the event of a natural disaster.

- Radio
- Emergency alert
- Local Citizen Network with Low Watt Transmitters

Reduce possibility of injury or loss of life due to flooding

- California Department of Water Resources regarding Grizzly Creek Dam
- Floodway development shall meet FEMA Standards.

Minimize injury or loss of life due to seismic or geologic hazards

- Mandate compliance with California Building Code (CBC).
- Evaluate essential facilities for compliance with seismic standards.
- Regulate grading and slope development standards to reduce potential landslide and slope movement events.

Minimize injury or loss of life due to wildfire

- Enforce compliance with open space and fuel break requirements.
- Review and update mutual aid agreements with Forest Service, CalFire, and other surrounding fire departments and agencies.
- Adopt California PRC 4290 and PRC 4291 legislation
- Evaluate and update the existing Citywide Emergency Evacuation Plan to include present roadway and development conditions
- Meet FEMA's Fire-Adapted Communities requirements
- Become a 'Fire Wise Community'.
- Reduce high fuel hazards and create fuel breaks.

Goal 3

Reduce risk of loss to property, both public and private

Establish Public Community Warning system in the event of a natural disaster.

- Provide flood & event warning and forecasting information to City residents.

Protect existing public infrastructure

- Evaluate potential impacts on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities & facilities for mitigation.

Pursue flood control solutions which minimize environmental impacts

- Continue to combine water quality, open space, recreation projects within flood measures where feasible.

Regulate Land Use and Development within flood areas

- Establish zoning and land use ordinances that limit development in flood prone areas
- Ensure flood mitigation measures are incorporated into repairs, new development, major alterations

Reduce property damage due to seismic and geologic hazards

- Mandate compliance with California Building Code (CBC).
- Prioritize and evaluate essential facilities
- Monitor and continue to regulate grading and slope development standards.
- Educate and encourage residents to adopt personal seismic safety protocols as their time and resources allow.

Minimize loss of property due to wildfire

- Enforce compliance with open space and fuel break requirements
- Perpetuate mutual aid agreements with USFS, Calfire, and Plumas County
- Evaluate and update the existing Citywide Emergency Evacuation Plan to include present roadway and development conditions.
- Meet FEMA's Fire-Adapted Communities requirements
- Become a 'Fire Wise Community.'

Goal 4

Maintain and increase funding for natural disaster preparedness, planning, and response

Cooperate with other local agencies, jurisdictions or non-profit organizations involved in disaster planning or response so that efforts to secure funding are coordinated and will work toward maximum benefits.

- Work with Plumas County. Create a community network for emergency response alternatives involving your churches and community service groups.

Support efforts put forth by other agencies where funding for mitigation efforts presents the potential to benefit the City.

- Work with Plumas County. Apply for grants.

Evaluate and improve current training for response personnel and equipment. Consider increased training for first responders and updating outdated equipment.

- Review existing training protocol and update/upgrade as necessary.
- Begin to search grant/funding opportunities for upgrade of fire equipment & training opportunities.
- Utilize County, State, and other regulatory agency opportunities for cross and specialty training modules.

**List of Media Event Notices and Flyers
Sent to the public**

Press Release
FOR IMMEDIATE RELEASE

April 6, 2012

City of Portola Solicits Public Input on Local Hazard Mitigation Plan

PORTOLA, CALIFORNIA – The City of Portola will be holding a public meeting on April 19, 2012 from 5:00 to 6:30 pm at the Portola City Hall. The purpose of the meeting is to gain public input and feedback on preliminary hazard profiles (as well as any additional hazards identified by the public) for inclusion in a Local Hazard Mitigation Plan (LHMP) which is being prepared for the City of Portola. The goal of the grant-funded LHMP is to provide a comprehensive, long-term plan to reduce the impact of a disaster before they occur and to allow for FEMA pre- and post-disaster funding.

The hazards preliminarily evaluated thus far include (in alphabetical order).

- Avalanche
- Dam Failure
- Drought
- Earthquake
- Extreme heat
- Flood
- Hurricane
- Landslide (including expansive soils)
- Man-made hazards (terrorism and industrial/train accident)
- Severe weather (including thunderstorm, lightning, hail, windstorm)
- Volcano
- Wildfire
- Winter Storm (including extreme cold)

The above list is preliminary and the City is soliciting input and feedback from the public to determine if there are additional hazards of concern to the community, special issues, or past hazard events that should be included in the evaluations.

Local Hazard Mitigation Plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. The planning process is as important as the plan itself. It creates a framework for risk-based decision making to reduce damages to lives, property, and the economy from future disasters. Local governments are required to develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance, including FEMA pre- and post-disaster funding.

Contact: Karen Downs, Planner – City of Portola
Phone: (530) 832-6808
Email: k.downs@ci.portola.ca.us
Website: www.portolasafetyplan.com

#

Your input is needed!

**Public Meeting – 4/19/2012, 5pm at the
City of Portola City Hall**

There will be a discussion of natural and man-made hazards including fire, flood and earthquake. This is the forum to have your input heard about these (and any other hazards) to be included in the Local Hazard Mitigation Plan to be completed this summer. Check out the project website for more details and to take the online survey!

<http://portolasafetyplan.com/>



WOOD RODGERS
ENGINEERING · PLANNING · MAPPING · SURVEYING



YOUR INPUT IS NEEDED!

Community Workshop **November 1st, 2012 at 6:00 pm** **Portola City Hall** **35 Third Avenue**

There will be a discussion about:

- Help keep your neighbors and your community safe!
- Local Hazard Mitigation Plan Update
- General Plan – Safety Element Update
- Hear and participate in discussions about identified natural hazards and proposed mitigation strategies.
- Community Wildfire Protection Plan (CWPP)

Check out the project website for more details and to take the new survey!

www.portolasafetyplan.com

For More Information, please contact:

Karen Downs

(530) 832-6808

k.downs@ci.portola.ca.us



YOUR INPUT IS NEEDED!

City Council Meeting Public Hearing

November 14th, 2012 at 7:00 pm at the
Portola City Hall

The General Plan

Safety Element and Local Hazard Mitigation Plan
Draft will be presented to Council for approval.



Meeting & Meeting Minutes

Hazard Mitigation Team/Public Meeting Summary

March 29, 2012: This was the initial meeting between Wood Rodgers and the newly formed Hazard Mitigation Team (HMT). This meeting was used to define the roles for all the participants as well as discuss long term goals and scheduling. One week prior to the meeting the draft hazard profiles (prepared by Wood Rodgers) were provided to the HMT for review and comment. Wood Rodgers also presented a Power Point detailing the hazards and invited comment as the same Power Point was planned to be presented at the upcoming public meeting.

May 10, 2012 two meetings were held in the City of Portola. The HMT met to discuss the hazards that had been identified and the potential severity of their impact. The HMT meeting was followed up with a presentation to the public. Presentation boards were set up to allow Portola residents to: review the type of hazards identified, review potential extent and severity of impact, and to provide anecdotal personal feedback regarding hazardous event experiences within their community. A questionnaire was presented which was geared to gage the level of concern felt by residents regarding specific hazards identified.

August 30, 2012 a meeting was held at the Wood Rodgers' office to begin the process of developing and formulating mitigation strategies with the City's Planner. Draft mitigation measures were discussed and refined. Critical components specific to the Safety Element update were also discussed.

October 4, 2012 a meeting was held at Wood Rodgers' office to discuss the mitigation process, identified strategies, and potential community involvement. The following items were presented and/or discussed:

- Project Schedule and Submittal Timelines
 - Future Meetings and Public Hearings were scheduled.
- Mitigation Goals, Objectives, and Strategies,
 - *Identify Mitigation Strategy* worksheets were drafted.
 - *Local Mitigation Capability* was discussed. It was specifically highlighted in this meeting that additional financial and administrative support is

critical to the City's ability to be able to move forward on any concrete mitigation strategy beyond public outreach, education, and training of emergency response personnel.

- The FEMA approved LHMP is to be adopted into the GPSE, and mitigation considerations, as appropriate, are currently being incorporated.

October 17, 2012 a meeting was held at the Williams House Museum in the City of Portola. The HMT met to discuss mitigation strategies, and action items, review the schedule, and discuss the public participation:

- Project Schedule and Submittal Timelines
 - Nov 1st Community Meeting and Nov 14th LHMP to City Council were confirmed.
 - State Hazard Mitigation Office and FEMA Review timeline were discussed.
- Mitigation Goals, Objectives, and Strategies,
 - *Mitigation Strategy* and STAPLEE Worksheet were reviewed. Action Items for mitigation strategies were drafted and discussed.
- Public Participation of the last meetings and surveys were discussed.
 - *Next online survey will be used for the City as a tool to gage public acceptance to mitigation measures, especially those that require funding through the city.*
 - *Ways to try and get more of public to meeting and getting involved.*

November 1, 2012 The second open house and public meeting occurred. Presentation boards were set up for Portola residents to: (1) review the mitigation goals, strategies, and potential actions items for the city to take, (2) give the city residents additional opportunities to provide feedback regarding mitigation measures, (3) present the draft Community Wildfire Protection Plan as it relates to the LHMP and City future mitigation measures. Comment cards were available giving residents the opportunity to comment. Four staff members from the Wood Rodgers and Resource Concepts were available to answer questions and concerns with the public. Two residents and a three city staff attended the meeting. The meetings first half focused on the Community Wildfire Protection Plan. The second half discussed the mitigation measures in the LHMP.

The Daft LHMP was placed in the on the website and a location to comment was made available to the residents. All the poster boards and information was left with the city to give to the residents that didn't attend but may have questions about the plan.

Agenda
Thursday March 29, 2012
1:30 pm
City offices - 35 Third Avenue, Portola
City of Portola LHMP and GPSE

Agenda

1. Introductions

2. Project Overview
 - a. Scope

 - b. Major Components

 - c. Schedule

3. Draft Hazard List

4. Some Preliminary Hazard Assessment Information

5. Public Participation
 - a. Web Site
 - i. Draft Online Survey

 - b. Public Meetings

6. Action items to be added

7. Future Planning Committee Meeting Schedule

Minutes
Thursday March 29, 2012
1:30 pm
City offices - 35 Third Avenue, Portola
City of Portola LHMP and GPSE Planning Committee

The meeting started at 1:30 and those in attendance were:

Name	Representing	Email	Phone
Lori Pini	OES / Public Health 270 County Hospital Road, Suite 206, Quincy	loripini@countyofplumas.com	283-6988
Mark Gookin	Wood Rodgers 5440 Reno Corporate Drive, Reno	mgookin@woodrogers.com	(775)823-9446
Eric Ford	Wood Rodgers	eford@woodrogers.com	(775)853-7452
Jim Reinhardt	RCI		(775)883-1600
Sheila Anderson	RCI	sheila@rci-nv.com	(775)883-1600
Karen Downs	City of Portola	k.downs@ci.portola.ca.us	832-6808
Lean Turner	City of Portola	l.turner@ci.portola.ca.us	832-6833
Jerry Hurley	Plumas County FSC	Jerry.hurley@sbcglobal.net	832-4705
Todd Roberts	City of Portola	t.roberts@ci.portola.ca.us	832-6809

The meeting began with introductions and identification of roles. Mark then began a PowerPoint presentation prepared by Wood Rodgers to update the Planning Committee.

Mark explained the FEMA guidelines for a LHMP are very specific, but that other additional hazards relevant to the community could be considered regardless of whether or not they are in the FEMA list. Jerry suggested that having the railroad running right through town should be addressed because it carries hazardous materials, and an accident in town could pose a significant hazard. Mark also emphasized that input from the planning team as well as public is vital for all aspects of the LHMP process to make sure the plan addresses issues of concern to the community.

The next slide was the schedule, and everyone agreed that the general timing for the scheduled public meetings was adequate but that the initial public meeting would slip to late April.

Then the presentation moved onto discussion of Wood Rodgers draft hazard profiling (initial assessment):



- There weren't any comments about the graphics or potential for a volcano to impact the City of Portola. Lassen poses some limited threat but is outside of high-hazard areas as mapped by USGS.
- The earthquake slide showed previous earthquakes in the area, and it was noted that a past earthquake had caused a broken water line. It was also brought up that many of the buildings in the City are old, and not up to current building code, which poses a threat.
- Wind was the next hazard, and the consensus was that the City of Portola doesn't experience extreme wind due to its physical setting.
- The next slide was the hail/tornado risks, and the consensus was that the risks were minimal. Lori brought up a microburst event that happened in Quincy about 5 years ago which caused significant damage (knocking down trees etc.).
- There were no additional comments on the winter storm/heat/cold slide. In particular, heat events tend to be short-lived due to the cool evenings.
- The flood slide brought up the issue that only one bridge connects the two sides of the City across the Middle Fork of the Feather River, and that people on the south side would have no way of reaching Highway 70 to evacuate if the bridge became impassible.
- Next Mark discussed the atmospheric river phenomenon and how it could cause a rain/flood event of significantly greater impact than the 100-year FEMA event.
- Fire was the next topic for discussion, and Shelia explained the Community Wildfire Protection Plan (CWPP) strategy. Leah brought up the issue of several structure fires which have occurred within the City limits over the past year, and that the City has a weed abatement program which could aid in the reduction of fire risk within the community. Jerry brought up the Tiano Ranch area, which is the highest fire hazard area within the City of Portola.
- The next slide was of the essential facilities located within the City of Portola. One additional facility to add is the City Hall, which generally is used as the incident command center. In addition, Portola has an "OES" trailer which can be parked at a strategic location for any emergency.

Public Meeting

The next issue discussed was the planning for the upcoming public meeting. The idea of scheduling the public meeting prior to the regularly scheduled City Council meetings was accepted, and the first public meeting was tentatively scheduled for 5:00 on April 25th. Karen volunteered to advertise the meeting in the paper and announce it at the City Council meeting on April 11th. The frequency for meetings with the planning committee was also discussed, and a one per month schedule was agreed upon. The next planning committee meeting was scheduled for 4:00 on the day of the public meeting.

Web Site and Survey

Next the project website was brought up, and the public opinion survey and other aspects of the web site were demonstrated. One suggestion was to add "Do you live within the City limits?" to



the list of questions. It was emphasized that the question should be clear regarding the City limits as there are other adjacent areas for which the residents tend to think of themselves within the City limits.

Other items

The text of the draft hazard profiles was handed out to all attendees as well as posted on the FTP site for comments/questions. Wood Rodgers would like to have all hazard profiles received by April 13th so the comments can be incorporated before the public meeting.

Summary Action Items

Items highlighted blue are completed items which will drop off after the next HMPC meeting.

#	Action Items	Responsible Entity	Due Date	Status	Final Resolution
1	Review draft profiles and provide comments to WR.	Entire Planning Committee	4/13/12		
2	Check for information on Microburst in Quincy area.	WR/Lori	One Week	WR located some newspaper info as of 4/2/12	
3	Incorporate train transport of hazardous materials into hazard considerations.	WR	4/20/12		
4	Incorporate consideration of single bridge access between north and south Portola and evacuation/supply implications.	WR	4/20/12		
5	Confirm 4/25 public meeting date	Karen	ASAP		

Agenda
Thursday May 10, 2012
4:00 pm
City offices - 35 Third Avenue, Portola
City of Portola LHMP and GPSE

Agenda

1. Introductions
2. Project Overview
 - a. Scope
 - b. Major Components
 - c. Schedule
3. Draft Hazard List
4. Some Preliminary Hazard Assessment Information
5. Public Participation
 - a. Web Site
 - i. Draft Online Survey
 - b. Public Meetings
6. Action items to be added
7. Future Planning Committee Meeting Schedule

Meeting Minutes
Thursday October 17, 2012
2:00 PM
Williams House Museum
City of Portola
City of Portola LHMP and GPSE

Agenda

1. Project Overview
 - a. Schedule
 - b. Hazard Mitigation Team Meeting Date
 - c. Public Meeting/City Council Meeting Dates
2. Mitigation Strategies/Action Items
 - a. Overview of Action Items
 - b. Worksheets
3. Public Participation
 - a. Web Site
 - i. Online Survey
4. Other Action Items to Be Addressed

Summary Information

The meeting was held at the Wood Rodgers office in Reno NV. In attendance:

Person	Affiliation	Phone	email
Mickey Smith	Wood Rodgers	775-823-7455	msmith@woodrogers.com
Jon Simpson	Wood Rodgers	775-823-5258	jsimpson@woodrogers.com
Karen Downs	City of Portola	530-832-6808	k.downs@ci.portola.ca.us
Todd Roberts	City of Portola	530-853-7455	t.roberts@ci.portola.ca.us

Minutes

1. Mickey began the meeting and reviewed the schedule and the changes.
 - November 1, Community Meeting-
 - November 14, Draft LHMP to the City Council for approval
 - December 1, would like to have the LHMP move from SHMO to FEMA.
2. Public participation was discussed. Plan to send invitations to various civic organizations, churches, Schools and other agencies to try and garner more public participation. The HMT has been involved and we have had plenty much support and feedback however the public seems to be somewhat disengaged. Ideas were discussed on how to get them more involved.
3. Reviewed the mitigation goals and strategies. Each goal and strategy was discussed to determine if the city was capable and if they felt the public would respond well future mitigation measures. City staff expressed their abilities and what they felt they could accomplish as part of the plan. It was determined to focus on elements that they could accomplish as a community. Additional Action Items were added regarding finding additional support for the city through grants, and other resources outside the city staff. The Goals and Strategy worksheets in the FEMA 2001 Developing the Mitigation Plan were used to help facilitate the discussion and direction of the meeting SEE ATTACHED WORKSHEET.
4. Website and latest questionnaire/survey was discussed. The website was updated to incorporate the various hazards found to impact the city, plus the new survey was added. Results to the last survey was also added to the website. A link to the City website was added. It was suggested that the city put a link to this website.

Work Sheet #1: Identify Mitigation Strategies

Fill in the goal and its corresponding objective developed in Step One. Use a separate worksheet for each objective. Make sure you note the sources of information. Use Worksheet Job Aid #1 in Appendix D as a starting point for identifying potential mitigation actions.

Goal 1: Increase public awareness of potential natural hazards and self-reliant mitigation actions.

Objective 1.1: Involve the public in disaster planning and promote individual mitigation and preparedness measures.

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
1.1.1 Educate public about potential hazards and high hazard areas within the community in the event of a natural disaster.	http://www.ready.gov/ http://www.calema.ca.gov/Pages/default.aspx	
1.1.2 Encourage property owners to actively participate in education programs and access resources as it relates to natural hazards specific to the community and personal property.		In lieu of relying solely on community mailings, phone invitations will be presented to service groups and the Chamber of Commerce.
1.1.3 Provide online access to awareness/protection materials relevant to City of Portola residents.	www.portolasafetyplan.com	Provide link on City of Portola web page when LHMP is approved.
1.1.4 Educate the public on the Citywide Emergency Evacuation Plan and Emergency Action Plan.	www.portolasafetyplan.com	Add Emergency Evacuation Plan to Safety Plan web page. Consider mailing final document to civic groups, church groups, & businesses in the flood plain for public posting. Consider incorporating age appropriate lessons to school curriculum.
1.1.5 Educate the public about the open space and defensible space requirements in the General Plan Safety Element.	www.portolasafetyplan.com	Add Open space and defensible space requirements to Safety Plan web page. Consider incorporating age appropriate lessons to school curriculum.
1.1.6 Create a public notification plan to provide a means to educate, inform, and alert the community regarding changes in hazard identification, occurrence, and mitigation processes and options.	www.portolasafetyplan.com	Add a notification link to Safety Plan web page for automatic emails when updates occur. Consider sending update notices to civic groups, church groups, & businesses in the flood plain.

1.1.7 Establish an outreach protocol with the American Red Cross.	www.redcross.org							

Have you considered Mitigation Strategies from other mitigation action categories?
 Check off ones that apply to this objective.

- Prevention
- Property Protection
- Public Education and Awareness
- Natural Resource Protection
- Emergency Services
- Structural Projects

Goal 2: Reduce risk of loss of life/injuries due to natural hazards

Objective 2.1: Establish Public Community Warning system in the event of a natural disaster.

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
2.1.1. Establish Public Community Warning system in the event of a natural disaster.	Emergency Evacuation Plan	Review protocols in EEP and modify as necessary
2.1.2 Establish a rapid communication system for the community in the event of a natural disaster (Television, Radio, Emergency alert)		Reverse 911
2.1.3 Actively participate in the development of Plumas County's Safety Element to ascertain Portola's concerns are addressed.		City is currently involved.

Objective 2.2: Reduce possibility of injury or loss of life due to flooding

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
2.2.1 Existing Structures within the 100-yr flood way should be analyzed and mitigated to provide adequate protection during a flood	See Grant Funding Sources	Secure funding to support staff in development of grant requests for analysis & mitigation study.
2.2.2 Coordinate with the California Department of Water Resources (Dam Safety Division) for mitigation measures within the community as a result of a dam failure inundation.		
2.2.3 Prohibit development inside the 100yr floodway.	City of Portola, General Plan & GPSE	City currently complies and will continue to comply.

Objective 2.3: Minimize Injury or loss of life due to seismic or geologic hazards

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
2.3.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC) and the International Residential Code (IRC).	Current International Building Code (IBC) & California Building Code (CBC)	City currently complies and will continue to comply
2.3.2 Prioritize and evaluate essential facilities for seismic conditions and potential retrofit		Secure funding to support staff in development of grant requests for analysis & prioritization study.
2.3.3 Create and adopt grading and slope development standards.	IBC & CBC	City currently complies and will continue to comply with IBC/CBC requirements. Geotechnical reports are required for hillside developments to address grading and slopes specifically.

Objective 2.4: Minimize Injury or loss of life due to wildfire

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
2.4.1 Enforce compliance with open space and defensible space requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section	GP Wildfire Protection Plan	Review existing ordinances. Draft and adopt more stringent policies, including fee assessment/fine structure.
2.4.2 Review and update agreements with Plumas National Forest, and California Department of Forestry for wildland fire response.	Reference Mutual Aid agreement.	Secure funding if necessary to support staff and resources for execution of 2.4.2. Evaluate suitability/adequacy of 2 hour support window. Secure funding for evaluation of existing fire response resources.
2.4.3 Adopt California PRC 4290 and PRC 4291 codes	www.firewise.org City of Portola Wildfire Protection Plan (in Process) http://www.fireadapted.org/	City had adopted.
2.4.4 Adopt and complete steps to meet FEMA's Fire-Adapted Communities requirements and become a 'Fire Wise Community.'		
2.4.5 Complete annual commercial fire inspections.		Secure funding to support staff and resources for execution of 2.4.5.

Have you considered Mitigation Strategies from other mitigation action categories?

Check off ones that apply to this objective.

- Prevention
- Property Protection
- Public Education and Awareness
- Natural Resource Protection
- Emergency Services
- Structural Projects

Goal 3: Reduce risk of loss to property, both public and private

Objective 3.1: Establish Public Community Warning system in the event of a natural disaster.

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
3.1.1 Provide flood warning and forecasting information to City residents.	Emergency Evacuation Plan	Review protocols in EEP and modify as necessary Reverse 911 notification
3.1.2 Establish a rapid communication system for the community in the event of a natural disaster (Internet, Emergency alert)	Emergency Evacuation Plan	Reverse 911 Employ protocols established in EEP for community notification. Link City of Portola Web page to NOAA snow alert system.
3.1.3 Actively participate in the development of Plumas County's Safety Element to ascertain Portola's concerns are addressed.		City is currently involved.

Objective 3.2: Protect existing public infrastructure

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
<p>3.2.1 Evaluate potential impacts of identified hazards on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities for mitigation based on risk level and criticality to community and/or criticality to emergency evacuation routes.</p>	<p>Previous Gulling Street Bridge analysis report to be provided. http://www.fhwa.dot.gov/bridge/nbi.htm</p>	<p>Seek out funding to support staff in evaluating: A – Criticality of City’s utilities, infrastructure, and critical facilities such as waste water treatment plant, well in flood zone, and analyses specific to Gulling Street Bridge. B – Prioritizing resource based on level of risk and criticality of structure. C – Identify water supply sources and potential extent of failure (i.e. will north and south zones work independently?)</p>
<p>3.2.2 Ensure that all essential facilities (hospitals, schools, evacuation centers, and other emergency facilities) are evaluated for specific risks and where risk is identified prioritize for analysis and mitigation.</p>	<p>Emergency Evacuation Plan</p>	<p>Refer to EEP for identification of emergency facilities. Based on results of 3.2.1 seek funding to begin analysis and fund mitigation.</p>

Objective 3.3: Pursue flood control solutions which minimize environmental impacts

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
3.3.1 Protect fisheries and allow for adequate water passage to ensure the survival of downstream riparian ecosystems. Evaluate criticality to community and/or criticality to emergency evacuation routes.		Table for later consideration after critical conditions have been addressed.
3.3.2 Combine water quality, open space, recreation within flood measures where feasible.		Table for later consideration after critical conditions have been addressed.
3.3.3 Maintain natural stream courses and adjacent habitat, where feasible during flood control improvements		Table for later consideration after critical conditions have been addressed.
3.3.4. Identify strategies and projects that have potential to improve wildlife habitat and promote watershed health.		Table for later consideration after critical conditions have been addressed.

Objective 3.4: Regulate Land Use and Development within flood areas

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
3.4.1 Prohibit development within the 100yr floodway		City complies with this requirement.
3.4.2 Establish zoning and land use ordinances that limit development in flood prone areas	General Plan – Land Use Element Title 17	City complies with this requirement.
3.4.3 Ensure the impacts of flooding are adequately analyzed when considering areas for future urban development or significant improvements to existing facilities or structures.	General Plan – Land Use Element Title 17	City complies with this requirement.
3.4.4. Ensure that flood mitigation measures are incorporated into new development, major alterations, and new redevelopment applications.		
3.4.5 Enforce compliance with the City of Portola Master Drainage Plan and Floodplain Management Ordinance.	www.FEMA.gov	Drainage studies are required for new development.
3.4.6 Pursue a regional approach to flood issues	City of Portola General Plan	

Objective 3.5: Reduce property damage due to seismic and geologic hazards

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
3.5.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC) and the International Residential Code (IRC).	IBC CBC	City complies with this requirement.
3.5.2 Prioritize and evaluate essential facilities for seismic conditions and potential retrofit		
3.5.3 Create and adopt grading and slope development standards.	IBC & CBC	City currently complies and will continue to comply with IBC/CBC requirements. Geotechnical reports are required for hillside developments to address grading and slopes specifically.
3.5.4. Educate and encourage homeowners to adopt seismic safety protocols as their time and resources allow.		

Objective 3.6: Minimize loss of property due to wildfire

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
3.6.1 Enforce compliance with open space and defensible space requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section		City complies with this requirement. Consider increase in fines to encourage adherence to codes.
3.6.2 Review and update agreements with Plumas National Forest, and California Department of Forestry for wildland fire response.	Reference Mutual Aid agreement.	Secure funding if necessary to support staff and resources for execution of 2.4.2. Evaluate suitability/adequacy of 2 hour support window. Secure funding for evaluation of existing fire response resources.
3.6.3 Adopt California 4290 and 4291 codes.		Verify City complies with these codes.
3.6.4. Evaluate and update the existing Citywide Emergency Evacuation Plan to include present roadway and development conditions.	EEP	
3.6.5 Adopt and complete steps to meet FEMA's Fire-Adapted Communities requirements and become a 'Fire Wise Community.'	www.firewise.org City of Portola Wildfire Protection Plan (in Process)	

Have you considered Mitigation Strategies from other mitigation action categories?

Check off ones that apply to this objective.

- Prevention Public Education and Awareness Emergency Services
- Property Protection Natural Resource Protection Structural Projects

Goal 4: Maintain and increase funding for natural disaster preparedness, planning and response

Objective 4.1: Cooperate with other local agencies, jurisdictions or non-profit organizations involved in disaster planning or response so that efforts to secure funding are coordinated and will work toward maximum benefits.

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
4.1.1 Search out grant opportunities to provide support to staff and increase resources.		
4.1.2 Specifically seek out a hazardous fuel reduction grant.		

Objective 4.2: Support efforts put forth by other agencies where funding for mitigation efforts presents the potential to benefit the City.

Strategy Actions	Sources of information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)

Objective 4.3: Evaluate and improve current training for response personnel as well as current equipment. Consider increased training for first responders and updating outdated equipment.

Strategy Actions	Sources of Information (Include sources you consulted for future reference and documentation.)	Comments (Note any initial issues you may want to discuss or research further.)
4.3.1 Replace Equipment in 2015		Begin seeking funding for grants.

Have you considered Mitigation Strategies from other mitigation action categories?
Check off ones that apply to this objective.

- Prevention
- Public Education and Awareness
- Emergency Services
- Property Protection
- Natural Resource Protection
- Structural Projects

Work Sheet #2 State Mitigation Capability Assessment

Agency Name (Mission/Function)	Programs, Plans, Policies, Regulations, Funding, or Practices	Point of Contact Name, Address, Phone, Email	Effect on Loss Reduction* (√)			Comments
			Support	Facilitate	Hinder	
CA Department of Water Resources: Division of Safety of Dams	Provides protection against loss of life and property from dam failure	(916) 227-4644. damsafety@water.ca.gov				Dam Failure Debris Flow (Post Fire) Flooding
Seismic Safety Commission	Oversees the statewide earthquake preparedness and planning	celli@stateseismig.com				Earthquake
Fire – Cal Fire Fire Safe Council.	To reduce the loss of natural and manmade resources caused by wildfire through Firewise community programs and pre-fire activities	Jerry Hurly Jerry.hurley@sbcglobal.net				Wildfire, Extreme Heat
Division of Flood Management	Statewide flood forecasting, flood operations and other key flood emergency response activities	http://www.water.ca.gov/floodmgmt				Flood, Severe Weather
Statewide Flood Management Planning Program	Identifies current flood risks and opportunities for integrated flood management	sfmp@water.ca.gov				Flood, Severe Weather
FloodSAFE California	A sustainable integrated flood management and emergency response system throughout California that improves public safety, protects and enhances environmental and cultural resources, and supports economic growth by reducing the probability of destructive floods, promoting beneficial floodplain processes,	www.water.ca.gov/floodsafe				Flood, Severe Weather

Agency Name (Mission/Function)	Programs, Plans, Policies,	Point of Contact Name, Address, Phone, Email	Effect on Loss Reduction* (√)			Comments
	and lowering the damages caused by flooding					
Caltrans						Winter Storm & Extreme Cold

***Definitions:**

Support: Programs, plans, policies, regulations, funding, or practices that help the implementation of mitigation actions.

Facilitate: Programs, plans, policies, etc., that make implementing mitigation actions easier.

Hinder: Programs, plans, policies, etc., that pose obstacles to implementation of mitigation actions.

Work Sheet #3 Local Mitigation Capability Assessment

Agency Name (Mission/Function)	Programs, Plans, Policies, Regulations, Funding, or Practices	Point of Contact Name, Address, Phone, Email	Effect on Loss Reduction* (√)			Comments
			Support	Facilitate	Hinder	
City Council/Planning Commission	<ul style="list-style-type: none"> Allocate Funds for the City Adopt codes and policies Ensure Compliance with current development policies 	Mayor Julian Mark/Karen Downs- 530-832-4216				Dam Failure Debris Flow (Post Fire) Wildfire Extreme Heat Flooding Earthquake Severe Weather Winter Storm & Extreme Cold
Administration/Finance Department.	<ul style="list-style-type: none"> Revenue Collection Billings Works with Legal Services 	Admin –Leslie Tigan 530-832-6801 Finance-Susan Scarlett 530-832-6802				
Community Services	<ul style="list-style-type: none"> Emergency Response Animal Control Police Contract Services 	Leah Turner 530-832-6833				Earthquake, Flooding, Wildfire,
Building Department	<ul style="list-style-type: none"> Building Code and municipal Code enforcement 	Todd Roberts 530-832-6804				Earthquake, Flooding, Wildfire
Public Works Department	<ul style="list-style-type: none"> Roadway Infrastructure Solid Waste Management Water Supply Sewer services Manage Engineering Contract Services 	Todd Roberts 530-832-6804				Severe Winter & Extreme Cold, Flooding, Earthquake, Wildfire
Fire Department	<ul style="list-style-type: none"> 30 volunteers 2 fire Stations on both sides of the Feather River Protect homes in an event of a Fire Assist in emergency response. 	Travis Schiavone (Volunteer service)				Wildfire

Agency Name (Mission/Function)	Programs, Plans, Policies, Regulations, Funding, or Practices	Point of Contact Name, Address, Phone, Email	Effect on Loss Reduction* (√)			Comments
			Support	Facilitate	Hinder	
Plumas County Fire Department	•	Jerry Hurly Jerry.hurley@sbcglobal.net				Wildfire
	•					
	•					
	•					
	•					
	•					

***Definitions:**

Support: Programs, plans, policies, regulations, funding, or practices that help the implementation of mitigation actions.

Facilitate: Programs, plans, policies, etc., that make implementing mitigation actions easier.

Hinder: Programs, plans, policies, etc., that pose obstacles to implementation of mitigation actions.

Meeting Minutes
Thursday October 17, 2012
2:00 PM
Williams House Museum
City of Portola
City of Portola LHMP and GPSE
Agenda

1. Project Overview
 - a. Schedule – November 1, Community Meeting
November 14, Draft LHMP before Council
2. Mitigation Strategies/Action Items
 - a. Overview of Action Items
3. Public Participation
 - a. Web Site - Updated
 - i. Online Survey - Updated
4. Other Action Items to Be Addressed
 - a. Submittals of Draft Documents to Cal EMA

Summary Information

The meeting began at 2:05 pm at the Williams House Museum in Portola. In attendance:

Person	Affiliation	Phone	email
Mickey Smith	Wood Rodgers	775-823-7455	msmith@woodrogers.com
Jon Simpson	Wood Rodgers	775-823-5258	jsimpson@woodrogers.com
Karen Downs	City of Portola	530-832-6808	k.downs@ci.portola.ca.us
Todd Roberts	City of Portola	530-853-7455	t.roberts@ci.portola.ca.us
Leslie Tigan	City of Portola	530-832-4116	l.tigan@ci.portola.ca.us
Leah Turner	City of Portola	530-832-6833	l.turner@ci.portola.ca.us
Jerry Sipe	Plumas County	530-283-6367	quincyenv@countyofplumas.com
Jerry Hurley	Plumas Fire Safe Council	530-832-4705	jerry.hurley@sbcglobal.net


Minutes

1. Mickey began the meeting and reviewed upcoming meeting and dates.
 - November 1, Community Meeting- This meeting will include information on changes to the General Plan; Safety Element, Community Wildfire Protection Plan, and Mitigation measures for the LHMP. Final Draft of LHMP to be complete. The LHMP will be sent to SHMO for review.
 - November 14, Draft LHMP to the City Council
 - December 1, would like to have the LHMP move from SHMO to FEMA.
2. Website update was discussed. Members of the Hazard Mitigation Team were encouraged to visit the site and provided feedback. Karen provided comments for the community meeting flyer. Minor changes need to be done and sent back. Mickey said she would have the changes done the next day. The second website survey was discussed. Feedback was minimal on the first survey and we hope for better participation by sending the flyer to community groups and churches. It is not anticipated that the results will be used in the report however it may give valuable feedback to the City on where support lies with future mitigation measures. Asked members of the Team to do the survey. If we get a good result we will present results at the next public meeting.
3. Reviewed the mitigation strategies and action Items currently outlined in the draft LHMP one at a time. Each item was discussed to determine how effective the strategies were to the community using the STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental). Modification and alterations to the Goals strategies were determined. SEE ATTACHED STAPLEE WORKSHEET
4. Items in the Draft LHMP were discussed:
 - Maps were difficult to read. Full size figures will be included in the appendix. Some figures could be adjusted to focus on the City; this may make them more readable in the document.
 - Supporting agency in the mitigation goals need to be reviewed and adjusted. Many groups/agencies are not noted and need to be added.
 - Jerry Sipe suggested more specific items should be listed in the document. For example: Need for Fire Station Equipment Replacement, Utility locations that are old or have a high potential for failure in an hazard event (water mains), pump station in the flood zone.

Work Sheets #4 Evaluate Alternative Mitigation Strategies

Goal 1: Increase public awareness of potential natural hazards and self-reliant mitigation strategies.

Objective 1.1: Involve the public in disaster planning and promote individual mitigation and preparedness measures.

STAPLEE Criteria	S (Social)		T (Technical)		A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)						
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws	
Considerations → for Alternative Strategies 																								
1.1.1 Educate public about potential hazards and high hazard areas within the community in the event of a natural disaster.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1.1.2 Encourage property owners to actively participate in education programs and access resources as it relates to natural hazards specific to the community and personal property.	-	±	+	+	-	-	-	-	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	+
1.1.3 Provide online access to awareness/protectio n materials relevant to City of Portola residents.	+	+	+	+	+	+	+	-	+	-	+	+	+	+	+	+	+	-	+	+	+	+	+	+

-Handouts
-Banner over Bridge
-Website (Text and E-Mail Notification)

Booth to promote at various town events – Rail Road
Raffle prize for those who attend

City looking to update the Website to incorporate online information

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws
<p>Considerations →</p> <p>for Alternative Strategies →</p>																							
1.1.4 Educate the public on the Citywide Emergency Evacuation Plan and Emergency Action Plan.	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+
<p>-Evacuation plan complete. Review to see if it needs to be revised or updated.</p> <p>-Identify emergency evacuation sites, Provide signs at locations</p> <p>-Add plan to website- Identify evacuation locations and paths as they relate to specific hazards (fire vs. flood)</p>																							
1.1.5 Educate the public about the open space and fuel break about living with fire and fire safe requirements in the General Plan Safety Element.	-	+	+	+	+	-	-	-	±	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<p>-needs to be more broad, Fuel breaks are just one part of the fire safety. Focus should be placed on those who are near Forested Areas. Homeowners may not be aware of the codes and regulations.</p> <p>-Living with fire – Risks and Consequences</p>																							
1.1.6 Create a public notification plan to provide a means to educate, inform, and alert the community regarding changes in hazard identification, occurrence, and mitigation processes and options.	+	+	+	-	+	-	+	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+
<p>Schools, Churches, Community organizations</p>																							
1.1.7 Establish an outreach protocol with the American Red Cross.	-	+	+	-	+	-	-	-	+	-	+	+	+	+	+	-	-	-	+	+	+	+	+
<p>Already a part of the Emergency Operation Plan. There could be an education component that the Red Cross could assist. Possibly establishing a Active Red Cross Chapter in the City?</p>																							

Work Sheets #4 Evaluate Alternative Mitigation Strategies

Goal 2: Reduce risk of loss of life/injuries due to natural hazards

Objective 2.1: Establish Public Community Warning system in the event of a natural disaster.

STAPLEE Criteria Considerations → for Alternative Strategies →	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws
2.1.1. Provide hazard warning and forecasting information to City residents.	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+
2.1.2 Establish a rapid communication system for the community in the event of a natural disaster (Television, Radio, Emergency alert)																							
2.1.3 Actively participate in the development of Plumas County's Safety Element to ascertain Portola's concerns are addressed.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Reverse 911 – Through Plumas County Low Watt Transmitters – May be Ideal for city like Portola
 City Siren –Public will need to know where to go to get info once the siren is sounded.
 Website – State wide Emergency Alert System is in place through the Radio

-----Possibly combine previous action items into one?-----

Objective 2.2: Reduce possibility of injury or loss of life due to flooding

STAPLEE Criteria	S (Social)			T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws	
<p>Considerations →</p> <p>for Alternative Strategies →</p>																								
<p>2.2.1 Existing Structures within the 100-yr flood way Zone should be analyzed and mitigated to provide adequate protection during a flood</p>	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+
<p>No public/Staff support for such an item. Economic feasibility difficult.</p> <p>REMOVE STRATEGY/ACTION ITEM</p>																								
<p>2.2.2 Coordinate with the California Department of Water Resources (Dam Safety Division) for mitigation measures within the community as a result of a dam failure inundation.</p>	+	+	+	+	-	+	+	+	-	+	-	-	-	±	±	±	±	±	+	+	+	+	+	+
<p>Staff will work with State</p>																								
<p>2.2.3 Prohibit development Unauthorized development inside the 100yr floodway. All Development within floodway shall meet FEMA Standards</p>	+	-	+	+	+	+	+	-	-	±	+	+	-	+	+	+	+	+	+	+	+	+	+	+
<p>It needs to be clear that development within the Floodway is not prohibited. Recreational (walking paths, camping) and other development may occur. Need to Follow FEMA Standards with regards to Floodways.</p>																								

Objective 2.3: Minimize injury or loss of life due to seismic or geologic hazards

STAPLEE Criteria	S (Social)			T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
<p>Considerations →</p> <p>for Alternative Strategies →</p>																								
2.3.1 Mitigate the potential impacts to new structures by mandating compliance with California Building Code (CBC) and the International Residential Code (IRC).	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
2.3.2 Prioritize and evaluate essential facilities for seismic conditions and potential retrofit	+	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	±	±	+	+	+	+	+	
2.3.3 Create and adopt Monitor and continue to regulate grading and slope development standards.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

City only regulates based on the California Building Code. Remove IRC, IBC, etc.

Almost all essential facilities are operated by the State or County Government. Identify local facilities.

Standards exist and do not need to be created. Monitoring and enforcement will need to continue.

Objective 2.4: Minimize injury or loss of life due to wildfire

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)		E (Economic)				E (Environmental)						
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws	
<p>Considerations →</p> <p>for Alternative Strategies →</p>																								
2.4.1 Enforce compliance with open space and fuel break requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section	+	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2.4.2 Review and update mutual aid agreements with Plumas-National Forest Service, Calfire, and other surrounding fire departments and agencies . Department of Forestry and Plumas County Fire Department for wildland fire response	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2.4.3 Adopt California PRC 4290 and PRC 4291 code	+	+	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+
2.4.4 Evaluate and update the existing Citywide Emergency Evacuation Plan to																								

No Plumas County Fire Department

Does not enforce – Guidance – Should look at Vacant lot standards for the City

SEE 1.1.4 for Comments

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws
<p>Considerations →</p> <p>for Alternative Strategies →</p>																							
include present roadway and development conditions.	-	+	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	+
2.4.5 Adopt and complete steps to meet FEMA's Fire-Adapted Communities requirements or and become a 'Fire Wise Community.'																							
Seek opportunities to reduce high fuel hazards and create fuel breaks	+	+	+	-	+	-	-	-	-	+	+	+	+	+	+	-	+	-	+	+	+	+	+

What is the City committing to in order to adapt to standards Fire Wise or Fire Safe Communities

Jerry w/ Plumas County Suggested strategy to be added

Objective 3.2: Protect existing public infrastructure

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)						
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws		
<p>Considerations →</p> <p>for Alternative Strategies →</p>																									
<p>3.2.1 Evaluate potential impacts of identified hazards on existing utilities and facilities (water, sewer, power, public transportation routes & structures). Prioritize those utilities for mitigation based on risk level and criticality to community and/or criticality to emergency evacuation routes.</p> <p>3.2.2 Ensure that all essential facilities (hospitals, schools, evacuation centers, and other emergency facilities) are evaluated for specific risks and where risk is identified prioritize for analysis and mitigation.</p>	+	+	-	+	+	-	-	-	+	-	+	+	+	+	-	+	-	+	+	+	+	+	+	+	
<p>Identify specific project that need to be done.</p> <p>-Well within Floodway</p> <p>-Waste Water Treatment Plant</p> <p>-Gulling Bridge – Scour protection</p>																									
<p>See Item 2.1.3 for comments</p>																									

Objective 3.3: Pursue flood control solutions which minimize environmental impacts

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)					
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws	
Considerations → for Alternative Strategies →																								
3.3.1 Protect fisheries and allow for adequate water passage to ensure the survival of downstream riparian ecosystems.																								
3.3.2 Continue water quality, open space, recreation Projects within flood measures where feasible.	+	-	-	-	+	-	-	-	+	-	+	+	+	+	-	-	-	+	+	+	+	+	+	+
3.3.3 Maintain natural stream courses and adjacent habitat, where feasible during flood control improvements	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	+
3.3.4 Identify strategies and projects that have potential to improve wildlife habitat and																								

REMOVE STRATEGY/ACTION ITEM

REMOVE STRATEGY/ACTION ITEM

STAPLEE Criteria	S (Social)		T (Technical)		A (Administrative)		P (Political)		L (Legal)		E (Economic)				E (Environmental)								
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Community Goals	Consistent with Federal Laws
<p>Considerations →</p> <p>for Alternative Strategies →</p> <p>promote watershed health.</p>																							

Objective 3.4: Regulate Land Use and Development within flood areas

STAPLEE Criteria	S (Social)		T (Technical)		A (Administrative)		P (Political)		L (Legal)		E (Economic)				E (Environmental)								
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Community Goals	Consistent with Federal Laws
<p>Considerations →</p> <p>for Alternative Strategies →</p>																							
3.4.1 Prohibit development within the 100yr floodway																							
3.4.2 Establish zoning and land use ordinances that limit development in flood prone areas																							
3.4.3 Ensure the impacts of flooding are adequately analyzed when considering areas for																							

See Item 2.2.3 for Comments

Objective 3.6: Minimize loss of property due to wildfire

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)					
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Considerations → for Alternative Strategies →																								
3.6.1 Enforce compliance with open space and defensible space requirements set forth in the City of Portola General Plan Safety Element Wildland Fire section																								
3.6.2 Review and update agreements with Plumas National Forest, California Department of Forestry and Plumas County Fire Department for wildland fire response.																								
3.6.3 Adopt California 4290 and 4291 code.																								
3.6.4. Evaluate and update the existing Citywide Emergency Evacuation Plan to include present																								

See Item 2.4.1 for Comments

See Item 2.4.2 for Comments


See Item 2.4.3 for Comments

See Item 2.4.4 for Comments

Work Sheets #4 Evaluate Alternative Mitigation Strategies

Goal 4: Maintain and increase funding for natural disaster preparedness, planning and response

Objective 4.1: Cooperate with other local agencies, jurisdictions or non-profit organizations involved in disaster planning or response so that efforts to secure funding are coordinated and will work toward maximum benefits.

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)					
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Environmental Goals	Consistent with Federal Laws	
Considerations → for Alternative Strategies 																								
4.1.1 Secure a grant that would provide support staff to aid in the implementation and execution of the LHMP.	+	-	+	-	+	-	-	-	+	-	+	+	+	+	+	+	-		+	+	+	+	+	+
4.1.2 Apply for grants specific to identified action items, including scientific studies and evaluation of existing improvements.	+	+	+	-	+	-	-	-	-	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+
4.1.3 Cross train staff with Plumas County personnel and adopt uniform protocols where applicable.	+	-	+	-	+	-	-	-	+	-	+	+	+	-	+	-	+	-	+	+	+	+	+	+
4.1.4 Work toward securing multi-jurisdiction grants	+	-	+	-	+	-	-	-	+	-	+	+	+	-	+	-	+	-	+	+	+	+	+	+

Identify specific studies and evaluation that the city should peruse

and funding for disaster planning and response.	+
4.1.5 Create a community network for emergency response alternatives including churches, and civic meeting halls.	+
	+
	+
	+
	+
	+
	-
	+
	+
	-
	+
	-
	-
	-
	+
	-
	-
	-
	+

Objective 4.2: Support efforts put forth by other agencies where funding for mitigation efforts presents the potential to benefit the City.

STAPLEE Criteria	S (Social)			T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
<p>Considerations →</p> <p>for</p> <p>Alternative</p> <p>Strategies</p> <p>→</p>																								
4.2.1 Continue involvement in the update to the Plumas County LHMP;	+	-	+	-	+	-	-	-	+	-	+	+	+	+	+	+	-	+	+	+	+	+	+	
4.2.2 Apply for grants that may help fund improvements beyond the City limits; e.g. fire safety and wildfire hazard mitigation, channel and water quality improvements to the Middle Fork of the Feather River, etc.	+	+	+	-	+	-	-	-	+	-	+	+	+	+	-	+	+	+	+	+	+	+	+	
Identify specific studies and evaluation that the city should peruse																								

Evaluation of the Public Involvement Process

Public Participation/Involvement

Although outreach efforts have been incorporated and implemented through the Plan, participation by the general public has been very limited. The members of the Hazard Mitigation Team have been very active and in our opinion have been sensitive to presenting a reasonable cross section of the residents' attitudes and opinions. We have learned that flyers through the mail and newspaper ads do little to motivate the citizens to become involved. Fortunately, the Team has captured the importance of garnering public support and understanding. They have presented several outreach program alternatives to help foster public involvement during the subsequent cycles of evaluating and updating the Plan. These proposed measures can present the communities' issues in a manner that will be both informative and palatable to the community and include: banners, booths at local events and celebrations, and direct involvement with civic groups and churches. Unfortunately, the catalyst that typically peaks public involvement is an event.

Public Surveys & Results

The City of Portola is seeking feedback from residents and community groups to help better serve the public during emergencies and update the City’s General Plan Safety Element and Local Hazard Mitigation Plan. These planning efforts will evaluate the City’s current safety risks from natural and man-made disasters and provide a basis for hazard mitigation planning. Your responses to the survey will be summarized and presented to the Community at a workshop as well as being included in a full report to be presented to the Portola City Council.

The following survey will only take a few minutes of your time to complete but could make a big impact on the type and number of facilities and services provided in your community! As a reminder, if you have comments or thoughts on the survey or any other aspect of the process, please visit the blog at www.portolasafetyplan.com and share your thoughts. We greatly appreciate your time and support.

1. Do you: **Own** **Rent** **Other**
2. Do you have internet access? **Yes** **No**
3. Which of the following natural hazards have you experienced while living in Portola? (Please check all that apply)

<input type="checkbox"/>	Floods
<input type="checkbox"/>	Wildfire
<input type="checkbox"/>	Earthquake
<input type="checkbox"/>	Landslide
<input type="checkbox"/>	Structure Fire
<input type="checkbox"/>	Severe Weather (wind, lightning, winter storm, etc.)
<input type="checkbox"/>	Tornadoes
<input type="checkbox"/>	Dam/Levee Failure
<input type="checkbox"/>	Drought
<input type="checkbox"/>	Extreme Heat
<input type="checkbox"/>	Fog
<input type="checkbox"/>	Epidemic/Pandemic (i.e. flu, H1N1, West Nile Virus, etc.)
<input type="checkbox"/>	None
<input type="checkbox"/>	Other:

4. How concerned are you about the following disasters affecting you and your community? (Circle the corresponding number below)

	Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned
Floods	1	2	3	4	5
Wildfire	1	2	3	4	5
Earthquake	1	2	3	4	5
Landslide	1	2	3	4	5
Structure Fire	1	2	3	4	5
Severe Weather (wind, lightning, winter storm, etc.)	1	2	3	4	5
Terrorism	1	2	3	4	5
Tornadoes	1	2	3	4	5
Utility Interruption/Communications Failure	1	2	3	4	5
Train Derailment	1	2	3	4	5
Radiation	1	2	3	4	5
Dam/Levee Failure	1	2	3	4	5
Health Alert/Epidemic	1	2	3	4	5
Water/Waste Water Loss	1	2	3	4	5
Other:					

5. How prepared is your household for a natural or man-made hazard event?

Not at all prepared
Somewhat prepared
Prepared enough
Well prepared
Very well prepared

6. What measures has your household taken to prepare for a hazard event? (Please check all that apply)

Made a fire escape plan
Have a designated meeting place
Received first aid/CPR training
Prepared disaster supply kit
Stored water and food
Stored flashlights and batteries
Have a fire extinguisher
Stored medical supplies
Installed smoke detectors
Created defensible space around my house
Other:

7. Is your property located in a FEMA designated floodplain? **Yes** **No** **Not Sure**

8. Do you have flood insurance? **Yes** **No** **Not Sure**

9. Is your property at risk of an earthquake? **Yes** **No** **Not Sure**

10. Do you have earthquake insurance? **Yes** **No** **Not Sure**

11. Is your property at risk of wildfire? **Yes** **No** **Not Sure**

12. Do you have fire insurance? **Yes** **No** **Not Sure**

13. Have you ever had difficulty obtaining homeowners or renters insurance for?

Flood	Yes	No	Not Sure
Earthquake	Yes	No	Not Sure
Wildfire	Yes	No	Not Sure

15. How long have you lived in Portola (within the City limits)?

Less than a year
1-2 years
3-5 years
6-10 years

11-15 years
More than 20 years
I don't live in Portola

16. Please tell us any additional comments you may have relative to natural or man-made hazards in Portola or provide your contact information (optional):

Thank you for taking the time and effort to complete this survey! Look for a notice regarding a future Workshop to discuss the results of the survey coming in September.

City of Portola Local Hazards Survey Results

of Surveys Received=9 % of City Population=0.4%

1	Do you own your own/rent/other Home	Own	Rent	Other	N/A
		6	1		2
2	Do you have internet access	Yes	No	N/A	
		8		1	

3	Which Natural Hazards have you Experienced?	Flood	Wildfire	Earthquake	Landslide	Structure Fire	Severe Weather	Tornadoes	Dam Failure	Drought	Extreme Heat	Fog	Epidemic
		78%	56%	78%	0%	44%	100%	0%	0%	67%	33%	44%	0%

4	How Concerned are you about the following disaster affecting you and your community?	No	Somewhat	Concerned	Very	Extremely	Total Points	% Concerned
	Flood	1	2	3	4	5	27	78%
	Wildfire	0	2	5	2	4	36	89%
	Earthquake	3	3	3	0	0	18	33%
	Landslide	5	1	2	0	0	13	22%
	Structure Fire	0	2	4	1	1	25	67%
	Severe Weather	0	5	3	1	0	23	44%
	Terrorism	7	1	1	0	0	12	11%
	Tornadoes	8	1	0	0	0	10	0%
	Utility Interruption	2	2	3	0	2	25	56%
	Train Derailment	2	3	1	2	1	24	44%
	Radiation	5	2	1	1	0	16	22%
	Dam Failure	5	1	2	0	0	13	22%
	Health Alert/Epidemic	3	1	2	1	0	15	33%
	Water/Sewer Loss	1	2	3	1	2	28	67%

Concerned/Very Concerned
No or Little Concern

5	How Prepared is your Household for Natural or man-made hazard events?	Not prepared	Somewhat Prepared	Prepared Enough	Well Prepared	Very Well Prepared	No Response
		0	4	2	2	0	1

6	What Measures has your Household taken to prepare for a hazard event?	Smoke Detectors	Defensible Space	Medical Supplies	Fire Extinguisher	Flashlight & Batteries	Meeting Place	CPR Training	Supply Kit	Store food water	Fire Escape plan	Other
		4	5	0	4	3	1	1	0	1	0	2

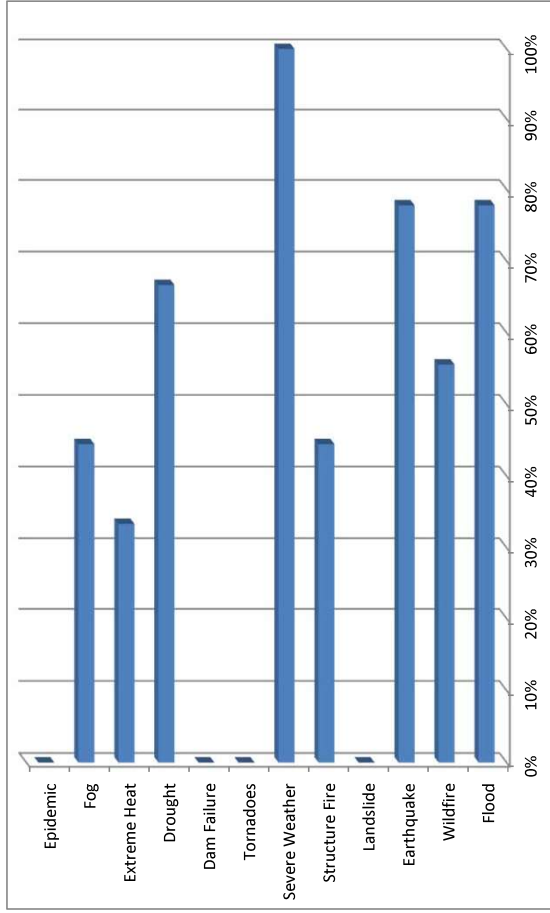
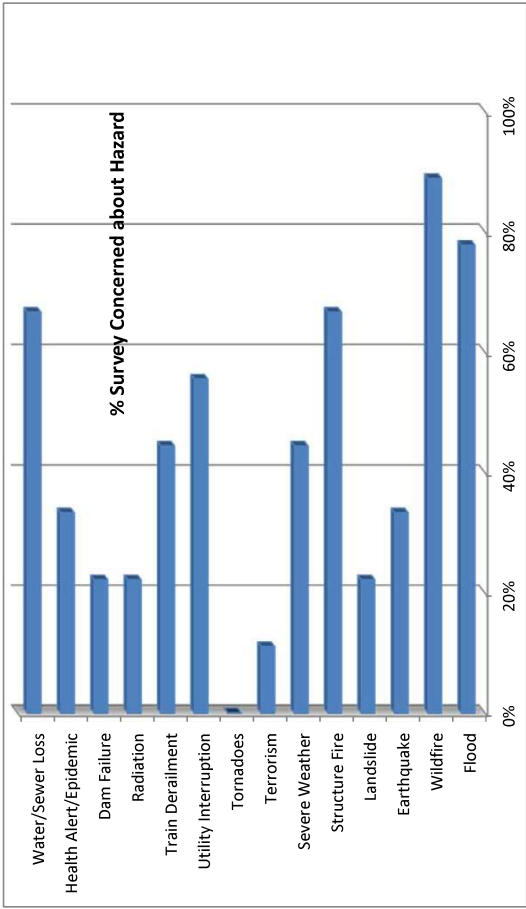
7	YES/NO Questions	Yes	NO	Not Sure
	Is your Property Located in a FEMA Designated Flood Plain?	0	9	0
	Do you have Flood Insurance?	0	9	0
	Is your Property at risk of an earthquake?	6	2	2
	Do you have earthquake insurance?	1	7	0
	Is your Property at risk of a wildfire?	5	3	0
	Do you have Fire Insurance?	8	0	0

8	Have you ever had difficulty obtaining homeowners or renters insurance for:	Yes	No	Not Sure
	Flood	0	7	1
	Earthquake	0	6	2
	Wildfire	0	8	0

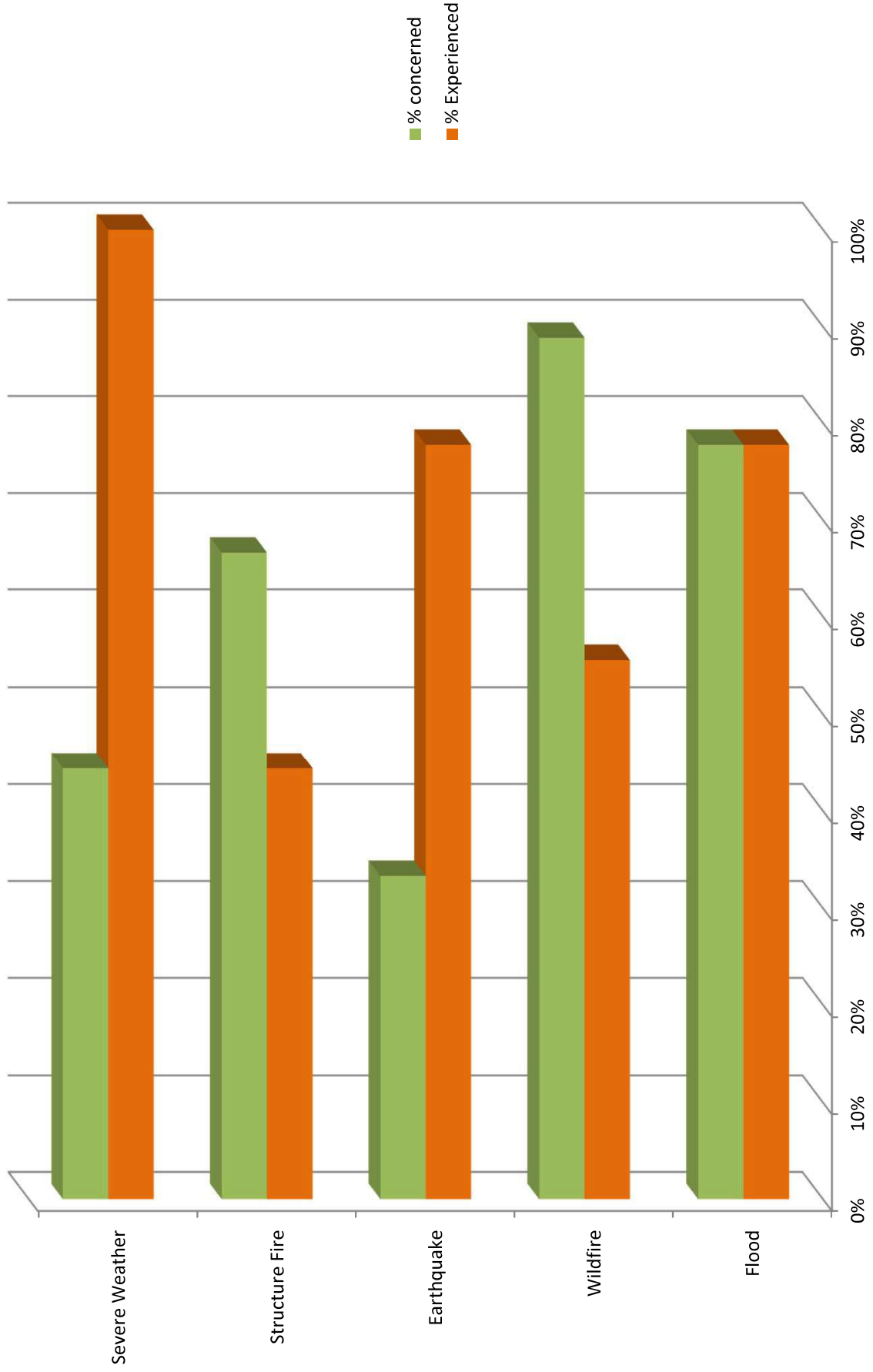
9	How long have you lived in Portola (within the city limits)?	20yrs+	11-15yrs	6-10yrs	3-5yrs	1-2yrs	Not a Resident	Did not Answer
		3 33%	3 33%	2 22%	0 0%	0 0%	0 0%	1 11%

Please tell us any additional Comments you may have relative to natural or man-made hazards in Portola?

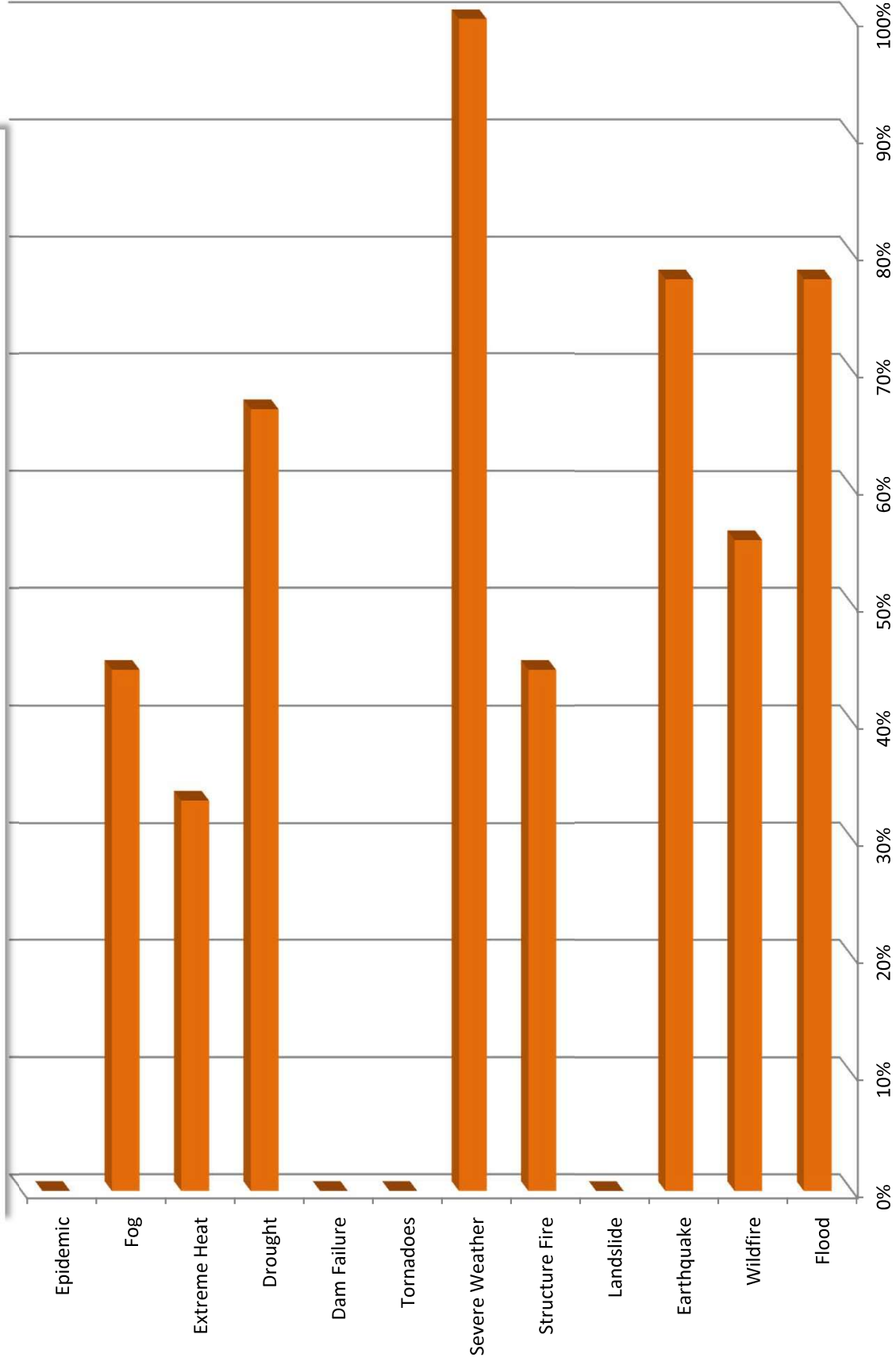
Responder 1	<p>I am rather disappointed with this survey. I knew we were in trouble when an internet survey asked "do you have internet access?"</p> <p>One of the Multiple choice questions does not allow for multiple choices.</p> <p>This survey reminds me of the surveys I get from political parties. The questions are so skewed that one comes off like a demon baby-killer if they don't answer the way the group wants.</p> <p>I hope this survey is not indicative of the quality of the ensuing report. If it is, Portola is wasting its money.</p> <p>No other Comments</p>
Responder 2	No other Comments



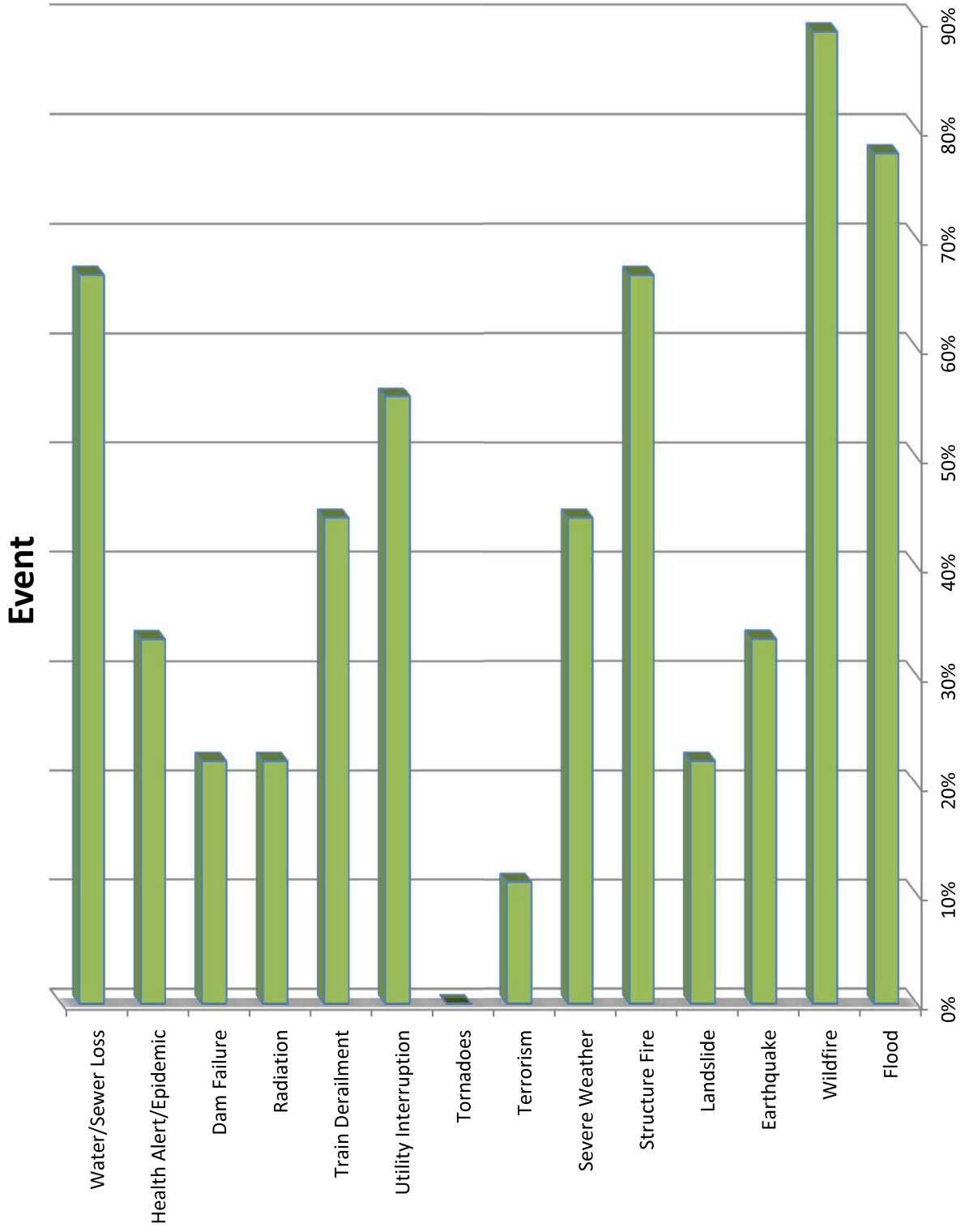
Percent of Survey Respondents who have Experienced a Specific Hazard Event vs. Those who are Concerned about a Specific Hazard Event



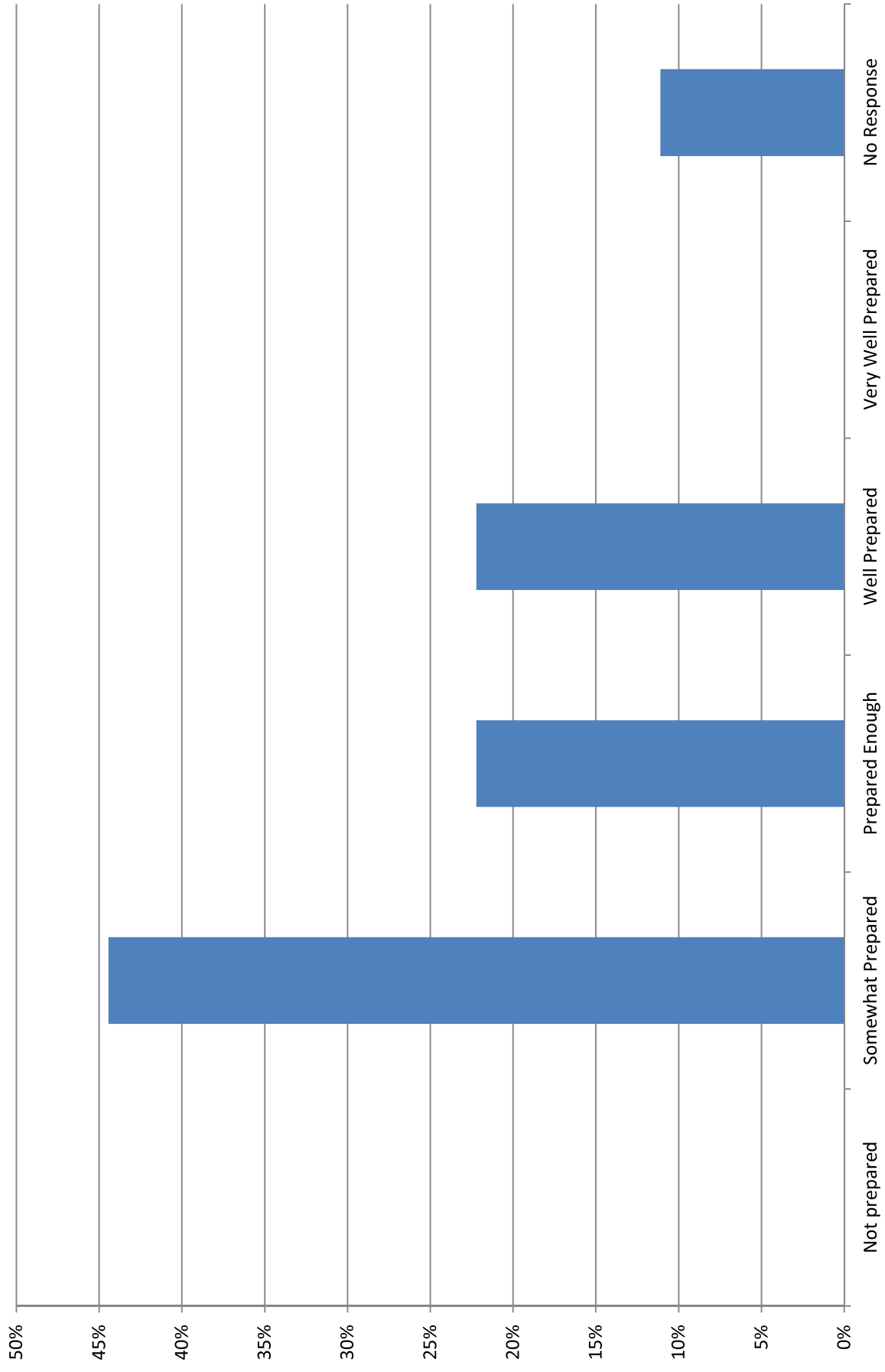
Percent of Survey Respondents Who Felt they Experienced a Specific Hazard Event



Percent of Survey Respondents Concerned About a Specific Hazard



Percent of Survey Respondents Feeling Prepared for a Natural or Man-Made Hazard Event



The following 15 question survey will assist the City with its mitigation planning. Please take a moment to consider and answer the following questions.

1. How long have you lived in Portola (within the City limits)?

	Less than a year
	1-2 years
	3-5 years
	6-10 years

	11-15 years
	More than 20 years
	I don't live in Portola

2. How did you hear about this survey? Website City/Community Meet Friend/Family
 Flyer News Other _____

3. Have you read or reviewed the community risk assessment at www.portolasafetyplan.com website or participated in any public meetings regarding local hazards?
 Yes No

4. The City of Portola plans to prioritize goals, objectives and action items as part of the Hazard Mitigation Plan and the City's General Plan Safety Element. Based on research and community feedback from the hazard analysis section of the current LHMP, the hazards within our city that present the greatest risk to life and property are wildfire, flood, and earthquake. Please indicate, in your opinion, the Hazard that should be the highest priority **to you personally** by ranking each hazard. Please rank from 1 to 3; 1 being the highest priority, 2 being the medium priority, and 3 being the lowest priority.

	Floods
	Wildfire
	Earthquake

5. Please indicate, in your opinion, the Hazard that should be the highest priority for the **City of Portola's residents and surrounding community members** by ranking each hazard. Please rank from 1 to 3; 1 being the highest priority, 2 being the medium priority, and 3 being the lowest priority.

	Floods
	Wildfire
	Earthquake

6. Public and private structures have been documented as being located within the 100 year floodway. Would you support community efforts to mitigate the floodway to protect these structures and properties?
 Yes No

7. Would you support community efforts to mitigate the floodway to protect these structures if local public funding (e.g. increase in taxes) was required?
 Yes No

8. Would you support community efforts to mitigate the floodway to protect these structures if funding assistance could be secured through grants and/or State or Federal support?
 Yes No

9. Are you aware that the City of Portola has open space- fuel break requirements established in the Wildland Fire section of our Safety Element.? Yes No
10. Do you feel that levying of fines or direct community interventions are warranted when private property is noted to not conform to our Wildland Fire Safety Element?
 Yes No
11. Is there an alternate means you would support to encourage or mandate personal property owners to conform to our Wildland Fire Safety Element? _____

_____.
12. Would you support specific seismically retrofits to certain critical facilities (Fire Stations, Police Station, Gulling street Bridge) within our City? Yes No
13. Would you support City efforts to seismically retrofit specific structures if public funding (e.g. increase in local taxes) was required? Yes No
14. Would you support City efforts to seismically retrofit specific structures if funding assistance could be secured through grants and/or State or Federal support?
 Yes No
- 15 Please tell us any additional comments you may have relative to hazards in Portola and what you feel the City can do to help keep our community safe(optional):

_____.

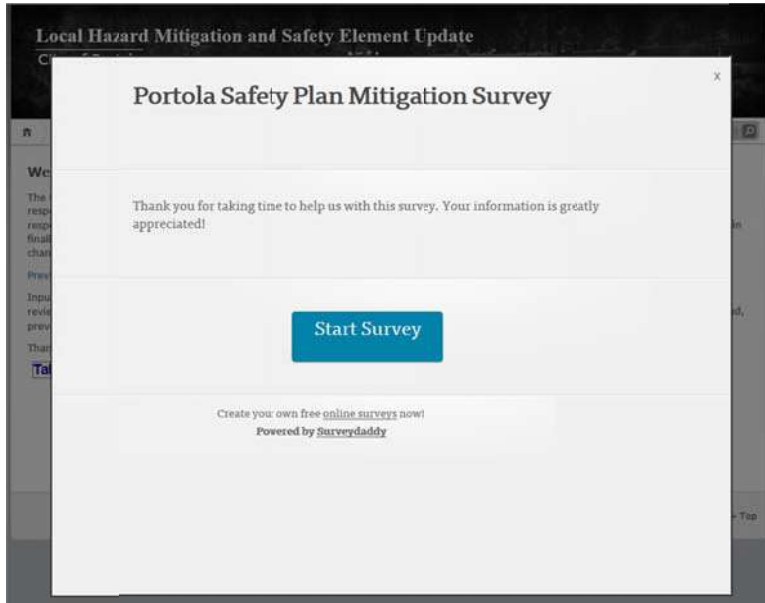
We greatly appreciate your time and support. Thank you for complete this survey! Please stay informed about the City of Portola’s Local Hazard Mitigation Plan and General Plan Safety Element Update at www.portolasafetyplan.com.

Webpage Snapshot

Website Overview:

In order to increase public access, awareness and participation for the LHMP process Wood Rodgers created a website dedicated to the LHMP. This website has news, updates, hazard summaries and surveys geared towards residents of the City of Portola. Two surveys were presented on the website, one for the initial hazard assessment, and one for that asked for input on mitigation strategies. Both were set up to be filled out online in just a few minutes.

Hazard Summaries were placed on the website for the public to review. The Draft LHMP is also available on the website for download in order to promote additional public comments.



Earthquake

An earthquake is a sudden motion or trembling caused by a release of stress accumulated within or along the edge of the earth's tectonic plates. Earthquakes usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. The severity of ground motion generally increases with the amount of energy released and decreases with distance from the fault or hypocenter of the earthquake.

Coincidental events manifested by earthquake activity include:

Surface Rupture

Surface rupture occurs when the ground surface breaks due to fault movement during an earthquake. The Alquist-Priolo Earthquake Fault Zoning Act (APEFZA) was passed in 1972 to attempt to mitigate the hazard of surface rupture to structures for human occupancy. The State has not designated any special study zones for Portola or the immediate surrounding areas indicating that Portola is not in a fault zone.

Ground Shaking

Ground shaking is a general term that refers to all aspects of motion of the earth's surface resulting from an earthquake and is usually considered the most important of all seismic hazards because all the other hazards are triggered by ground shaking. The amount of ground shaking experienced varies with each earthquake and each fault system. Structural design, construction materials and supporting soils/bedrock also significantly influence how the structure responds to the event and how much damage occurs. Portola is considered in an area of moderate ground shaking potential.

Liquefaction and Lateral Spreading

Some of the most infamous events associated with earthquake damage deal with liquefaction, the point during a seismic event when soils lose their strength and begin to act as fluids, and spread laterally or liquefy. The greatest potential for lateral spreading would follow the river corridor where significant changes in grade/elevation occur. Liquefaction can cause severe damage to structures, bridges, roadways, and buried utilities as well. Liquefaction typically manifests in somewhat isolated zones and areas. An area can be the same seismically and geologically, yet liquefaction may only impact a small portion of the area or an isolated structure.



Local Hazard Mitigation and Safety Element Update

City of Portola

News and Updates We Want Your Input Meet the Team Hazard Summaries City of Portola

Type text to search

We Want Your Input

The City of Portola is actively seeking input from residents to help us better serve you through our development of emergency planning and response strategies. The City is currently in the process of developing a Local Hazard Mitigation Plan. Your input will allow us to consider and respond directly to your concerns as they relate to the identified hazards and their potential to adversely impact you. Your feedback will assist in finalizing the development of our Community's Local Hazard Mitigation Plan, help guide and direct policy changes, and help us target necessary changes to the City's General Plan Safety Element. Please review the summary of our Community's hazards through the link below:

[Previous Survey Results on Local Hazards](#)

Input from our local residents and business owners will help us prioritize and establish goals that you as the community will support. After reviewing the hazards, please take a few minutes to complete the on-line survey regarding goals and strategies that the City can take to respond, prevent, and protect our community. YOUR INPUT IS A VALUABLE RESOURCE FOR THE CITY AND ITS GOAL MAKING PROCESS.

Thank you. We greatly appreciate your time and support.

[Take the Portola Safety Survey](#)

Top

Local Hazard Mitigation and Safety Element Update

City of Portola

News and Updates We Want Your Input Meet the Team Hazard Summaries City of Portola

Type text to search

PURPOSE

"An ounce of prevention is worth a pound of cure." It is hard to believe that an adage from over 200 years ago could still be so relevant today. Although Mr. Franklin was really thinking about avoiding the common cold, prevention and mitigation are even more relevant because our families, our residents, and all of us as citizens of Portola have so much invested in our community.

Federal regulations now require that as a community we must develop a Local Hazard Mitigation Plan (LHMP). Simply put, we work to evaluate what potential natural disasters could impact our community, and then we work together to decide what we can do to reduce their impact when they occur. Not all potential hazards or disasters can be avoided; however, we can all take steps to lessen their impact on us, help us help our neighbors, and help protect those features and places that are vital to our community. The LHMP process also helps unite us as a community in deciding what assets are most important to us and how we can move forward in protecting those vital assets. The completion and approval of our LHMP by FEMA (Federal Emergency Management Administration) also puts our community in position to receive Federal assistance in the event a disaster strikes.

FEMA lists 18 hazards for consideration in the formulation of an LHMP. Some hazards are obviously not a threat to our community, such as coastal erosion and coastal storm. Some hazards, through our local environment such as climate and geology, present such a low risk or potentially low impact that they can be eliminated from further consideration (such as avalanche, land subsidence). Some hazards, although not frequently experienced in our community, bear consideration although we can't do much about them other than stock up on supplies or stay indoors. Other hazards, present such risks to our community that we need to do what we can to plan for their occurrence and work diligently to protect ourselves and our personal and community properties from their impact. The remaining hazards, dam failure and manmade disasters, must be considered but must also be approached with the help of other agencies such as the California Division of Water Resources, Division of Safety of Dams, and the California and Federal hazard emergency management branches, Cal EMA and FEMA.

Avalanche	Expansive Soils	Severe Weather (Hail, Thunderstorms, Microbursts)
Coastal Erosion	Extreme Heat	Tsunami
Coastal Storm	Flood	Volcano
Dam Failure	Hurricane	Wildfire
Drought	Land Subsidence	Winter Storms & Extreme Cold
Earthquake	Manmade Disasters	Landslides & Debris Flows

APPENDIX 7

HAZARD SCREENING

Hazard Consideration Selection Matrix			
Hazard	Threshold Value or Condition	Considered a Hazard	Hazard Profiled
Avalanche	Slope >30° http://www.fsavalanche.org/Default.aspx?ContentId=12&LinkId=18&ParentLinkId=16	N	N
Coastal Erosion	On Coast http://www.aoml.noaa.gov/hrd/tcfaq/G12.html	N	N
Coastal Storm	On Coast http://www.aoml.noaa.gov/hrd/tcfaq/G12.html	N	N
Dam Failure	Refer to California Division of Water Resources http://www.water.ca.gov/damsafety/index.cfm	Y	Y
Debris Flow (Post Fire)	Independent Study Required http://pubs.usgs.gov/of/2007/1384/ http://www.fs.fed.us/land/wfas/fd_class.png http://pubs.usgs.gov/fs/2005/3104/pdf/FS-2005-3104.pdf	Y	Y
Drought	Agricultural Dependency & D4 http://droughtmonitor.unl.edu/	N	N
Earthquake	PGA > 0.02g http://earthquake.usgs.gov/hazards/products/graphic2pct50.pdf https://geohazards.usgs.gov/eqprob/2009/index.php	Y	Y
Expansive Soils	a.) >30% Clay b.) Plasticity Index >15 http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx	N	N
Extreme Heat	Heat Index >105°F predicted for more than 2 days. http://www.ready.gov/heat	Y	Y
Flood	FEMA 100 Year Flood Zone https://msc.fema.gov/webapp/wcs/stores/servlet	Y	Y
Hurricane	Within Tropical Cyclone Formation Region http://www.aoml.noaa.gov/hrd/tcfaq/G12.html http://www.nhc.noaa.gov/climo/	N	N
Land Subsidence	a.) Aquifer Compaction Area b.) Evaporate or Carbonate Rock http://water.usgs.gov/ogw/pubs/fs00165/SubsidenceFS.v7.PDF http://www.quake.ca.gov/gmaps/RGM/chico/chico.html	N	N

Hazard	Threshold Value or Condition	Considered a Hazard	Hazard Profiled
Landslide	Slope (°) > 0.19(Relief, m) - 0.16 http://landslides.usgs.gov/learning/nationalmap/images/psw.gif http://landslides.usgs.gov/docs/coe/GodtCoeBaumHighlandHazardMap.pdf	N	N
Severe Weather Hail Lightning Microbursts Thunderstorms Tornadoes Windstorms	> ¾" Diameter No Threshold Established Straight line wind speed >85 mph Severe, wind>58 mph & hail>¾" Wind speed > 85 mph Wind > 58 mph (50 knots) http://www.fema.gov/graphics/library/wmap.gif http://www.ready.gov/thunderstorms-lightning http://www.spc.noaa.gov/gis/svrgis/ http://www.rutherfordcountyttn.gov/ema/definitions_tornado.htm http://www.fema.gov/graphics/library/wmap.gif	Y	Y
Tsunami	Within 1000' of Water Body http://nctr.pmel.noaa.gov/state/ca/index.html &	N	N
Volcano	Within Mt. Lassen Influence Zone http://pubs.usgs.gov/fs/2000/fs022-00/	N	N
Winter Storms & Extreme Cold	Definition for Cold Air Outbreak http://www.cpc.ncep.noaa.gov/products/outreach/proceedings/cdw29_proceedings Climate Model Simulations of Extreme Cold-Air Outbreaks (CAOs)	Y	Y

AVALANCHE

<http://www.fsavalanche.org/Default.aspx?ContentId=12&LinkId=18&ParentLinkId=16>

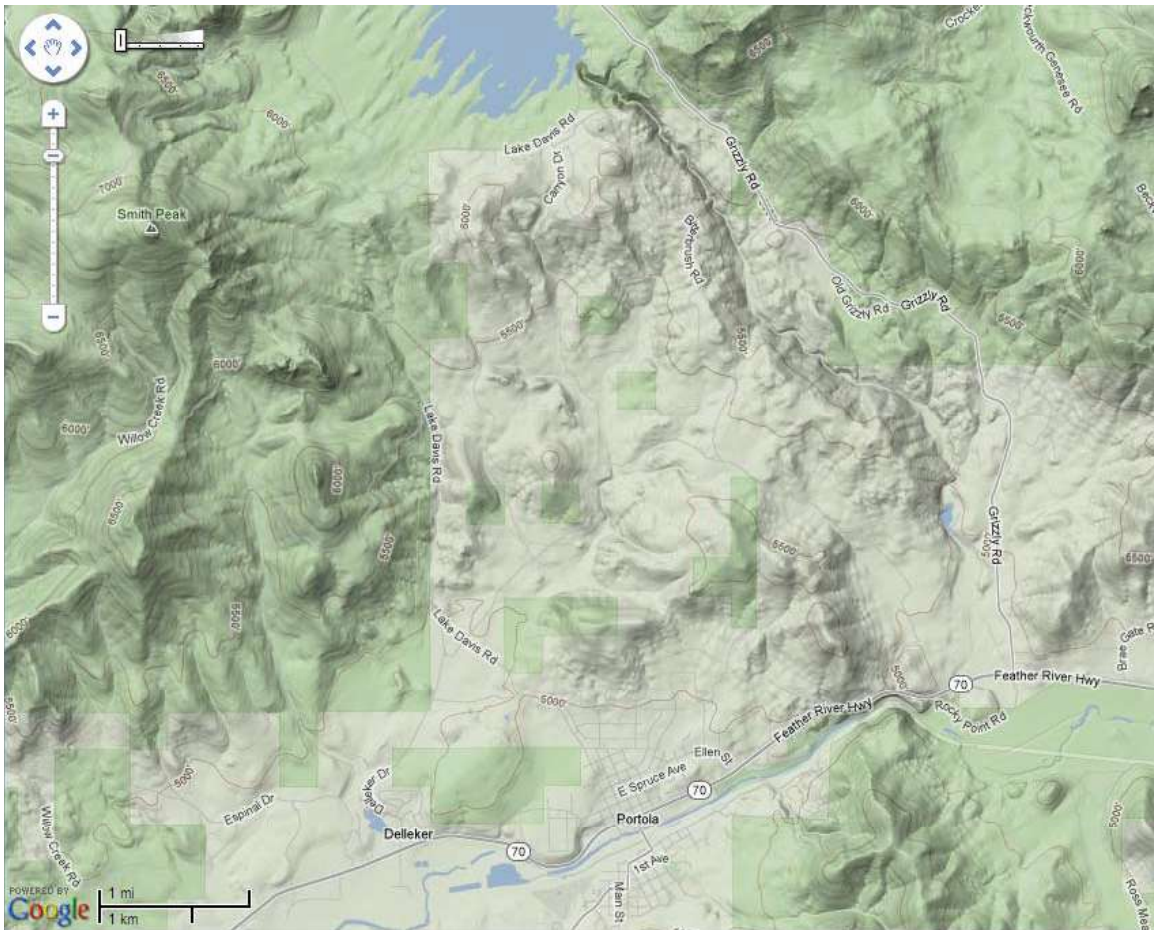
<http://www.sierraavalanchecenter.org/>

Map, compliments of <http://www.quake.ca.gov/gmaps/RGM/chico/chico.html>

If the surrounding terrain is steeper than 30° , or connected to terrain steeper than 30° , it can slide.

$0.78'' = 1 \text{ Mile}$, therefore 500' contour interval $< 0.074''$ —

500' contour interval of slopes toward Portola, $> 0.074''$



COASTAL EROSION

<http://www.aoml.noaa.gov/hrd/tcfaq/G12.html>

<http://csc.noaa.gov/hurricanes/index.html#>

Historical Hurricane Tracks
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Search
Location: to
 Show search area of 65 Nautical Miles

Refine Search
Category: Timeframe: Pressure:
 Auto-apply

Search Results (0) Selected Storm My Storms (0)

No results to display.
No storms were found. Try broadening your search criteria.
Click the help(?) button in the search panel for tips.

United States Department of Commerce | National Oceanic and Atmospheric Administration | National Ocean Service

Contact Us | Privacy Policy | Link Disclaimer | USA.gov

COASTAL EROSION

<http://www.aoml.noaa.gov/hrd/tcfaq/G12.html>

<http://csc.noaa.gov/hurricanes/index.html#>

Historical Hurricane Tracks
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Search

Location: [Dropdown]
-120.464, 29.016 to [Dropdown] or [Set Location]
 Show search area of 65 Nautical Miles

Refine Search

Category: [Add]
Timeframe: [Add]
Pressure: [Add]

Auto-apply

Search Results (0) Selected Storm My Storms (0)

No results to display.
No storms were found. Try broadening your search criteria.
Click the help(?) button in the search panel for tips.

Map: California, Nevada, cities (Medford, Eureka, Redding, Chico, Reno, Carson City, Sacramento, Santa Rosa, Napa, Vacaville, Fairfield, Concord, Antioch, Stockton, San Francisco, Fremont, Livermore, Modesto, San Jose, Salinas, Fresno).
Scale: 200km, 100mi
Latitude: 42.1179 Longitude: -119.7334
Streets Imagery

United States Department of Commerce | National Oceanic and Atmospheric Administration | National Ocean Service
Contact Us | Privacy Policy | Link Disclaimer | USA.gov

DAM FAILURE

<http://www.water.ca.gov/damsafety/index.cfm>

The dam inundation failure analysis performed by the California Department of Safety of Dams is not available for public reprint. The report has been obtained for review by the City.

DEBRIS FLOW – POST FIRE

<http://pubs.usgs.gov/of/2007/1384/>

http://www.fs.fed.us/land/wfas/fd_class.png

<http://pubs.usgs.gov/fs/2005/3104/pdf/FS-2005-3104.pdf>

Special studies of burn areas are required to assess potential for this hazard.

DROUGHT

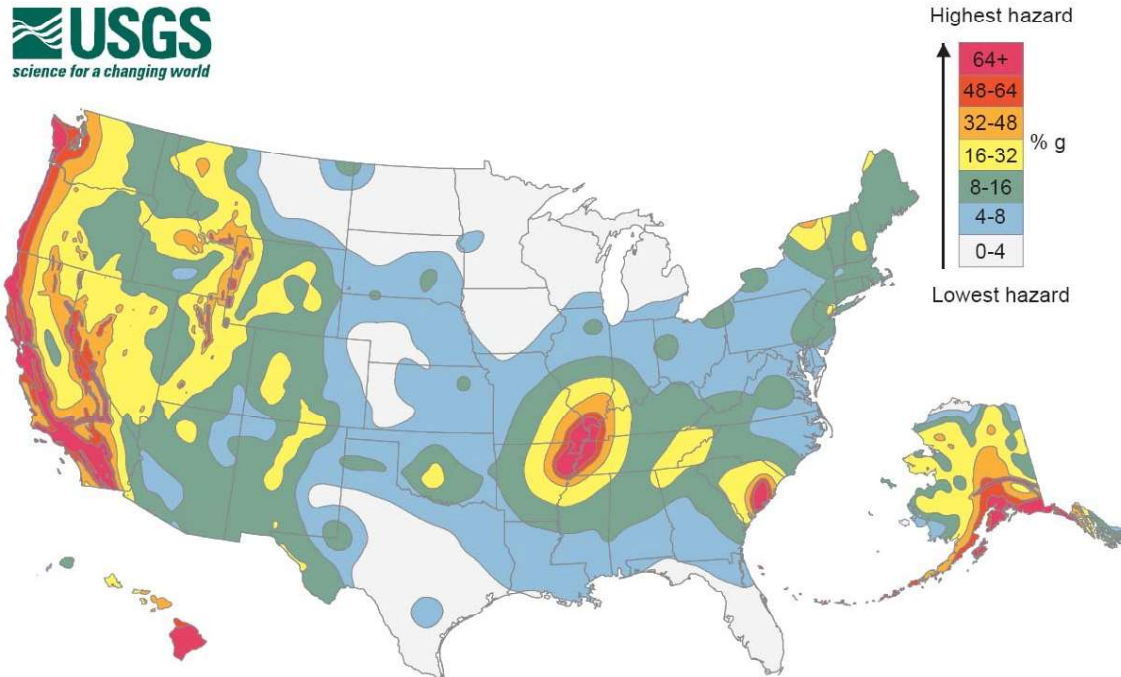
Drought conditions have occurred for large areas of the State of California throughout the State's history. Most recently, drought conditions which occurred during 2009 were estimated to have had a combined economic impact of approximately \$1B for the year. **Drought impacts directly to the City of Portola have not been recorded.**

The City of Portola is not likely to be directly affected by a drought due to its proximity to the headwaters of a major river (Middle Fork Feather River). The large, high elevation drainage area for the City of Portola historically receives abundant precipitation and, even in years of below average precipitation, snowpack, groundwater storage, and access to the Lake Davis Reservoir are sufficient to provide reliable sources of water for household use. Indirect impacts could include reduction in the limited agricultural productivity for surrounding areas and related economic impacts.

EARTHQUAKE

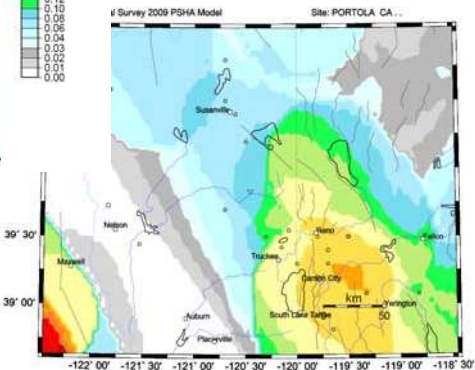
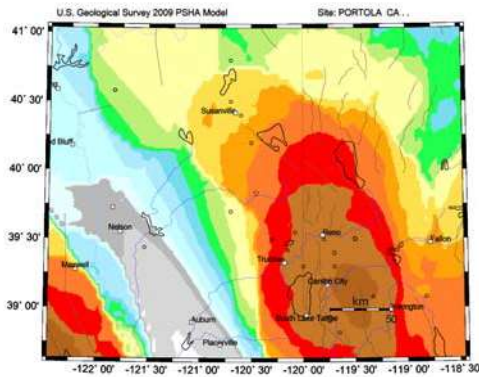
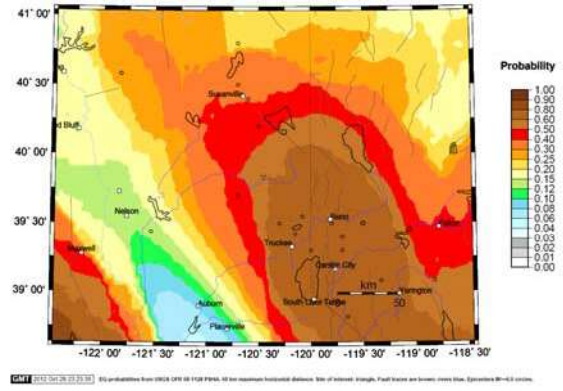
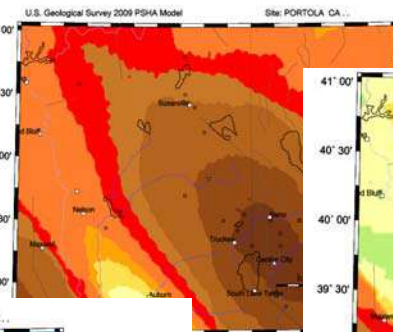
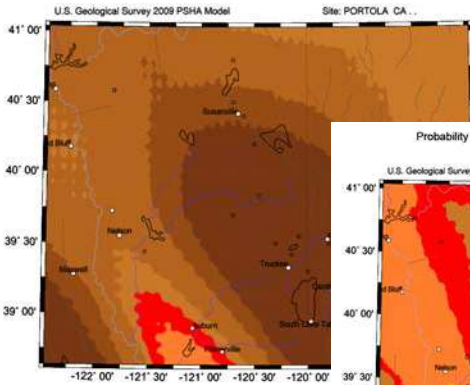
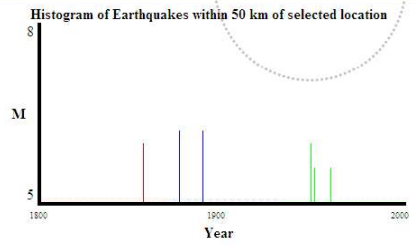
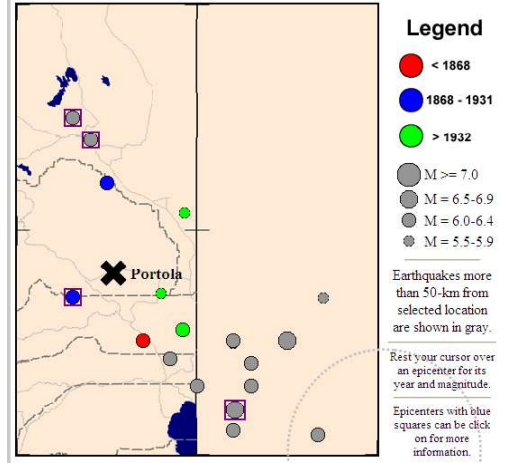
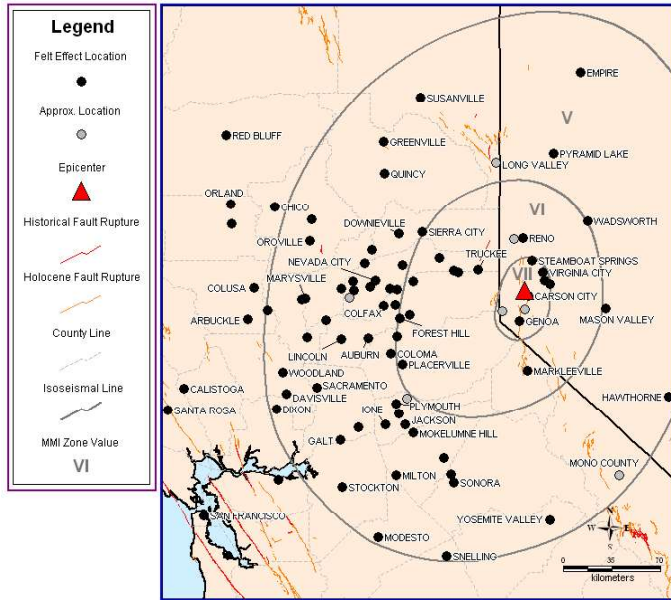
A hazard has been characterized as having a potential for an event presenting a PGA >0.02g. Based on the graphic presented below, the Portola area presents a PGA between 0.32g & 0.48g.

<http://earthquake.usgs.gov/hazards/products/graphic2pct50.pdf>



<http://redirect.conservation.ca.gov/cgs/rghm/quakes/historical/hiseq.asp?Longitude=-120.468&Latitude=39.811&Town=Portola>
<http://redirect.conservation.ca.gov/cgs/rghm/quakes/historical/index.htm>

Date YYYY-MM-DD	Time (GMT)	Longitude	Latitude	Magnitude	Distance from selected location	Notes
1855-01-25	0600	-120.300	39.5000	6.0	37.5 km	Sierraville
1875-01-24	1200	-120.500	40.2000	6.2	43.3 km	Honey Lake
1888-04-29	0448	-120.700	39.7000	6.2	23.4 km	Mohawk Valley
1948-12-29	1253	-120.080	39.5500	6.0	44.1 km	West of Verdi, Nevada
1950-12-14	1324	-120.070	40.0800	5.6	45.2 km	North of Reno, Nevada
1959-04-01	1818	-120.200	39.7200	5.6	25 km	North of Reno, Nevada



click on tabs above to change from earthquake, flood and fire

Earthquake Hazards

Earthquakes can occur everywhere in California which means all Californians live with an earthquake risk. In addition to the shaking caused by earthquakes, other things can occur such as landslides, surface fault ruptures and liquefaction—all of which may cause injury or property damage. Take note of where you live, read the information provided here, and contact your local city or county government for further details on how to be prepared where you live.

Earthquake Preparedness

More information and ideas on how to secure the contents of your home can be found at <http://www.earthquakecountry.info/daretoprepare/>.

Recommended actions for Earthquake Fault zones

If the property is not developed, a fault study may be required before the parcel can be subdivided or structures permitted. If a property is developed, you will not need a geologic study unless you plan to extensively add onto or remodel an existing structure. (more information at <http://www.consrv.ca.gov/cgs/rghm/sp/index.htm>)

Recommended actions for Liquefaction Seismic Hazard zones

http://geomaps.wr.usgs.gov/sfgeo/liquefaction/what_can.html also See Chapter 6 <http://www.conservation.ca.gov/CGS/shzpl/webdocs/sp117.pdf>

Recommended actions for Earthquake-Induced Landslide zones

See Chapter 5 <http://www.conservation.ca.gov/CGS/shzpl/webdocs/sp117.pdf>

*About the Seismic Hazard Zonation Maps:

These maps prepared by the California Geological Survey are State-mandated regulatory maps that show "Zones of Required Investigation" for surface fault rupture, liquefaction and landslide hazard. They do not depict different degrees of hazard, rather they identify zones within which site specific studies will be required for new construction. These maps also are used in real estate transactions - when a property falls within a "Zone of Required Investigation," sellers of that property must disclose that fact to prospective buyers.

NOTE: Some areas of the State scheduled for Seismic Hazard Zonation for liquefaction and earthquake-induced landslides are yet to be evaluated. If you are informed that you are not in a Seismic Hazard Zone, please check whether the Official Seismic Hazard Zone Map covering your area has been released (http://gmw.consrv.ca.gov/shmp/html/pdf_maps_no.html.)

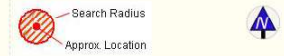
Also, map scale limitations on this website do not always allow accurate determination of whether a property falls inside or outside a Zone of Required Investigation. This degree of uncertainty is addressed herein by use of the term "in or near" a zone. To determine property location relative to a zone boundary, please visit your local planning agency to view appropriate Official Seismic Hazard, Earthquake Fault Zone maps, and parcel maps. Click [here](#) for more information about the Seismic Hazard Zonation Mapping Program.

Showing: Earthquake Hazard Map

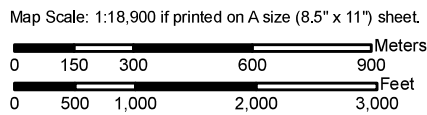
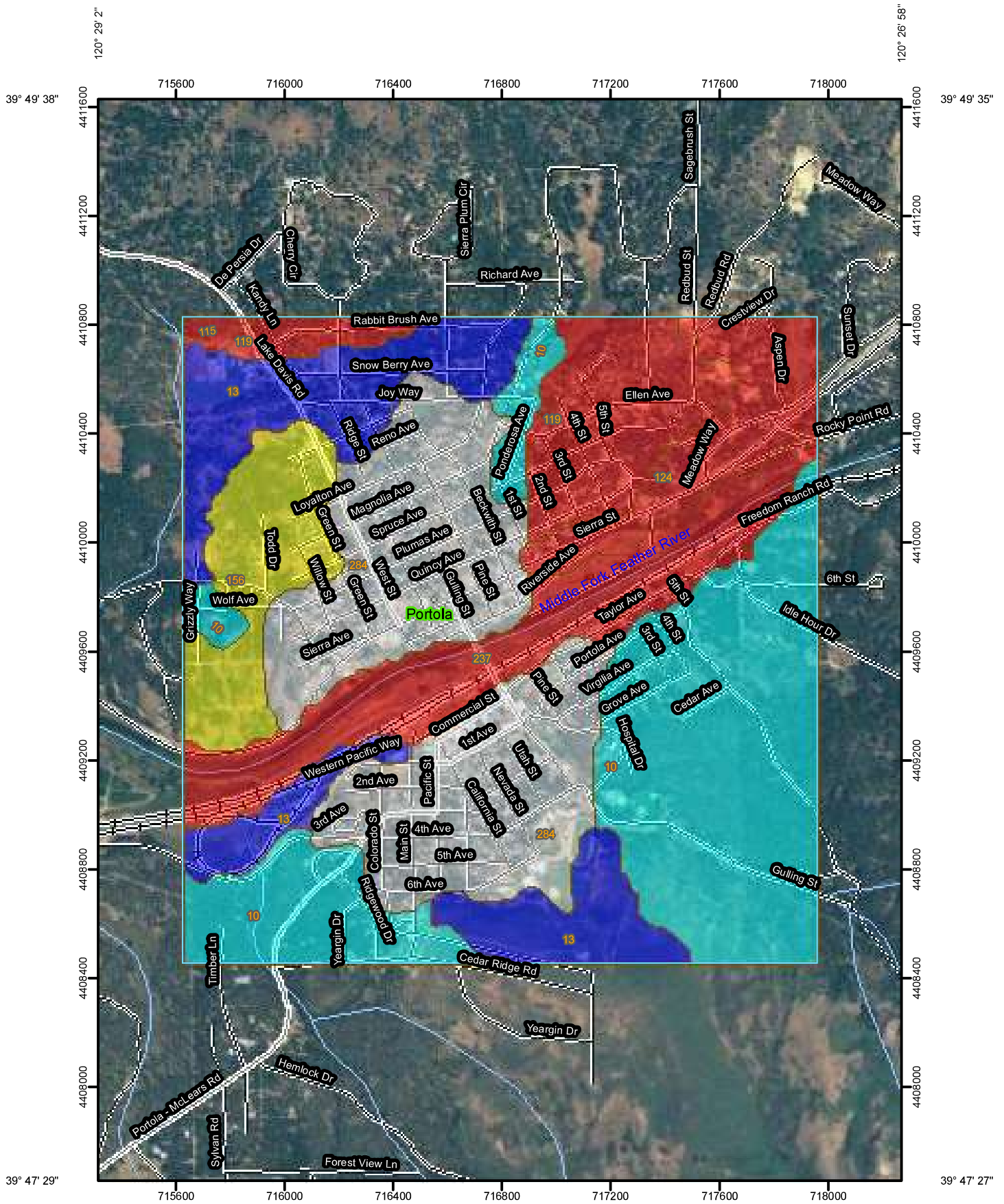


- Fault-rupture hazard zone
- Earthquake-induced liquefaction area
- Earthquake-induced landslide area
- High earthquake shaking probability
- Moderate earthquake shaking probability















Sources: [California Geological Survey](#), [US Geological Survey](#)



Percent Clay—Plumas National Forest Area, California



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 -  Soil Map Units
- Soil Ratings**
 -  <= 10
 -  > 10 AND <= 14
 -  > 14 AND <= 15
 -  > 15 AND <= 18
 -  Not rated or not available
- Political Features**
 -  Cities
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

Map Scale: 1:19,000 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000. Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Plumas National Forest Area, California
Survey Area Data: Version 6, Jan 31, 2008

Date(s) aerial images were photographed: 8/17/2005; 8/27/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Percent Clay

Percent Clay— Summary by Map Unit — Plumas National Forest Area, California (CA713)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
10	Badenaugh very gravelly loam, 2 to 5 percent slopes.	15.0	381.3	27.9%
13	Dotta loam, 2 to 5 percent slopes.	18.0	196.4	14.4%
115	Chaix-Holland families complex, 2 to 50 percent slopes,	10.0	5.3	0.4%
119	Chaix-Wapi families complex, 2 to 30 percent slopes.	10.0	119.3	8.7%
124	Chaix-Wapi families-Haplaquolls complex, 2 to 30 percent slopes.	10.0	82.4	6.0%
156	Felton-Waterman families-Rock outcrop complex, 2 to 60 percent slopes.	14.0	94.8	6.9%
237	Riverwash-Fluents complex, 0 to 5 percent slopes.	10.0	152.7	11.2%
284	Urban land		334.5	24.5%
Totals for Area of Interest			1,366.7	100.0%

Description

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No














Layer Options: Depth Range

Top Depth: 0

Bottom Depth: 6

Units of Measure: Inches

MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 -  Soil Map Units
- Soil Ratings**
 -  <= 0
 -  > 0 AND <= 3
 -  > 3 AND <= 5
 -  Not rated or not available
- Political Features**
 -  Cities
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

Map Scale: 1:19,000 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000. Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Plumas National Forest Area, California
Survey Area Data: Version 6, Jan 31, 2008
Date(s) aerial images were photographed: 8/17/2005; 8/27/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Plasticity Index

Plasticity Index— Summary by Map Unit — Plumas National Forest Area, California (CA713)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
10	Badenaugh very gravelly loam, 2 to 5 percent slopes.	5.0	381.3	27.9%
13	Dotta loam, 2 to 5 percent slopes.	5.0	196.4	14.4%
115	Chaix-Holland families complex, 2 to 50 percent slopes,	0.0	5.3	0.4%
119	Chaix-Wapi families complex, 2 to 30 percent slopes.	0.0	119.3	8.7%
124	Chaix-Wapi families-Haplaquolls complex, 2 to 30 percent slopes.	0.0	82.4	6.0%
156	Felton-Waterman families-Rock outcrop complex, 2 to 60 percent slopes.	3.0	94.8	6.9%
237	Riverwash-Fluvents complex, 0 to 5 percent slopes.	0.0	152.7	11.2%
284	Urban land		334.5	24.5%
Totals for Area of Interest			1,366.7	100.0%

Description

Plasticity index (PI) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is defined as the numerical difference between the liquid limit and plastic limit of the soil. It is the range of water content in which a soil exhibits the characteristics of a plastic solid.

The plastic limit is the water content that corresponds to an arbitrary limit between the plastic and semisolid states of a soil. The liquid limit is the water content, on a percent by weight basis, of the soil (passing #40 sieve) at which the soil changes from a plastic to a liquid state.

Soils that have a high plasticity index have a wide range of moisture content in which the soil performs as a plastic material. Highly and moderately plastic clays have large PI values. Plasticity index is used in classifying soils in the Unified and AASHTO classification systems.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options: Depth Range

Top Depth: 0

Bottom Depth: 6

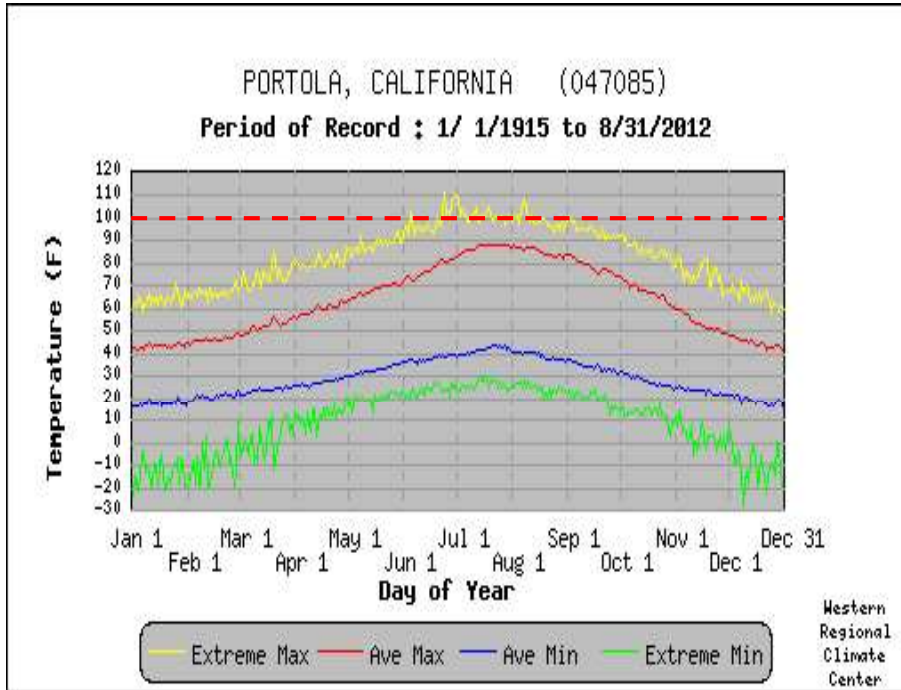
Units of Measure: Inches

EXPANSIVE SOILS

For the purposes of this LHMP, expansive soils are defined as soils presenting more than 30% passing the #200 sieve, and a Plasticity Index greater than 15. As presented on the accompanying USDA Soil Survey maps, neither screening condition is present for the bulk of the soils in the Portola area.

EXTREME HEAT

Heat Index >105°F predicted for more than 2 days.



LEGEND

Extreme Max. - Maximum of all daily maximum temperatures recorded for the day of the year.

Ave. Max. - Average of all daily maximum temperatures recorded for the day of the year.

Ave. Min. - Average of all daily minimum temperatures recorded for the day of the year.

Figure xxx – Threshold Occurrences of Extreme Heat Events

Ref: Western Regional Climate Center

FIRE

<http://myhazards.calema.ca.gov/>

Instructions Earthquake Flood **Fire** Tsunami

click on tabs above to change from [Show fire map and results](#) fire

Contact Us Link Email

Wildfire Hazards

California wildfires typically burn hundreds of thousands of acres each year. California law requires CAL FIRE (California Department of Forestry and Fire Protection), to identify areas based on the severity of fire hazard that is expected to prevail there. These areas, or "zones," are based on factors such as fuel (material that can burn), slope and the expected chance of burning. There are three zones, based on increasing fire hazard... Moderate (M), High (H) and Very High (VH).

See FEMA's information about [how to protect yourself from wildfire](#).

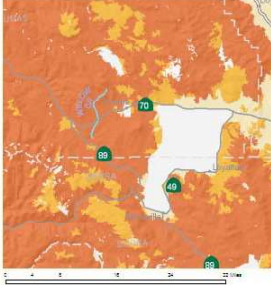
Wildfire Hazard Preparedness

For those living with wildfire hazards start protecting your property by creating 100 feet of "defensible space" around your structures. This includes removing all flammable vegetation and debris within 30 feet immediately surrounding your home, and, creating a "reduced fuel zone" that extends 70 feet beyond that.

Next, you can use "ignition resistant" materials in your construction, and make sure you have well marked access to your property and an emergency water supply.

For many more tips on keeping your property fire safe see the [Fire Safety](#) web page from Cal Fire.

Showing: Fire Hazard Map



Very high fire hazard
High fire hazard
Moderate fire hazard
Non-wildland/non-urban or Not Mapped

Source:
[Dept. of Forestry and Fire Protection - Fire and Resource Assessment Program](#)

Note:
Shown here are "adopted" fire hazard zones for state responsibility areas and "draft" zones for federal areas. Zones for local responsibility areas are not shown.

Search Radius
Approx. Location

FLOOD

<http://myhazards.calema.ca.gov/>

[Instructions](#) [Earthquake](#) [Flood](#) [Fire](#) [Tsunami](#)

[Contact Us](#) [Link](#) [Email](#)

click on tabs above to change from earthquake, flood and fire

Flood Hazards

Floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.

Be aware of flood hazards no matter where you live, but especially if you live in a low-lying area, near water or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds, or low-lying ground that appear harmless in dry weather can flood. Every state is at risk from this hazard.

For more information, see [FEMA's flood web page](#).

NOTE: FEMA is currently updating the Flood Insurance Rate Map (FIRM) inventory through its [Map Modernization Program](#). The updated maps will be added to this site as they are available, however, the digital information for many California counties has not been completed.

Please be sure to check on-line at the [FEMA Map Service Center website](#) to view the most current [FIRMs](#) and use the search function for a "Public Flood Map."

Flood Preparedness

Before a flood there are several steps you will want to take, including:

- Get an emergency supply kit
- Make a plan if your family is separated during a flood
- Be informed on flood watches and warnings by listening to the radio or watching television

For more information on the above topics, see the [Ready America flood web page](#).

Here are some steps you can take to help secure your home in case of a flood:

- Get [flood insurance](#)—you can benefit from it even if you do not live in a high flood risk area.
- Avoid building in a flood-prone area unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install "check valves" in sewer traps to prevent floodwater from backing up into the drains of your home.
- Contact community officials to find out if they are planning to construct barriers (levees, beams, floodwalls) to stop floodwater from entering the homes in your area.
- Seal the walls in your basement with waterproofing compounds to avoid seepage.

For more information on these items, see the [Ready America](#) and [FEMA](#) websites. In addition, the [California Dept. of Water Resources](#) has a [web page](#) with extensive links about flood management in California.

Showing: Flood Hazard Map

Legend:

- High flood hazard
- Low flood hazard
- Unknown flood hazard
- Not mapped for flood hazard

Source:
[FEMA National Flood Insurance Program](#)

Search Radius

Approx. Location

Hazard Consideration Selection Matrix			
Hazard	Threshold Value or Condition	Considered a Hazard	Hazard Profiled
Avalanche	Slope >30° http://www.fsavalanche.org/Default.aspx?ContentId=12&LinkId=18&ParentLinkId=16	N	N
Coastal Erosion	On Coast http://www.aoml.noaa.gov/hrd/tcfaq/G12.html	N	N
Coastal Storm	On Coast http://www.aoml.noaa.gov/hrd/tcfaq/G12.html	N	N
Dam Failure	Refer to California Division of Water Resources http://www.water.ca.gov/damsafety/index.cfm	Y	Y
Debris Flow (Post Fire)	Independent Study Required http://pubs.usgs.gov/of/2007/1384/ http://www.fs.fed.us/land/wfas/fd_class.png http://pubs.usgs.gov/fs/2005/3104/pdf/FS-2005-3104.pdf	Y	Y
Drought	Agricultural Dependency & D4 http://droughtmonitor.unl.edu/	N	N
Earthquake	PGA > 0.02g http://earthquake.usgs.gov/hazards/products/graphic2pct50.pdf https://geohazards.usgs.gov/eqprob/2009/index.php	Y	Y
Expansive Soils	a.) >30% Clay b.) Plasticity Index >15 http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx	N	N
Extreme Heat	Heat Index >105°F predicted for more than 2 days. http://www.ready.gov/heat	Y	Y
Flood	FEMA 100 Year Flood Zone https://msc.fema.gov/webapp/wcs/stores/servlet	Y	Y
Hurricane	Within Tropical Cyclone Formation Region http://www.aoml.noaa.gov/hrd/tcfaq/G12.html http://www.nhc.noaa.gov/climo/	N	N
Land Subsidence	a.) Aquifer Compaction Area b.) Evaporate or Carbonate Rock http://water.usgs.gov/ogw/pubs/fs00165/SubsidenceFS.v7.PDF http://www.quake.ca.gov/gmaps/RGM/chico/chico.html	N	N

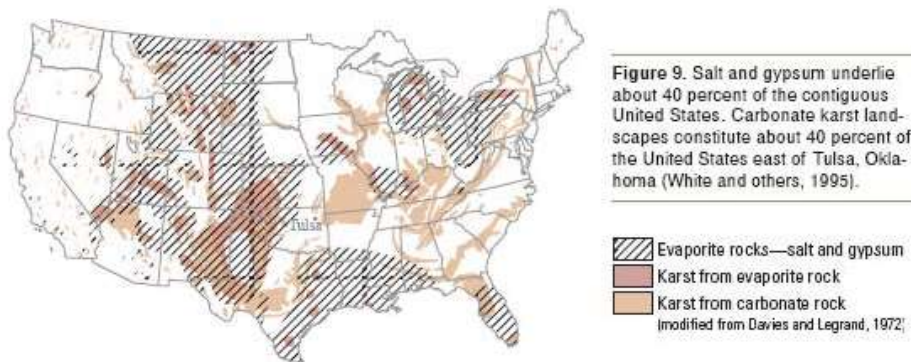
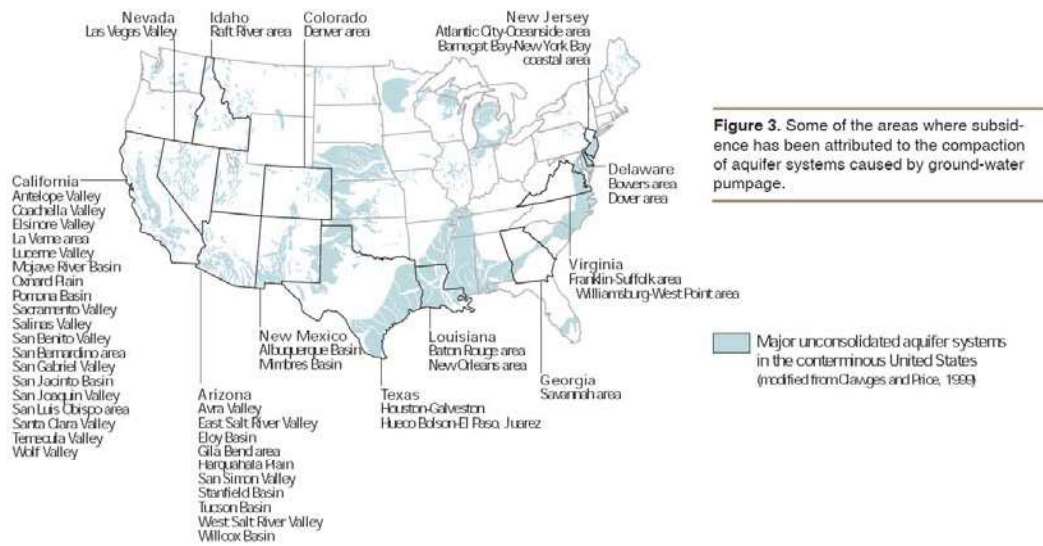
Hazard	Threshold Value or Condition	Considered a Hazard	Hazard Profiled
Landslide	Slope (°) > 0.19(Relief, m) - 0.16 http://landslides.usgs.gov/learning/nationalmap/images/psw.gif http://landslides.usgs.gov/docs/coe/GodtCoeBaumHighlandHazardMap.pdf	N	N
Severe Weather Hail Lightning Microbursts Thunderstorms Tornadoes Windstorms	> ¾" Diameter No Threshold Established Straight line wind speed >85 mph Severe, wind>58 mph & hail>¾" Wind speed > 85 mph Wind > 58 mph (50 knots) http://www.fema.gov/graphics/library/wmap.gif http://www.ready.gov/thunderstorms-lightning http://www.spc.noaa.gov/gis/svrgis/ http://www.rutherfordcountyttn.gov/ema/definitions_tornado.htm http://www.fema.gov/graphics/library/wmap.gif	Y	Y
Tsunami	Within 1000' of Water Body http://nctr.pmel.noaa.gov/state/ca/index.html &	N	N
Volcano	Within Mt. Lassen Influence Zone http://pubs.usgs.gov/fs/2000/fs022-00/	N	N
Winter Storms & Extreme Cold	Definition for Cold Air Outbreak http://www.cpc.ncep.noaa.gov/products/outreach/proceedings/cdw29_proceedings Climate Model Simulations of Extreme Cold-Air Outbreaks (CAOs)	Y	Y

LAND SUBSIDENCE

<http://water.usgs.gov/ogw/pubs/fs00165/SubsidenceFS.v7.PDF>

<http://www.quake.ca.gov/gmaps/RGM/chico/chico.html>

Soil types, ground water recharge due to Feather River, main water source from Davis Lake Reservoir, and size of community lend land subsidence to be an unlikely concern to the community.



California Geological Survey - Geologic Map of the Chico Quadrangle - Windows Internet Explorer

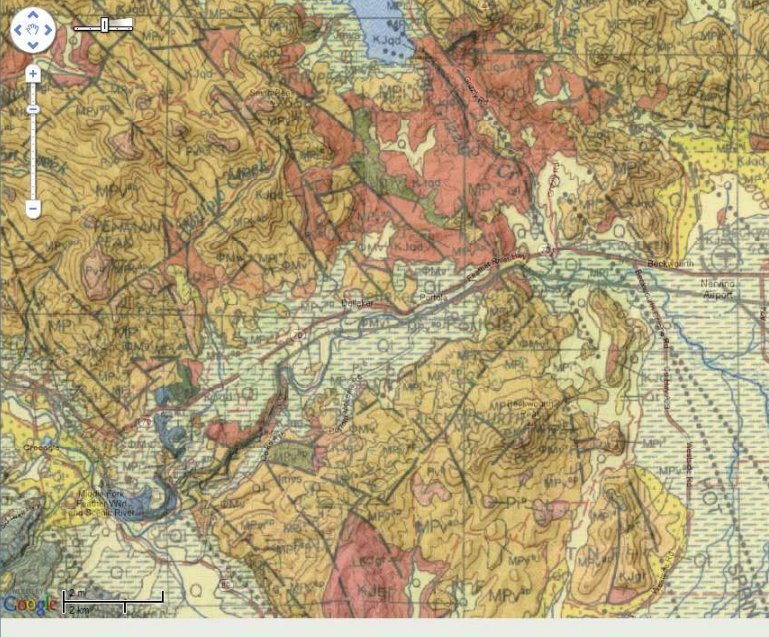
http://www.quake.ca.gov/gmaps/RGM/chico/chico.html

File Edit View Favorites Tools Help

http://water.usgs.gov/jogw/... California Geological Surv... X

GEOLOGIC MAP OF THE CHICO QUADRANGLE

Hide/Show Legend



Map Satellite My Topo Terrain

- Qb Basin deposits (Alluvium)
- Qls Landslide deposits
- Ql Lake deposits
- Qf Fan deposits
- Qt Terrace deposits
- Qg Glacial deposits
- Qm Modesto Formation (Alluvium)
- Qr Riverbank Formation (Alluvium)
- Qos Pleistocene nonmarine sedimentary rocks
- Qrb Red Bluff Formation
- Qv^{es} Pleistocene volcanic rocks (t-basalt, tps-scoria and tuff)
- Qv^{pl} Volcanic sediments of Sutter Buttes Qv^{pl} Volcanic lake beds
- Qv^{rv} Volcanic rocks of Sutter Buttes (andesite, rhyolite)

Map data ©2012 Google

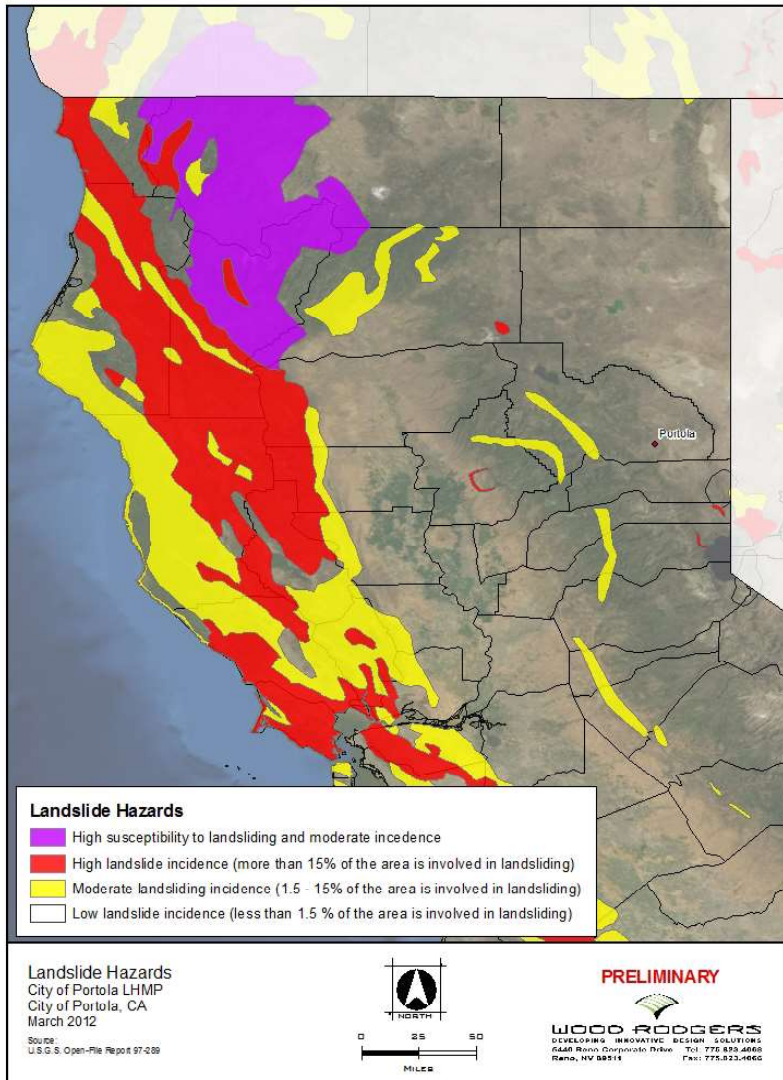
Back to Top Help Contact Us Questions/Comments

Done Internet 100%

LANDSLIDE

(Does not consider post wildfire debris flows.)

<http://Myhazards.calema.ca.gov/>



[\(http://myhazards.calema.ca.gov/\)](http://myhazards.calema.ca.gov/)

SEVERE WEATHER

<http://www.fema.gov/graphics/library/wmap.gif>

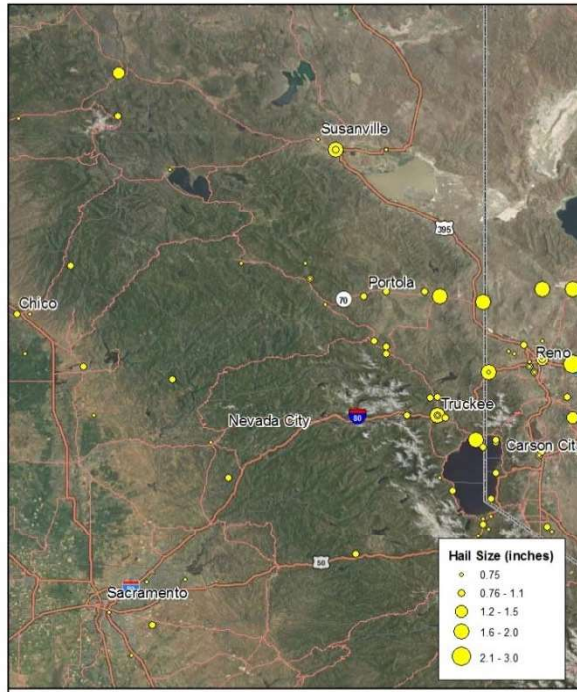
<http://www.ready.gov/thunderstorms-lightning>

<http://www.spc.noaa.gov/gis/svrgis/>

http://www.rutherfordcountyttn.gov/ema/definitions_tornado.htm

<http://www.fema.gov/graphics/library/wmap.gif>

Hail



Lightning

Lightning is unpredictable.

Lightning strikes outside heavy rain and may occur as far as 10 miles away from any rainfall.

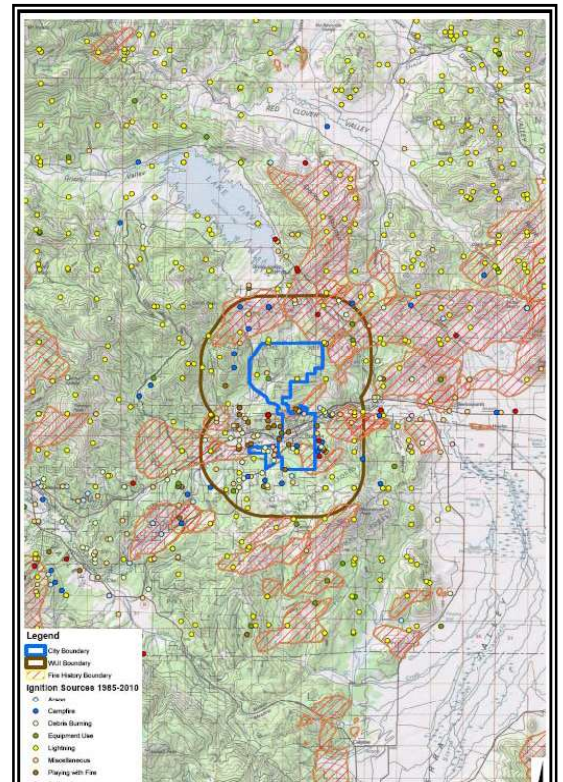
Most lightning deaths and injuries occur when people are outside during evenings and afternoons in the summer.

Given number of lightning strikes in consideration with ignition hazard for wild fires, lightning was considered a hazard.

Microbursts

Historical event - Quincy

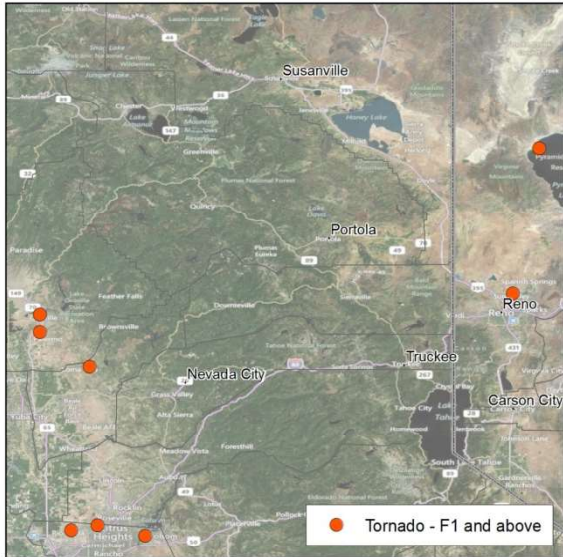
Microbursts are considered a hazard of low likelihood



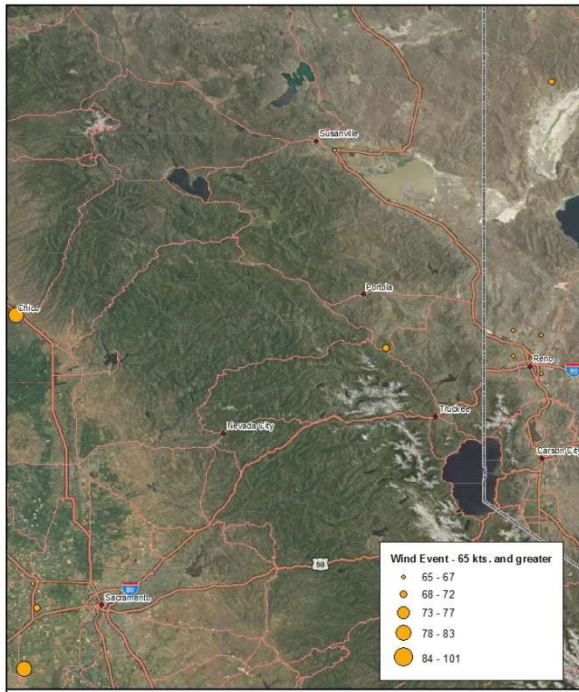
Thunderstorms

History of high winds and hail $>3/4"$ in immediate proximity to Portola, thunderstorms were considered a potential hazard.

Tornadoes



Windstorms



TSUNAMI & SEICHE

<http://myhazards.calema.ca.gov/>

Instructions Earthquake Flood Fire **Tsunami**

click on tabs above to change from earthquake, flood and fire

Tsunami Hazards

A tsunami is a sea wave generated by an earthquake, landslide, volcanic eruption, or even by a large meteor hitting the ocean. (The Japanese word tsu means harbor, nami means wave.)

Things You Should Know:

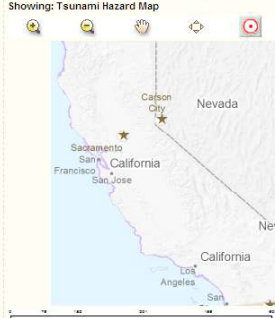
- Although tsunamis in California are a rare, the entire California coastline is vulnerable to these events.
- A tsunami is a series of waves or surges most commonly caused by an earthquake beneath the sea floor.
- An unusual lowering of ocean water, exposing the sea floor, is a warning of a tsunami or other large wave. This "draw back" means the water will surge back strongly.
- Beaches, lagoons, bays, estuaries, tidal flats, and river mouths are the most dangerous places to be. It is rare for a tsunami to penetrate more than a mile inland.
- Tsunami waves are unlike normal coastal waves. Tsunamis are more like a river in flood or a sloping mountain of water and filled with debris.
- Tsunamis cannot be surfed. They have no face for a surfer to dig into and are usually filled with debris.
- Large tsunamis may reach heights of twenty to fifty feet along the coast and even higher in a few locales.
- The first tsunami surge is not the highest and the largest surge may occur hours after the first wave.
- It is not possible to predict how many surges or how much time will elapse between waves for a particular tsunami.

Additional Information

Here are links to other sources of information about Tsunamis:

- [The National Oceanic and Atmospheric Administration's Tsunami Website](#)
- [Tsunami Education for Kids](#)
- [California Geological Survey - Tsunami Web Site](#)
- [FEMA Are You Ready - Tsunamis](#)

Showing: Tsunami Hazard Map



Legend:

- Tsunami Hazard Zone
- Open Water
- Shoreline/Water Boundary

Sources:

- [California Emergency Management Agency \(2009\)](#)
- [California Geological Survey \(2009\)](#)
- [University of California, Tsunami Research Center \(2009\)](#)

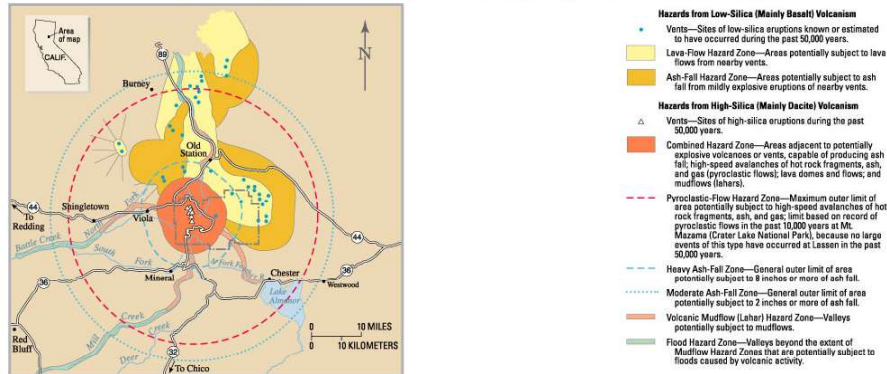
Note:

This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional coastal evacuation planning uses only. This map and the information presented herein, is not a legal

VOLCANO

<http://pubs.usgs.gov/fs/2000/fs022-00/>

VOLCANO HAZARD ZONES OF THE LASSEN VOLCANIC NATIONAL PARK REGION



The areas of highest hazard in the region of Lassen Volcanic National Park are those that could potentially be affected by pyroclastic flows and mudflows. These areas are those in the immediate vicinity and downhill from likely eruption sites. Fallout of ash will affect areas downwind at the time of an eruption. Within the hazard zones, relative hazard is gradational, decreasing away from the location of potential vents.

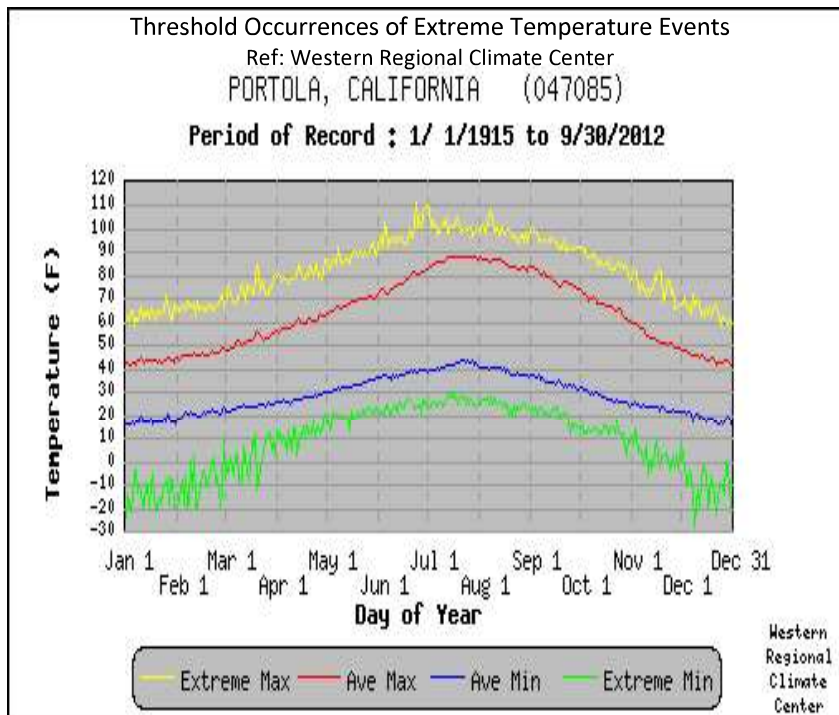
WINTER STORM & EXTREME COLD

http://www.cpc.ncep.noaa.gov/products/outreach/proceedings/cdw29_proceedings

Climate Model Simulations of Extreme Cold-Air Outbreaks (CAOs)

Cold Air Outbreak - Two or more consecutive days in which the daily mean temperature is at least two standard deviations below the DJF (December-January-February) mean temperature.

As indicated in the figure below, isolated and relatively limited periods of extreme cold have occurred in the past. The average winter minimum temperature for Portola is typically between 10 and 20°F. All-time record low temperatures have been reported near -30°F and periods of extended temperatures below 30°F have occurred. The figure below provides an indication as to the frequency of extreme cold events since 1915.



LEGEND

Extreme Max. - Maximum of all daily maximum temperatures recorded for the day of the year.

Ave. Max. - Average of all daily maximum temperatures recorded for the day of the year.

Ave. Min. - Average of all daily minimum temperatures recorded for the day of the year.

Extreme Min. - Minimum of all daily minimum temperatures recorded for the day of the year.

APPENDIX 8

GULLING STREET BRIDGE INSPECTION

DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE & INVESTIGATIONS
1801 30th Street
SACRAMENTO, CA 95816
PHONE (916) 227-8631
FAX (916) 227-8357



*Making Conservation
a California Way of Life.*

December 20, 2018

Mr. Todd Roberts
Director Of Public Works
City of Portola
P O Box 1225
Portola, CA 96122

Dear Mr. Roberts:

In accordance with Title 23 of the Code of Federal Regulations (Federal Highway Act) and the National Bridge Inspection Standards (NBIS), Caltrans Structure Maintenance and Investigations performed an inspection of 2 bridges under your jurisdiction. The type of inspection is indicated on the bridge report transmittal sheet. The bridges have been rated to indicate their deficiencies, structural adequacy, safe load carrying capacity and overall general condition.

Enclosed are copies of the Bridge Inspection Reports for the structures noted on the attached transmittal sheet. These reports contain descriptions of physical changes to the structures since the last inspection, recommendations for work to be done, and additional information not recorded in the previous Bridge Reports.

Your attention is directed to the requirements of Title 23, Part 650 of the Code of Federal Regulations, where newly completed structures or any modification of existing structures shall be entered in the inventory within 90 days. Please notify this office of any newly constructed bridge or culvert within your jurisdiction, more than 20 feet measured along the center of the roadway and carrying public vehicular traffic or over a public roadway, in order that it may be entered in the inventory of bridge structures in compliance with Federal requirements.

Should you have any questions regarding the enclosed Bridge Inspection Reports, please contact Ryan Odell @ (916) 227-8774.

Sincerely,

A handwritten signature in blue ink, appearing to read "Erol C. Kaslan".

EROL C. KASLAN
Office Chief
Structure Maintenance & Investigations - (Investigations-North)

Enclosures

DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE & INVESTIGATIONS
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WEB SITES:

The National Bridge Inspection Standards (NBIS) Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, Element Level Inspection, Structure Maintenance and Investigations Manuals, Local Assistance Program Guidelines and other related information are posted on Division of Maintenance, Structure Maintenance and Investigations; Division of Local Assistance, Local Highway Bridge Program (HBP) and FHWA websites.

The websites can be accessed at:

1. "Caltrans Structure Maintenance and Investigations" <http://www.dot.ca.gov/hq/structur/strmaint/>
2. "Caltrans Division of Local Assistance"
<http://www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm>
3. "FHWA" <http://www.fhwa.dot.gov/BRIDGE/mtguide.pdf>

Inspection Type Definitions**Routine Inspection:**

Routine Inspections consist of both the initial Inventory Inspection (the first inspection of the bridge that places it in the bridge inventory or when there has been a change in the configuration of the structure) and subsequent regularly scheduled inspections. The initial inspection provides all the Structural Inventory & Appraisal (SI&A) data required by federal and state regulations, determines the baseline structural conditions, lists any existing problems, and establishes the load capacity of the structure. Subsequent inspections consist of observations, measurements needed to determine the physical and functional condition of the bridge, to identify any changes from the previously recorded conditions, and verification of its load capacity. These inspections are generally conducted from the deck, ground and/or water level, and from permanent work platforms and walkways, if present. Inspection of underwater portions of the substructure is limited to observations during low-flow periods and/or probing for signs of undermining. Special equipment should be utilized in circumstances where its use provides the only practical access to areas of the structure.

Fracture Critical, Special Feature & Underwater Inspections:

Fracture Critical, Special Feature, and Underwater Inspections are up close, hands-on inspections of one or more members above or below the water level to identify any deficiencies not readily detectable using Routine Inspection procedures. These inspections generally require special equipment such as under-bridge inspection equipment, manlifts, boats, traffic control, and railroad flagging. Personnel with special skills such as divers or structural steel inspectors trained in non-destructive testing techniques may be required.

Other Inspections:

Other Inspections are conducted on damaged structures, structures that have developed specific problems, or structures suspected of developing problems. The scope of these investigations should be sufficient to determine the need for emergency load restrictions or closure of the structure, monitor a changing condition, and to assess the level of effort necessary to effect a repair.

DEPARTMENT OF TRANSPORTATION

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 STRUCTURE MAINTENANCE & INVESTIGATIONS
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 FAX (916) 227-8357



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 a California Way of Life.*

Bridge Report Transmittal Sheet

Batch 46935

City of Portola

Bridge #	Bridge Name	Location	Inspection		Outstanding	
			Date	Type	Work	Cost
09C0100	PORTOLA OVERHEAD	0.35 MI S SH 70	09/12/2018	Routine	Y	\$
09C0130	MIDDLE FORK FEATHER RIVER	0.2 MI S SH 70	09/12/2018	Routine	Y	\$

2 Bridge(s) in this Transmittal



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 09C0100
Facility Carried: GULLING STREET
Location : 0.35 MI S SH 70
City : PORTOLA
Inspection Date : 09/12/2018

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STRUCTURE NAME: PORTOLA OVERHEAD

CONSTRUCTION INFORMATION

Year Built : 1954	Skew (degrees): 0
Year Modified: N/A	No. of Joints : 2
Length (m) : 59.7	No. of Hinges : 2

Structure Description: Three-span continuous and suspended rolled steel beams (5) with RC deck on RC two-column bents and RC pile cap abutments with U-shaped non-monolithic wingwalls. The abutments are founded on steel piles. The bents are founded on spread footings and abutments founded on steel piles.

Span Configuration : 1 @ 49.90 ft, 1 @ 90.00 ft, 1 @ 49.9 ft

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20		
Inventory Rating: RF=0.94 =>30.5 metric tons	Calculation Method: LOAD FACTOR	
Operating Rating: RF=1.57 =>50.9 metric tons	Calculation Method: LOAD FACTOR	
Permit Rating : PGGGG		
Posting Load : Type 3: <u>Legal</u>	Type 3S2: <u>Legal</u>	Type 3-3: <u>Legal</u>

DESCRIPTION ON STRUCTURE

Deck X-Section: 1.15 ft br, 5.91 ft sw, 29.86 ft, 1.15 ft br
 Total Width: 10.9 m Net Width: 9.1 m No. of Lanes: 2 Speed: 25 mph
 Min. Vertical Clearance: Unimpaired Overlay Thickness: 0.0 inches
 Rail Code: 1111

DESCRIPTION UNDER STRUCTURE

Channel Description: None.

NOTICE

The bridge inspection condition assessment used for this inspection is based on the American Association of State Highway and Transportation Officials (AASHTO) Bridge Element Inspection Manual 2013 as defined in Moving Ahead for Progress in the 21st Century (MAP-21) federal law. The new element inspection methodology may result in changes to related condition and appraisal ratings on the bridge without significant physical changes at the bridge.

The element condition information contained in this report represents the current condition of the bridge based on the most recent routine and special inspections. Some of the notes presented below may be from an inspection that occurred prior to the date noted in this report. Refer to the Scope and Access section of this inspection report for a description of which portions of the bridge were inspected on this date.

INSPECTION COMMENTARY

SCOPE AND ACCESS

There are no issues restricting access for inspection of this structure. All visible elements were inspected on foot from the roadway and from the underside of the structure.

A special feature member inspection was performed on 06/27/2017 by the Office of Specialty Investigations. The investigation was conducted in accordance with the Special

INSPECTION COMMENTARY

Feature Member Inspection Plan, dated 11/20/2007. A hands-on visual inspection was performed on: (i) the steel beams with Category "E" welds in Spans 1 and 3, and (ii) the steel beams with Category "E" welds and pin and hanger assemblies in Span 2. No fractures or cracks were found.

NUMBERING CONVENTION

The support and span numbering on the as-built-plans is reversed from the statewide convention established by Caltrans Structure Maintenance and Investigations. This report and all other reports uses the conventional system for orientation of local agency bridges. The supports and spans are numbered from south to north with the southerly abutment designated as Abutment 1.

MISCELLANEOUS

Routine roadway, elevation, and underside photos were taken during this routine inspection. See attached photos 1 to 4.

DECK AND ROADWAY

There are random pattern cracks throughout the walkway up to 0.02 inch wide and as close as 6 inches on center. The cracks are not structurally significant and are not a problem at this time. Based on a field comparison of the photo from the 10/2010 report this condition has not changed.

SAFE LOAD CAPACITY

A Structure Rating Summary Sheet dated 09/29/2009 is on file for this structure. While this inspection does not include a check of that analysis, it does verify that the structural conditions observed during this inspection are consistent with those assumed in that analysis. The current rating is based on VIRTIS computer output dated 10/31/2007.

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Defect	Element Description	Env	Total Qty	Units	Qty in each State	Condition	State
							St. 1	St. 2	St. 3 St. 4
12			Deck-RC	2	651	sq.m	420	231	0 0
	1080		Delamination/Spall/Patched Area	2	1		0	1	0 0
	1130		Cracking (RC and Other)	2	220		0	220	0 0
	1190		Abrasion (PS Conc./RC)	2	10		0	10	0 0

(12-1080)

There is a 6 inch diameter x 0.5 inch deep deck spall in the southbound lane in Span 4 with no exposed rebar.

(12-1130)

The deck rehabilitation was done on 08/20/2006. The deck has transverse cracks up to 0.05 inch wide x 4 feet long and as close as 1 foot on center and pattern cracks up to 0.02 inch wide and as close as 6 inches on center. Based on a field comparison of the photo from the 10/2010 report this condition has not changed.

There are transverse soffit cracks up to 0.03 inch wide and as close as 5 feet on center with light

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Defect	Element Description	Env Qty	Total Qty	Units	Qty in each State	Condition	State
							St. 1	St. 2	St. 3 St. 4

efflorescence staining. Based on a field comparison of the photo from the 10/2010 report this condition has not changed.

The soffit of Span 2 is black from the railroad trains that travel under this span and the soffit cracks were not visible.

(12-1190)

The entire bridge deck is lightly abraded when the AC was removed from the deck in 2006.

107			Girder/Beam-Steel	2	299	m	299	0	0	0
-----	--	--	-------------------	---	-----	---	-----	---	---	---

(107)

A special feature member investigation was done on 06/27/2017 and no defects were noted during that inspection.

A hands-on visual inspection was performed on: (i) the steel beams with Category "E" welds in Spans 1 and 3, and (ii) the steel beams with Category "E" welds in Span 2. No fractures or cracks were found.

161			Steel Pin+Pin/Hanger or Both	2	10	each	10	0	0	0
-----	--	--	------------------------------	---	----	------	----	---	---	---

(161)

A special feature member investigation was done on 06/27/2017 and no defects were noted during that inspection. A hands-on visual inspection was performed on the pin and hanger assemblies in Span 2. No fractures or cracks were found.

The pins in Span 2, Hinge 1, Girders 4 and 5 were tested ultrasonically. No indications of defects were found, see the Pin/Hanger UT Inspection Table below for more details.

The pins in Span 2, at Hinge 2, on Girders 1 to 3 shall be tested during the next special feature member inspection in June of 2021.

205			Column-RC	2	4	each	4	0	0	0
-----	--	--	-----------	---	---	------	---	---	---	---

(205)

There were no significant defects noted.

215			Abutment-RC	2	23	m	23	0	0	0
-----	--	--	-------------	---	----	---	----	---	---	---

(215)

There were no significant defects noted.

225			Pile-Steel	2	1	ea.	1	0	0	0
-----	--	--	------------	---	---	-----	---	---	---	---

(225)

The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.

234			Pier Cap-RC	2	23	m	23	0	0	0
-----	--	--	-------------	---	----	---	----	---	---	---

(234)

There were no significant defects noted.

302			Joint-Compression Seal	2	23	m	23	0	0	0
-----	--	--	------------------------	---	----	---	----	---	---	---

(302)

There were no significant defects noted.

311			Bearing-Moveable	2	15	each	15	0	0	0
-----	--	--	------------------	---	----	------	----	---	---	---

(311)

There were no significant defects noted.

ELEMENT INSPECTION RATINGS AND COMMENTARY

Elem No.	Defect /Prot	Element Description	Env	Total Qty	Units	Qty in each Condition State			
						St. 1	St. 2	St. 3	St. 4
313		Bearing-Fixed	2	15	each	10	5	0	0
	1000	Corrosion	2	5		0	5	0	0

(313-1000)

The fixed bearings at Abutment 1 have light surface rust with no section loss of the steel is evident. Based on a field comparison of the photo from the 09/29/2014 report, this condition has not changed.

331		Railing-RC	2	116	m	116	0	0	0
-----	--	------------	---	-----	---	-----	---	---	---

(331)

There were no significant defects noted.

WORK RECOMMENDATIONS

RecDate: 09/12/2018

EstCost:

Treat the entire RC deck with

Action : Deck-Methacrylate

StrTarget: 2 YEARS

methacrylate.

Work By: LOCAL AGENCY

DistTarget:

Status : PROPOSED

EA:

RecDate: 09/27/2012

EstCost:

Patch the 6 inch diameter x 0.5 inch

Action : Deck-Repair Potholes

StrTarget: 2 YEARS

deep spall in the southbound lane in Span

Work By: LOCAL AGENCY

DistTarget:

3.

Status : PROPOSED

EA:

Team Leader : Armin G. GroessReport Author : Armin G. GroessInspected By : AG.Groess/RH.Le

 12/13/18

Armin G. Groess (Registered Civil Engineer) (Date)



STRUCTURE INVENTORY AND APPRAISAL REPORT

```

***** IDENTIFICATION *****
(1) STATE NAME- CALIFORNIA                069
(8) STRUCTURE NUMBER                      09C0100
(5) INVENTORY ROUTE (ON/UNDER)- ON      150000000
(2) HIGHWAY AGENCY DISTRICT              02
(3) COUNTY CODE 063 (4) PLACE CODE 58352
(6) FEATURE INTERSECTED- UP RR & BNSF RY
(7) FACILITY CARRIED- GULLING STREET
(9) LOCATION- 0.35 MI S SH 70
(11) MILEPOINT/KILOMETERPOINT           0
(12) BASE HIGHWAY NETWORK- NOT ON NET    0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 39 DEG 48 MIN 28.43 SEC
(17) LONGITUDE 120 DEG 28 MIN 03.66 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

***** STRUCTURE TYPE AND MATERIAL *****
(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL CONT
      TYPE- STRINGER/MULTI-BEAM OR GDR CODE 402
(44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
      TYPE- OTHER/NA CODE 000
(45) NUMBER OF SPANS IN MAIN UNIT 3
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
      A) TYPE OF WEARING SURFACE- NONE CODE 0
      B) TYPE OF MEMBRANE- NONE CODE 0
      C) TYPE OF DECK PROTECTION- NONE CODE 0
***** AGE AND SERVICE *****
(27) YEAR BUILT 1954
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
      UNDER- RAILROAD 2
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 10046
(30) YEAR OF ADT 2017 (109) TRUCK ADT 8 %
(19) BYPASS, DETOUR LENGTH 31 KM
***** GEOMETRIC DATA *****
(48) LENGTH OF MAXIMUM SPAN 27.4 M
(49) STRUCTURE LENGTH 59.7 M
(50) CURB OR SIDEWALK: LEFT 1.8 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 9.1 M
(52) DECK WIDTH OUT TO OUT 10.9 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 9.1 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF- RAILROAD 6.91 M
(55) MIN LAT UNDERCLEAR RT REF- RAILROAD 14.1 M
(56) MIN LAT UNDERCLEAR LT 0.0 M
***** NAVIGATION DATA *****
(38) NAVIGATION CONTROL- NOT APPLICABLE CODE N
(111) PIER PROTECTION- CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

***** SUFFICIENCY RATING = 64.1
STATUS
HEALTH INDEX 94.3
PAINT CONDITION INDEX = N/A

***** CLASSIFICATION ***** CODE
(112) NBIS BRIDGE LENGTH- YES Y
(104) HIGHWAY SYSTEM- NOT ON NHS 0
(26) FUNCTIONAL CLASS- MINOR COLLECTOR RURAL 08
(100) DEFENSE HIGHWAY- NOT STRAHNET 0
(101) PARALLEL STRUCTURE- NONE EXISTS N
(102) DIRECTION OF TRAFFIC- 2 WAY 2
(103) TEMPORARY STRUCTURE-
(105) FED.LANDS HWY- NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL- ON FREE ROAD 3
(21) MAINTAIN- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(22) OWNER- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

***** CONDITION ***** CODE
(58) DECK 5
(59) SUPERSTRUCTURE 7
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION N
(62) CULVERTS N

***** LOAD RATING AND POSTING ***** CODE
(31) DESIGN LOAD- MS-18 OR HS-20 5
(63) OPERATING RATING METHOD- LOAD FACTOR 1
(64) OPERATING RATING- 50.9
(65) INVENTORY RATING METHOD- LOAD FACTOR 1
(66) INVENTORY RATING- 30.5
(70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5
(41) STRUCTURE OPEN, POSTED OR CLOSED- A
      DESCRIPTION- OPEN, NO RESTRICTION

***** APPRAISAL ***** CODE
(67) STRUCTURAL EVALUATION 7
(68) DECK GEOMETRY 3
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL 7
(71) WATER ADEQUACY N
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 1111
(113) SCOUR CRITICAL BRIDGES N

***** PROPOSED IMPROVEMENTS *****
(75) TYPE OF WORK- CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT M
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 9430
(115) YEAR OF FUTURE ADT 2037

***** INSPECTIONS *****
(90) INSPECTION DATE 09/18 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
      A) FRACTURE CRIT DETAIL- NO MO A)
      B) UNDERWATER INSP- NO MO B)
      C) OTHER SPECIAL INSP- NO 48 MO C) 06/17

```

DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE & INVESTIGATIONS
1801 30th Street
SACRAMENTO, CA 95816
PHONE (916) 227-8631
FAX (916) 227-8357



*Flex your power!
Be energy efficient!*

November 02, 2007

Mr. Todd Roberts
Director Of Public Works
City of Portola
P O Box 1225
Portola, CA 96122

Dear Mr. Roberts:

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Should you have any questions regarding the enclosed Bridge Inspection Report(s), please contact Armin G. Groess @ (916) 227-8650 or John Gillis @ (916) 227-8774.

Sincerely,

A handwritten signature in black ink, appearing to read "Pete J. Whitfield", with a horizontal line extending to the right.

PETE J. WHITFIELD
Office Chief
Structure Maintenance & Investigations - (Investigations - North)

Enclosures

DEPARTMENT OF TRANSPORTATION

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2. "Caltrans Division of Local Assistance"
<http://www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm>
3. "FHWA" <http://www.fhwa.dot.gov/BRIDGE/mtguide.pdf>

Inspection Type Definitions**Routine Inspection:**

Routine Inspections consist of both the initial Inventory Inspection (the first inspection of the bridge that places it in the bridge inventory or when there has been a change in the configuration of the structure) and subsequent regularly scheduled inspections. The initial inspection provides all the Structural Inventory & Appraisal (SI&A) data required by federal and state regulations, determines the baseline structural conditions, lists any existing problems, and establishes the load capacity of the structure. Subsequent inspections consist of observations, measurements needed to determine the physical and functional condition of the bridge, to identify any changes from the previously recorded conditions, and verification of its load capacity. These inspections are generally conducted from the deck, ground and/or water level, and from permanent work platforms and walkways, if present. Inspection of underwater portions of the substructure is limited to observations during low-flow periods and/or probing for signs of undermining. Special equipment should be utilized in circumstances where its use provides the only practical access to areas of the structure.

Fracture Critical, Special Feature & Underwater Inspections:

Fracture Critical, Special Feature, and Underwater Inspections are up close, hands-on inspections of one or more members above or below the water level to identify any deficiencies not readily detectable using Routine Inspection procedures. These inspections generally require special equipment such as under-bridge inspection equipment, manlifts, boats, traffic control, and railroad flagging. Personnel with special skills such as divers or structural steel inspectors trained in non-destructive testing techniques may be required.

Other Inspections:

Other Inspections are conducted on damaged structures, structures that have developed specific problems, or structures suspected of developing problems. The scope of these investigations should be sufficient to determine the need for emergency load restrictions or closure of the structure, monitor a changing condition, and to assess the level of effort necessary to effect a repair.

DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE & INVESTIGATIONS
1801 30th Street
SACRAMENTO, CA 95816
PHONE (916) 227-8631
FAX (916) 227-8357



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Bridge Report Transmittal Sheet**Batch 11868**

Br. Number	Bridge Name	Inspection Date	Inspection Type	Outstanding Work
09C0100	PORTOLA OVERHEAD	09/11/2007	Routine	N
09C0130	MIDDLE FORK FEATHER RIVER	09/11/2007	Routine	Y

✓ 2 Bridge(s) in this Transmittal



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 09C0100
Facility Carried: GULLING STREET
Location : 0.35 MI S SH 70
City : PORTOLA
Inspection Date : 09/11/2007

Bridge Inspection Report

Inspection Type
Routine FC Underwater Special Other

STRUCTURE NAME: PORTOLA OVERHEAD

CONSTRUCTION INFORMATION

Year Built : 1954 Skew (degrees): 0
Year Widened: N/A No. of Joints : 2
Length (m) : 59.7 No. of Hinges : 2

Structure Description: Three-span cantilever and suspended span steel girders (5) with an RC deck on two-column RC bents and RC pile cap abutments with "U"-shaped wingwalls. The abutments are founded on steel piles. The piers are founded on spread footings.

Span Configuration : 1 @ 15.2 m, 1 @ 27.4 m, 1 @ 15.2 m

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
Inventory Rating: 24.5 metric tons Calculation Method: LOAD FACTOR
Operating Rating: 45.3 metric tons Calculation Method: LOAD FACTOR
Permit Rating : G0000
Posting Load : Type 3 N/A Type 3S2 N/A Type 3-3 N/A

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.35 m br, 1.80 m sw, 9.1 m, 0.35 m br
Total Width: 11.6 m Net Width: 9.1 m No. of Lanes: 2
Rail Description: Type 736 modified with chain link fencing and sidewalk on the left side. Rail Code : 1111
Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: None.

CONDITION TEXT

REVISIONS

The work recommendation to place rock to arrest erosion was removed from the Work Recommendation Text.

CONDITION OF STRUCTURE

There are up to 0.012" wide random pattern cracks throughout the walkway as close as 6" on center. This is not a problem at this time.

The deck has random pattern cracks up to 0.012" wide and as close as 6" on center.

There is a 6" diameter spall in the southbound lane in Span 6 with no exposed rebar.

The entire bridge deck is lightly abraded due to AC being removed from the deck.

PAINT CONDITION

CONDITION TEXT

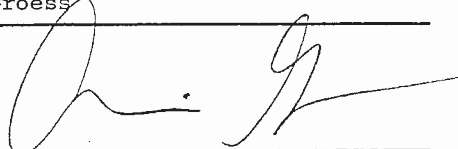
The paint on the steel girders is in good condition, excluding the black soot build-up in Span 2.

The fixed bearings at Abutment 1 are covered with surface rust.

ELEMENT INSPECTION RATINGS									
F#Elem	Element Description	Env	Total	Units	Qty in each Condition State				
					Qty	St. 1	St. 2	St. 3	St. 4
101 12	Concrete Deck - Bare	2	510	sq.m.	510	0	0	0	0
101 107	Painted Steel Open Girder/Beam	2	299	m.	299	0	0	0	0
101 161	Painted Steel Pin and/or Pin and Hanger Assembly	2	10	ea.	10	0	0	0	0
101 205	Reinforced Conc Column or Pile Extension	2	4	ea.	4	0	0	0	0
101 215	Reinforced Conc Abutment	2	23	m.	23	0	0	0	0
101 234	Reinforced Conc Cap	2	23	m.	23	0	0	0	0
101 302	Compression Joint Seal	2	23	m.	23	0	0	0	0
101 311	Moveable Bearing (roller, sliding, etc.)	2	15	ea.	15	0	0	0	0
101 313	Fixed Bearing	2	15	ea.	10	5	0	0	0
101 333	Other Bridge Railing	2	72	m.	72	0	0	0	0
101 335	Other Bridge Railing	2	72	m.	72	0	0	0	0

WORK RECOMMENDATIONS - NONE

Inspected By : Armin Groess



Registered Civil Engineer



STRUCTURE INVENTORY AND APPRAISAL REPORT

```

***** IDENTIFICATION *****
(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER 09C0100
(5) INVENTORY ROUTE(OH/UNDER)- ON 150000000
(2) HIGHWAY AGENCY DISTRICT 02
(3) COUNTY CODE 063 (4) PLACE CODE 58352
(6) FEATURE INTERSECTED- UP RR & BNSF RY
(7) FACILITY CARRIED- GULLING STREET
(9) LOCATION- 0.35 MI S SH 70
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 39 DEG 48 MIN 28 SEC
(17) LONGITUDE 120 DEG 28 MIN 04 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

***** STRUCTURE TYPE AND MATERIAL *****
(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL
TYPE- STRINGER/MULTI-BEAM OR GDR CODE 302
(44) STRUCTURE TYPE APPR:MATERIAL-
TYPE- CODE
(45) NUMBER OF SPANS IN MAIN UNIT 3
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
A) TYPE OF WEARING SURFACE- CONCRETE CODE 1
B) TYPE OF MEMBRANE- NONE CODE 0
C) TYPE OF DECK PROTECTION- NONE CODE 0
***** AGE AND SERVICE *****
(27) YEAR BUILT 1954
(106) YEAR RECONSTRUCTED
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
UNDER- RAILROAD 2
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 5000
(30) YEAR OF ADT 1978 (109) TRUCK ADT 8 %
(19) BYPASS, DETOUR LENGTH 31 KM
***** GEOMETRIC DATA *****
(48) LENGTH OF MAXIMUM SPAN 27.4 M
(49) STRUCTURE LENGTH 59.7 M
(50) CURB OR SIDEWALK: LEFT 1.8 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 9.1 M
(52) DECK WIDTH OUT TO OUT 11.6 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 9.1 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF- RAILROAD 6.91 M
(55) MIN LAT UNDERCLEAR RT REF- RAILROAD 14.1 M
(56) MIN LAT UNDERCLEAR LT 0.0 M
***** NAVIGATION DATA *****
(38) NAVIGATION CONTROL- NOT APPLICABLE CODE N
(111) PIER PROTECTION- CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

***** SUFFICIENCY RATING = 65.6
STATUS
HEALTH INDEX 99.5
PAINT CONDITION INDEX = 100.0
***** CLASSIFICATION ***** CODE
(112) NBIS BRIDGE LENGTH- YES Y
(104) HIGHWAY SYSTEM- NOT ON NHS 0
(26) FUNCTIONAL CLASS- MINOR COLLECTOR RURAL 08
(100) DEFENSE HIGHWAY- NOT STRAHNET 0
(101) PARALLEL STRUCTURE- NONE EXISTS N
(102) DIRECTION OF TRAFFIC- 2 WAY 2
(103) TEMPORARY STRUCTURE-
(105) FED.LANDS HWY- NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL- ON FREE ROAD 3
(21) MAINTAIN- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(22) OWNER- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5
***** CONDITION ***** CODE
(58) DECK 7
(59) SUPERSTRUCTURE 7
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION N
(62) CULVERTS N
***** LOAD RATING AND POSTING ***** CODE
(31) DESIGN LOAD- MS-18 OR HS-20 5
(63) OPERATING RATING METHOD- LOAD FACTOR 1
(64) OPERATING RATING- 45.3
(65) INVENTORY RATING METHOD- LOAD FACTOR 1
(66) INVENTORY RATING- 24.5
(70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5
(41) STRUCTURE OPEN, POSTED OR CLOSED- A
DESCRIPTION- OPEN, NO RESTRICTION
***** APPRAISAL ***** CODE
(67) STRUCTURAL EVALUATION 6
(68) DECK GEOMETRY 4
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL 7
(71) WATER ADEQUACY N
(72) APPROACH ROADWAY ALIGNMENT 7
(36) TRAFFIC SAFETY FEATURES 1111
(113) SCOUR CRITICAL BRIDGES N
***** PROPOSED IMPROVEMENTS *****
(75) TYPE OF WORK- CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT M
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 9000
(115) YEAR OF FUTURE ADT 2015
***** INSPECTIONS *****
(90) INSPECTION DATE 09/07 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
A) FRACTURE CRIT DETAIL- NO MO A)
B) UNDERWATER INSP- NO MO B)
C) OTHER SPECIAL INSP- YES 48 MO C) 08/04

```



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 09C0130
Facility Carried: GULLING STREET
Location : 0.2 MI S SH 70
City : PORTOLA
Inspection Date : 09/11/2007

Bridge Inspection Report

Inspection Type				
Routine	FC	Underwater	Special	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STRUCTURE NAME: MIDDLE FORK FEATHER RIVER

CONSTRUCTION INFORMATION

Year Built : 1954	Skew (degrees): 0
Year Widened: N/A	No. of Joints : 4
Length (m) : 76.8	No. of Hinges : 2

Structure Description: Five-span continuous steel stringers (5) with an RC deck on RC wall piers and RC pile cap abutment with "U"-shaped wingwalls. Abutment 1 is founded on steel piles. The piers and Abutment 6 are founded on spread footings.

Span Configuration : 5 @ 15.2 m

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20			
Inventory Rating: 35.4 metric tons	Calculation Method: LOAD FACTOR		
Operating Rating: 57.1 metric tons	Calculation Method: LOAD FACTOR		
Permit Rating : PPPPP			
Posting Load : Type 3 N/A	Type 3S2 N/A	Type 3-3	N/A

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.35 m br, 1.80 m sw, 9.1 m, 0.35 m br

Total Width: 11.6 m	Net Width: 9.1 m	No. of Lanes: 2
Rail Description: Type 736 Mod on right side and Type 26 Mod on left side.		Rail Code : 1111

Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: Sand, gravel.

CONDITION TEXT

REVISIONS

The following ELI Elements have been changed due to field inspection:

Element 333: Other Bridge Railing - 78 meters has been removed from the ELI Element table.

Element 335: Other Bridge Railing - 78 meters has been removed from the ELI Element table.

Element 331: Reinforced Concrete Bridge Rail - 156 meters has been added to the ELI Element table all in Condition State 1.

CONDITION OF STRUCTURE

Due to the high water depth in the river over 6' deep at Pier 3, access to the pier footings was not possible. There was 1' of water at Piers 2 and 4 and a full inspection of the Piers 2 and 4 footings was performed. No scour problem was noted.

CONDITION TEXT

The concrete rail on both sides has up to 0.025" wide full length vertical cracks spaced as close as 2' on center throughout.

The bridge deck and sidewalk has pattern cracks throughout up to 0.012" wide and as close as 6" on center.

The metal bridge railing at the left side of Abutment 6 is pulling out of the concrete rail post pockets at 4 locations. (See attached photo)

The Type "A" joint seals are failing in adhesion at both abutments.

PAINT CONDITION

The paint on the steel girders is faded and chalky at various locations.

SCOUR

The hydraulics report dated 09/04/01 determined that this structure is scour critical. The National Bridge Inventory Item 113 Code, "Vulnerability to Scour", has been changed to 3: "Bridge is scour critical; bridge foundations determined to be unstable for assessed or calculated scour conditions: scour within limits of footings or piles."

The following condition has been noted in previous investigations and could not be verified at this time:

There is a localized scour hole at Pier 3.

<u>ELEMENT INSPECTION RATINGS</u>									
F#Elem	Element Description	Env	Total Units	Qty in each Condition State					
				Qty	St. 1	St. 2	St. 3	St. 4	St. 5
101 12	Concrete Deck - Bare	2	590 sq.m.	590	0	0	0	0	0
101 107	Painted Steel Open Girder/Beam	2	384 m.	0	0	384	0	0	0
101 161	Painted Steel Pin and/or Pin and Hanger Assembly	2	10 ea.	10	0	0	0	0	0
101 210	Reinforced Conc Pier Wall	2	46 m.	46	0	0	0	0	0
101 215	Reinforced Conc Abutment	2	23 m.	23	0	0	0	0	0
101 301	Pourable Joint Seal	2	23 m.	0	23	0			
101 302	Compression Joint Seal	2	23 m.	23	0	0	0	0	0
101 311	Moveable Bearing (roller, sliding, etc.)	2	10 ea.	10	0	0			
101 313	Fixed Bearing	2	10 ea.	10	0	0	0	0	0
101 331	Reinforced Conc Bridge Railing	2	156 m.	156	0	0	0	0	0
101 361	Scour	2	1 ea.	0	1	0	0	0	0

WORK RECOMMENDATIONS

WORK RECOMMENDATIONS

RecDate: 09/18/2005 EstCost: Provide appropriate scour mitigation at
Action : Sub-Scour Mitiga StrTarget: 2 YEARS Pier 3.
Work By: LOCAL AGENCY DistTarget:
Status : PROPOSED EA:

Inspected By : Armin Groess



Registered Civil Engineer



STRUCTURE INVENTORY AND APPRAISAL REPORT

```

***** IDENTIFICATION *****
(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER 09C0130
(5) INVENTORY ROUTE(ON/UNDER)- ON 15000000
(2) HIGHWAY AGENCY DISTRICT 02
(3) COUNTY CODE 063 (4) PLACE CODE 58352
(6) FEATURE INTERSECTED- MIDDLE FORK FEATHER RIV
(7) FACILITY CARRIED- GULLING STREET
(9) LOCATION- 0.2 MI S SH 70
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 39 DEG 48 MIN 32 SEC
(17) LONGITUDE 120 DEG 28 MIN 04 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

***** STRUCTURE TYPE AND MATERIAL *****
(43) STRUCTURE TYPE MAIN:MATERIAL- STEEL CONT
TYPE- STRINGER/MULTI-BEAM OR GDR CODE 402
(44) STRUCTURE TYPE APPR:MATERIAL-
TYPE- CODE
(45) NUMBER OF SPANS IN MAIN UNIT 5
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
A) TYPE OF WEARING SURFACE- CONCRETE CODE 1
B) TYPE OF MEMBRANE- NONE CODE 0
C) TYPE OF DECK PROTECTION- NONE CODE 0
***** AGE AND SERVICE *****
(27) YEAR BUILT 1954
(106) YEAR RECONSTRUCTED
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 5000
(30) YEAR OF ADT 1978 (109) TRUCK ADT 8 %
(19) BYPASS, DETOUR LENGTH 31 KM
***** GEOMETRIC DATA *****
(48) LENGTH OF MAXIMUM SPAN 15.2 M
(49) STRUCTURE LENGTH 76.8 M
(50) CURB OR SIDEWALK: LEFT 1.8 M RIGHT 0.0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 9.1 M
(52) DECK WIDTH OUT TO OUT 11.6 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 9.1 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M
(55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M
(56) MIN LAT UNDERCLEAR LT 0.0 M
***** NAVIGATION DATA *****
(38) NAVIGATION CONTROL- NO CONTROL CODE 0
(111) PIER PROTECTION- CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

***** SUFFICIENCY RATING = 73.9
STATUS
HEALTH INDEX 79.4
PAINT CONDITION INDEX = 52.7
***** CLASSIFICATION ***** CODE
(112) NBIS BRIDGE LENGTH- YES Y
(104) HIGHWAY SYSTEM- NOT ON NHS 0
(26) FUNCTIONAL CLASS- MINOR COLLECTOR RURAL 08
(100) DEFENSE HIGHWAY- NOT STRAHNET 0
(101) PARALLEL STRUCTURE- NONE EXISTS N
(102) DIRECTION OF TRAFFIC- 2 WAY 2
(103) TEMPORARY STRUCTURE-
(105) FED.LANDS HWY- NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL- ON FREE ROAD 3
(21) MAINTAIN- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(22) OWNER- CITY OR MUNICIPAL HIGHWAY AGENCY 04
(37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5
***** CONDITION ***** CODE
(58) DECK 7
(59) SUPERSTRUCTURE 6
(60) SUBSTRUCTURE 6
(61) CHANNEL & CHANNEL PROTECTION 6
(62) CULVERTS N
***** LOAD RATING AND POSTING ***** CODE
(31) DESIGN LOAD- MS-18 OR HS-20 5
(63) OPERATING RATING METHOD- LOAD FACTOR 1
(64) OPERATING RATING- 57.1
(65) INVENTORY RATING METHOD- LOAD FACTOR 1
(66) INVENTORY RATING- 35.4
(70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5
(41) STRUCTURE OPEN, POSTED OR CLOSED- A
DESCRIPTION- OPEN, NO RESTRICTION
***** APPRAISAL ***** CODE
(67) STRUCTURAL EVALUATION 6
(68) DECK GEOMETRY 4
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 7
(36) TRAFFIC SAFETY FEATURES 1111
(113) SCOUR CRITICAL BRIDGES 3
***** PROPOSED IMPROVEMENTS *****
(75) TYPE OF WORK- CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT M
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 9000
(115) YEAR OF FUTURE ADT 2015
***** INSPECTIONS *****
(90) INSPECTION DATE 09/07 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
A) FRACTURE CRIT DETAIL- NO MO A)
B) UNDERWATER INSP- YES 24 MO B) 09/91
C) OTHER SPECIAL INSP- YES 48 MO C) 08/04

```

APPENDIX 9

DRAFT CITY OF PORTOLA COMMUNITY WILDFIRE PROTECTION PLAN

City of Portola Community Wildfire Protection Plan

November 14, 2012



Photo Courtesy of Jerry Hurley

Prepared for:

City of Portola, California
35 Third Avenue
Portola, CA 96122

Prepared by:

RCI Resource Concepts, Inc.
340 N. Minnesota Street
Carson City, NV 89703

City of Portola Community Wildfire Protection Plan

November 14, 2012

SIGNATURE PAGE

The Community Wildfire Protection Plan developed for the City of Portola:

- Was collaboratively developed. Interested parties and citizens from the City of Portola have participated in identifying risks and mitigation measures.
- This plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will reduce the risk of wildfire to the City of Portola.
- This plan recommends measures to reduce the ignitability of structures throughout the wildland-urban interface addressed by the plan.

The following entities mutually agree with the contents of this Community Wildfire Protection Plan:

*Juliana Mark, Mayor
City of Portola*

Date

*Travis Schiavone, Chief
Portola Volunteer Fire Department*

Date

*Shane Vargas, Fire Prevention Captain
Lassen-Modoc Plumas Ranger Unit
California Department of Forestry and Fire Protection*

Date

*Deb Bumpus, District Ranger
Beckwourth Ranger District Plumas National Forest*

Date

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EXECUTIVE SUMMARY

The Community Wildfire Protection Plan (CWPP) was prepared by Resource Concepts, Inc. for the City of Portola to meet the intent of the Healthy Forest Restoration Act and the requirement for recognition as a *Fire-Adapted Community* as defined by the Federal Emergency Management Agency (FEMA). The objective of the CWPP is to provide an updated and focused assessment of fuel hazards and risks in the wildland-urban interface (WUI) around Portola. The WUI was delineated as the zone within 1.5 miles of the City limits.

The purpose of a CWPP is to provide specific recommendations for the community to reduce the highest risks and minimize the potential severity of a wildland fire by incorporating the objectives of the landowners with the needs and expectations of the community regarding fire risk reduction.

The RCI Fire Specialist and Plumas County Fire Safe Council Coordinator inventoried neighborhoods and fuel conditions in the wildland-urban interface and evaluated the following potential wildfire hazards: community design, construction material, defensible space, availability and capability of fire suppression resources, and physical conditions such as fuel type, topography, and aspect in the wildland-urban interface.

The results showed that improving and enforcing defensible space was the most important factor that can be adjusted to reduce the potential for extreme fire behavior within the Portola WUI. Embers from wildland fires as much as five miles away can land within the WUI and ignite spot fires under extreme fire conditions. Based on this analysis, the following actions were recommended to reduce the risk of wildfire in the City of Portola.

1. Recommendations for Private Property Owners

On an individual basis, the most widespread recommendation for City of Portola residents is to **create and maintain defensible space**. Defensible space is the homeowner's responsibility, and it is an essential first line of defense for improving firefighter safety and saving lives and property during a catastrophic wildland fire. Homeowners should create and maintain a minimum 100-foot defensible space zone around all structures. On small lots in high density development areas this will require cooperation between landowners and neighbors helping neighbors to improve community safety.

2. Recommendations for Community Development

It is imperative that the City of Portola continue to require all future development to meet California Fire Safe Regulations PRC 4290 and 4291 and California Wildland-Urban Interface Building Code Chapter 7A with regard to community design, construction materials, housing density, road design and access routes, and water supplies for fire suppression.

Appropriate regulations and ordinances also must be enforced that require property owners in **existing and future developments** to maintain adequate defensible space around their residences in order to reduce hazardous conditions for firefighters and to save lives, property, and natural resources.

Enforcement of defensible space criteria must also apply to owners of vacant lots and absentee homeowners.

3. Recommendations for Portola Volunteer Fire Department

Portola VFD should become the official representative for the City of Portola to coordinate important risk reduction projects for the City by:

- Facilitating the weed abatement program, defensible space requirements, and yard cleanup;
- Working with State Fire Marshall’s Office to complete annual commercial fire inspections within the City;
- Coordinating with US Forest Service and Plumas County to continue implementation and maintenance of fuels reduction projects in the wildland-urban interface; and
- Inspecting powerlines annually to assure that vegetation clearance is maintained beneath poles and transformers.

Numerous areas within the city were identified as needing fuel reduction treatments to lessen the likelihood of an ignition and lower the potential for extreme fire behavior following an ignition. The most hazardous fuel conditions in and around Portola is Teanna Ranch, which currently poses an extreme wildland fire risk to the City.

Table E-1. Fuels Reduction Treatment Priorities Within The City of Portola

	LOCATION	TREATMENT
1	East- southeast of hospital	Thin trees and masticate brush.
2	Teanna Ranch	Thin trees, masticate brush and reduce dead and down fuels.
3	Gully between N. Gulling Street and N. Pine Street	Remove dead trees and enforce 100-foot defensible space on private property.
4	Developed and undeveloped forested lots throughout the City	Thin trees to open up crowns and improve forest health and vigor of remaining trees.
5	Woodbridge Development	Thin trees and masticate brush and dead and down trees.
6	Taylor and S. 5 th Streets	Thin trees and masticate brush.
7	Southwest Portola	Retreat portions of this area to remove dead and down trees. Thin remaining trees to create crown openings and masticate brush.

Public awareness, neighbors helping neighbors, and concerned, proactive individuals setting examples for others to follow are among the most important initiatives involved in reducing the risk of wildfire for the City of Portola. There are many existing resources to facilitate public education through the *Fire Wise Communities* and *Fire Adapted Community* programs. The City should incorporate these programs into an annual wildfire safety event and adopt and complete steps to meet FEMA's Fire-Adapted Communities requirements and to become a 'Fire Wise Community.'

1.0 INTRODUCTION

1.1 Background

Catastrophic wildland fires in 2000 led to the Western Governor’s Association report entitled *Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - A 10-Year Comprehensive Strategy*. This report, agency plans, and strategies developed after the 2000 fire season, collectively known as “The National Fire Plan,” address important wildland fire issues such as firefighting, wildfire preparedness, rehabilitation and restoration, hazardous fuels reduction, and community assistance and accountability (CAL FIRE FRAP 2010). The Plan also calls for more active forest and rangeland management to reduce the threat of wildland fire in the wildland-urban interface (WUI), the area where homes and wildland meet.

The Healthy Forest Restoration Act (HFRA) (H.R. 1904) was signed into law in December of 2003 following another catastrophic wildfire year in 2002. The Act created provisions for expanding the activities outlined in the National Fire Plan. HFRA extended benefits to communities that prepare a *Community Wildfire Protection Plan (CWPP)* in collaboration with local fire agencies and community residents. HFRA included meaningful statutory incentives for the USDA Forest Service and USDI Bureau of Land Management to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction projects. Portola was included in the Plumas County CWPP prepared by the Fire Safe Council in 2005.

Recent guidance for *Fire-Adapted Communities* was developed by the International Association of Fire Chiefs in cooperation with the US Forest Service (*US Fire Administration/FEMA 2012*). The concept of Fire-Adapted Communities is part of the National Cohesive Wildland Fire Management Strategy mandated by Congress through the 2009 Flame Act. Once the Cohesive Strategy is completed, adopted, and funded by Congress it will be used as the mechanism for fuels, education, and a variety of activities via cost share grants.

1.2 Objectives

1. The objectives for the City of Portola CWPP are to:
2. Provide an updated and focused assessment of fuel hazards and risks in the wildland-urban interface around Portola.
3. Provide specific recommendations for the community to reduce the highest risks and minimize the potential severity of a wildland fire by incorporating the objectives of the landowners with the needs and expectations of the community regarding fire risk reduction.
4. Coordinate wildland fire risk reduction across property boundaries and adjacent National Forest lands.
5. Incorporate the recommendations and guidance for the “Firewise Communities” program for long-term maintenance and improvement of community wildland fire safety.

6. Follow the guidance for “Fire-Adapted Communities” recommended as part of the National Cohesive Wildland Fire Management Strategy.

2.0 METHODOLOGY

Data and information incorporated in the Portola CWPP were compiled from the following sources:

2.1 Plumas County Fire Safe Council

- Wildfire and Ignition History
- Completed projects

2.2 California Department of Forestry and Fire Protection Fire and Resource Assessment Program

- Fuel Rank (Fuel Hazard Conditions)

2.3 Community Assessment

The field assessment was conducted on May 10, 2012 and May 16, 2012 by Jim Reinhardt, RCI Fire Services Specialist and Jerry Hurley, Plumas County Fire Safe Council. Five primary factors that affect potential fire hazard were surveyed: community design, construction materials, defensible space, availability and capability of fire suppression resources, and physical conditions such as fuel loading and topography.

2.4 Fire Service Personnel and Suppression Capabilities

Interviews were conducted by Jim Reinhardt with the following fire and emergency service personnel on May 10, 2012.

- Leah Turner, City of Portola Community Services/ Portola Volunteer Fire Department/ Eastern Plumas Health Care (Ambulance)
- Travis Schiavone, Chief Portola Volunteer Fire Department

2.5 Public Participation

Public meetings were held on May 10, 2012 and November 1, 2012 at Portola City Hall to discuss wildfire and other hazards potentially affecting the community. A project website (www.portolasafetyplan.com) for the Local Hazard Mitigation Plan was developed to provide additional opportunities for public participation.

2.6 Local Hazard Mitigation Plan / Safety Committee

The City of Portola multi-agency Safety Committee includes the following representatives who have participated in development and review of the Portola CWPP:

Karen Downs, City of Portola Planning

Todd Roberts, City of Portola Public Works

Leah Turner, City of Portola Community Services, Portola Volunteer Fire Department, Eastern Plumas Health Care

Jerry Hurley, Plumas County Fire Safe Council Coordinator

Jerry Sipe, Plumas County Environmental Health

Don Fregulia, US Forest Service [Advisory]

Carl Anderson, Union Pacific Railroad [Advisory]

3.0 EXISTING CONDITIONS

3.1 Wildland - Urban Interface

The wildland-urban interface (WUI) boundary identified for the Portola CWPP includes the area within 1.5 miles of the City Limits (Figure 1).

3.2 Interface Condition

Community safety is affected by the density and distribution of structures with respect to the surrounding wildland environment. The City of Portola has a classic intermix condition. The City has been constructed within a wildland area and there is no clear line of demarcation between structures (home, out buildings, businesses, etc.) and wildland vegetation. Structure density varies throughout the City ranging from very dense development areas of eight to twelve units per acre to sparse development density with one residential structure on one to five acre parcels.

The Portola Volunteer Fire Department does not have a brush clearance program and does not have a fire inspector to conduct commercial property fire inspections.

3.3 Community Design

Many aspects of community design can be modified to make a community more fire safe. Factors considered include:

Access.

Design aspects of roadways influence the wildfire hazard of a community. A road gradient of greater than five percent can increase response times for heavy vehicles carrying water. Roads less than twenty feet in width often impede two-way movement of vehicles and fire suppression equipment. Hairpin turns and cul-de-sacs with radii of less than 45 feet can cause problems for equipment mobility. Adequately designed secondary access routes and loop roads in a community can lower a hazard rating. Visible, fire-resistant street and address identification and adequate driveway widths also reduce the overall community hazard rating.

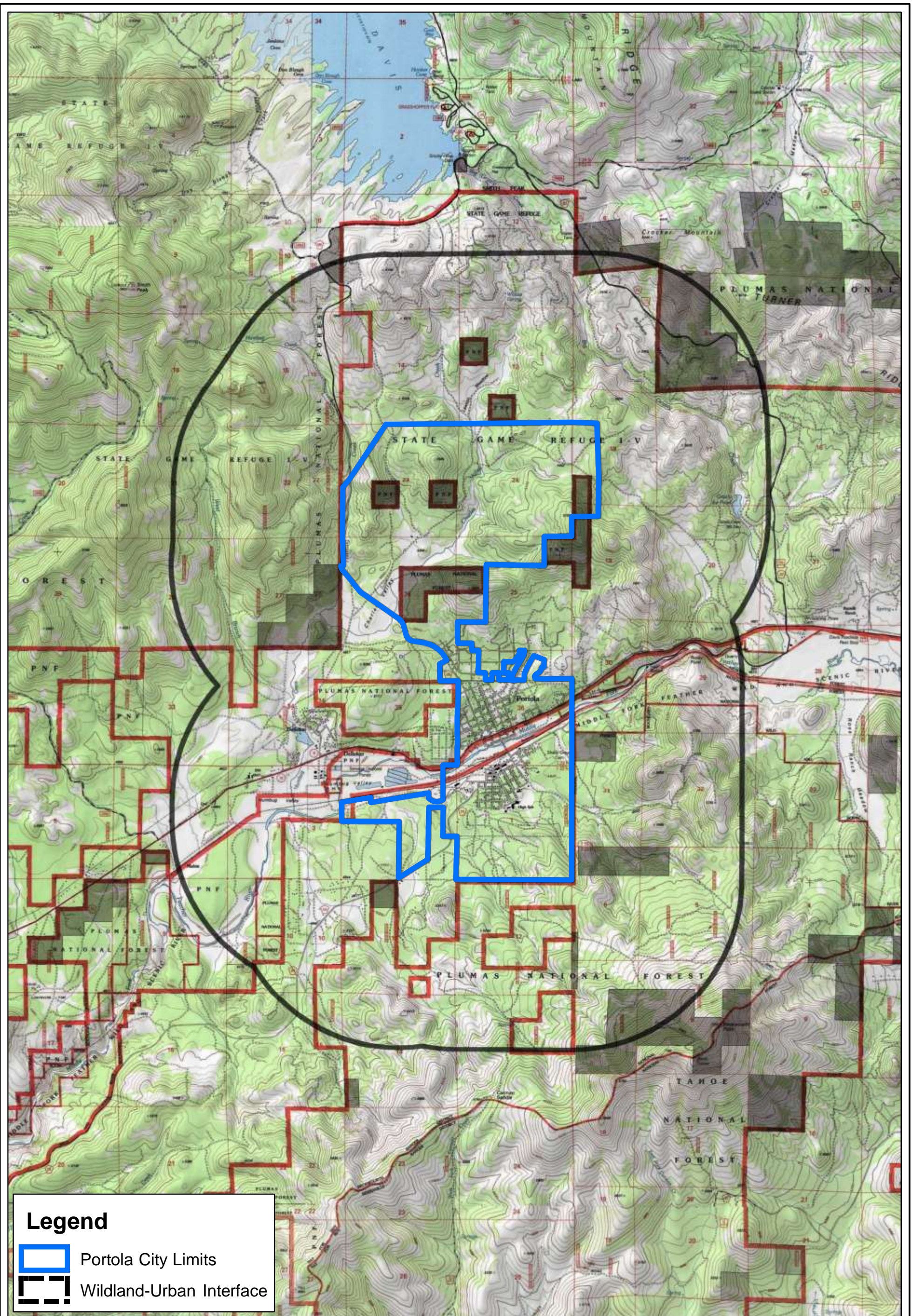


Figure 1.
Wildland-Urban Interface and National Forest Lands
in the Vicinity of Portola, California.

Community Wildfire Protection Plan

0 0.375 0.75 1.5 Miles

RESOURCE CONCEPTS, INC.

Source: The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://goto.arcgisonline.com/maps/USA_Topo_Maps

Within the City boundary, most streets are paved and provide good ingress and egress. The road gradient on the majority of roads is less than five percent. Some streets on north side of the City are not paved but appear to be well maintained. All streets appear to be at least twenty feet wide or greater. All street signs are metal and most are easy to see. Cul-de-sacs and dead end streets appear to provide adequate turning radius for fire equipment.

There is only one bridge that crosses the Middle Fork of the Feather River, which bisects the City into North and South communities. The City of Portola Office of Emergency Services developed a citywide Emergency Evacuation Plan for emergency situations or natural disaster events that can be used to evacuate the City in the event of a life-threatening wildfire. In general, the north community can evacuate to Highway 70 or to Lake Davis Road / Grizzly Road. The south community can evacuate to highway 70 if the bridge is passable, or to County Road A-15 to Highway 89. In the event that Gulling Street bridge becomes impassable, the City is prepared to create an emergency crossing of the Union Pacific Railroad Track and the Feather River if the river is not flooding. In a worst-case scenario, the community can be evacuated by helicopter.

Utilities.

Poorly maintained overhead power lines can be a potential ignition source for wildfires. It is important to keep power line corridors clear of flammable vegetation, especially around power poles and beneath transformers, as fires have been known to start from arcing power lines or exploding transformers during wind storms or periods of high electricity demand. Keeping flammable vegetation cleared from beneath power lines and around power poles reduces potential hazards from damaged power lines. Energized power lines may fall and create additional hazards for residents and firefighters including blocked road access. Power failures are especially dangerous if a community lacks backup sources for electrical power.

There is evidence of previous vegetation trimming and clearance around powerlines throughout Portola with only minor maintenance work required at the present.

Construction Materials.

The composition of building materials determines the length of time a structure can withstand high temperatures before ignition occurs. Houses composed of wood siding and wood shake roofing are usually the most susceptible to ignitions. Houses built with stucco exteriors and tile, metal, or composition roofing are able to withstand much higher temperatures and heat durations, thereby presenting a much lower ignition risk from firebrands, embers, or the proximity of advancing flames when defensible space conditions are adequate.

Residential construction throughout Portola is a mix of wood frame, log, and manufactured housing. The age of structures ranges from early 1900's to modern construction. About half of structures have flammable siding. The majority of roofs are either metal or composite. Only three wood shake roofs were observed.

Architectural Features.

Unenclosed or unscreened balconies, decks, porches, eaves, or attic vents on homes can create drafty areas where sparks and embers can be trapped, smolder, ignite, and rapidly spread fire to the house. A high number of houses within a wildland-urban interface area with these features implies a greater hazard to the community.

Most of the attic vents that could be seen during the survey did not appear to be screened. Numerous unenclosed wood decks and porches were observed.

4.0 SUPPRESSION CAPABILITIES

Knowledge of the capabilities or limitations of the fire suppression resources in a community can help county officials and residents take action to maximize the resources available. Factors considered in the assessment include: availability, number, and training level of firefighting personnel and quantity and type of fire suppression equipment.

4.1 Fire Protection

The City of Portola is a Local Response Area (LRA) with an all-volunteer fire department. There are two fire stations in the City; one on the north side and one on the south side of Feather River. Volunteer firefighters are certified to State Fire Marshall Firefighter 1 and Firefighter 2 levels, receive County 40-hour training, and meet National Fire Protection Association (NFPA) qualifications.

The adjacent private lands within the WUI are in a State Responsibility Area (SRA). There are no CalFire fire stations in Plumas County. The State contracts with US Forest Service for fire protection. USFS is responsible for fire protection on national forest lands.

Mutual aid agreements are in place with Beckwourth Fire District, Eastern Plumas Rural Fire Protection District, Graeagle Fire Department, and Plumas Eureka Fire Department. The dispatch facility is located approximately 30 miles west of Portola in Quincy, California.

4.2 Suppression Equipment

Fire equipment available for initial and extended response to a wildland fire threatening the City of Portola is summarized in Table 1.

Table 1. Fire Resources Available to Respond to a Wildland Fire in the Portola WUI

Response Time Within 10-30 minutes	
Location	Type of Equipment
Portola VFD	Type 1 engine (1) Type 2 water tender (1) Type 7 brush engine (1)
Beckwourth FD	Type 1 engine (1) Type 2 water tender (1) Type 3 brush engine (1)
Graeagle FD	Type 1 engine (1) Type 2 water tender (1) Type 3 brush engine (1)
Plumas-Eureka FD	Type 1 engine (1) Type 2 water tender (1) Type 3 brush engine (1)
Eastern Plumas RFD	Type 1 engine (1) Type 2 water tender (1) Type 3 brush engine (1)
USFS Beckworth Ranger Station	Hand crew (1) Type 3 brush engine (1)
Stead, Nevada Airport	Type 3 Air tanker
Response Time Within 1-2 hours	
Location	Type of Equipment – Seasonal Availability
USFS Plumas National Forest (as ordered)	Hand crews Brush engines Type 1 engines Water tenders Air tankers Bull dozers

4.3 Water Resources

The availability of water resources is critical to fighting a wildland fire. Whether there is a community water system with adequate fire flow capabilities, or whether firefighters must rely on local ponds or other drafting sites affects how difficult it will be for firefighters to protect the community.

The Portola water system has three storage tanks that can be used for fire protection; 200,000 gallons, 500,000 gallons, and 1,000,000 gallons. Fire hydrants are installed throughout the City that meet 500 gpm minimum standards. The water system is both gravity operated and powered by electric pumps with emergency generators for backup. There are also water drafting sources in ponds and in the Feather River within a 20-minute round trip distance from the City.

5.0 PHYSICAL CONDITIONS

Physical conditions include slope, aspect, topography, fuel type, and fuels density. With the exception of changes to the fuels composition, the physical conditions in and around a community cannot be altered to make the community more fire safe. Therefore, an understanding of how these physical conditions influence the fire behavior is essential to planning effective preparedness activities such as fuel reduction treatments.

5.1 Slope, Aspect, and Topography

In addition to local weather conditions, slope, aspect, and topographic features are also used to predict fire behavior. Steep slopes greatly influence fire behavior. Fire usually burns upslope with greater speed and with longer flame lengths than on flat areas. Fire also burns downslope, but usually burns downhill at a slower rate and with shorter flame lengths. West and south facing aspects are subject to more intense solar exposure, which preheats vegetation, lowers the moisture content of fuels, and increases fuel ignitability. Canyons, ravines, and saddles are topographical features that are prone to higher wind speeds than adjacent areas. Fires pushed by winds grow at an accelerated rate compared to fires burning in non-windy conditions. Homes built mid-slope, at the crest of slopes, or in saddles are most at risk due to wind-prone topography in the event of a wildfire.

Slopes within the City are generally flat to gently sloping. However, the WUI is surrounded by steep slopes to the north, northeast, east and southeast.

5.2 Fuel Type and Density

Vegetation type, fuel moisture values, and fuel density around a community affect the potential fire behavior. Areas with dense, continuous, vegetative fuels carry a higher hazard rating than communities situated in areas of irrigated, sparse, or non-continuous fuels.

The high fuel hazard areas in Portola are characterized by mixed conifer stands with an understory of light to heavy grass, brush, and deadfall trees typical of Fuel Models 2, 6, and 10 with fuel loads ranging from 2 to 12 tons per acre. Areas with closed crowns. (Figure 2).

The worst fuel conditions within the City Limits occur on the undeveloped Teanna Ranch property which represents a significant risk to the City. Other problem areas were found in the Woodbridge development south of the high school, the forested area southeast of the hospital, and forested lots throughout the City.

6.0 FIRE AND IGNITION HISTORY

Portola has an active history of fire ignitions within and around the WUI. Ignition risks fall into two general categories, lightning and human caused. Human caused ignitions that have occurred within the WUI come from a variety of sources including equipment use, debris burning, playing with fire, arson, and campfires. (Figure 3)

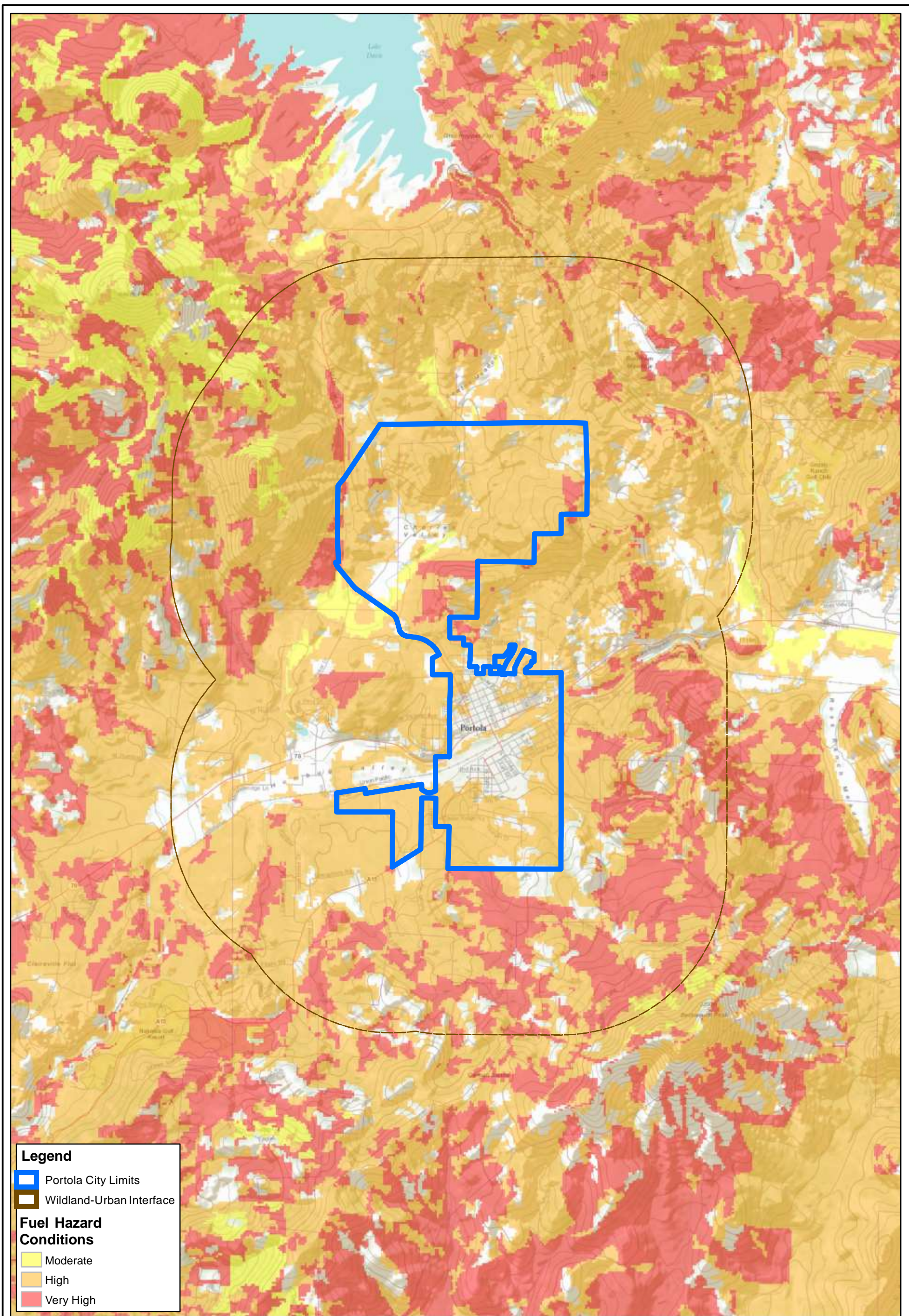
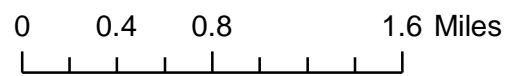
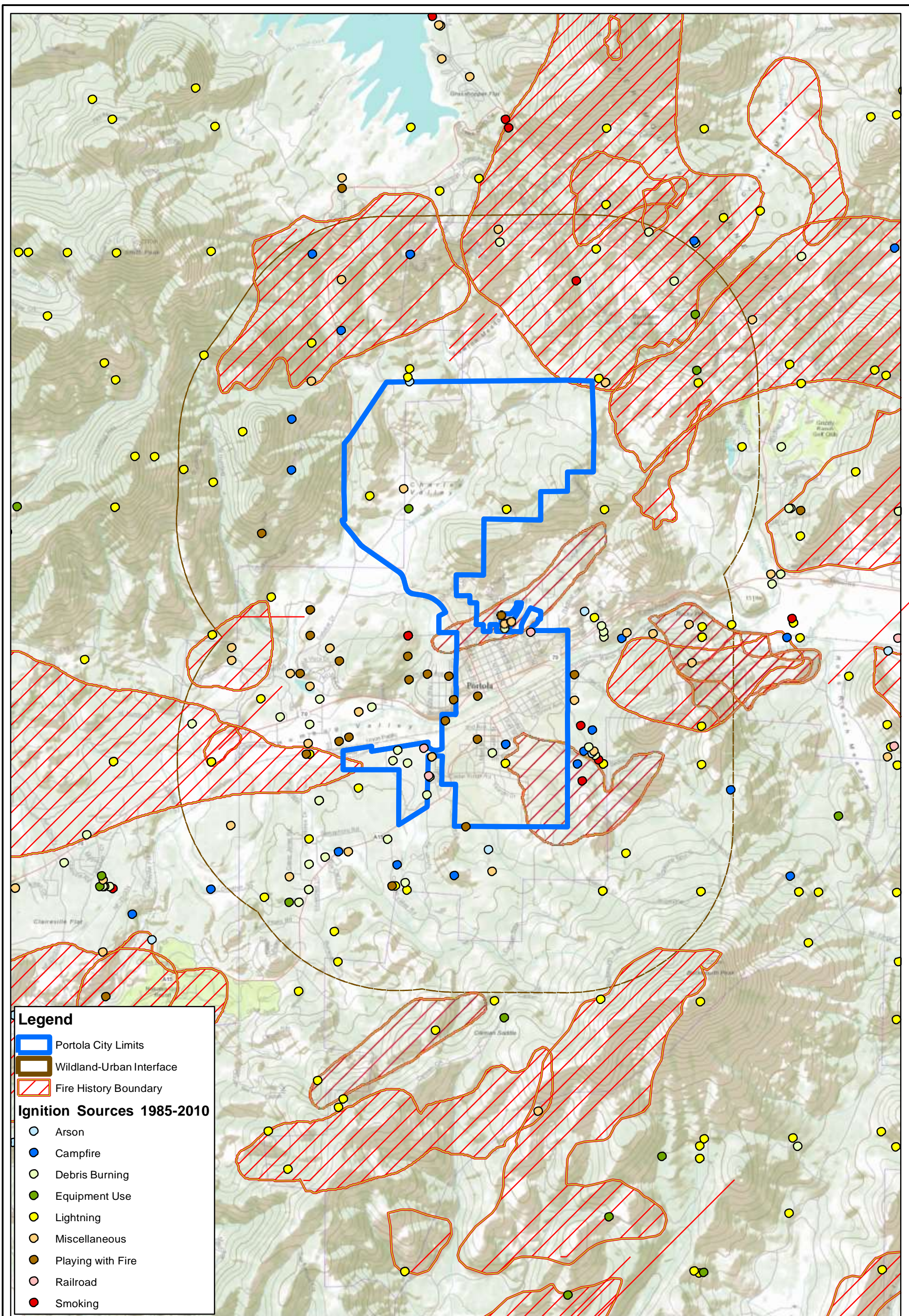


Figure 2.
Fuel Hazard Conditions in the Vicinity of the
Portola Wildland-Urban Interface.

Community Wildfire Protection Plan



Source: The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://goto.arcgisonline.com/maps/USA_Topo_Maps



Legend

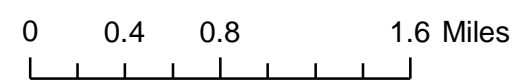
- Portola City Limits
- Wildland-Urban Interface
- Fire History Boundary

Ignition Sources 1985-2010

- Arson
- Campfire
- Debris Burning
- Equipment Use
- Lightning
- Miscellaneous
- Playing with Fire
- Railroad
- Smoking

Figure 3.
Wildland Fire History and Ignitions in the Vicinity of
the Portola Wildland-Urban Interface.

Community Wildfire Protection Plan



Source: The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://goto.arcgisonline.com/maps/USA_Topo_Maps

6.1 Worst-case Scenario Wildland Fire

The worst-case scenario wildland fire in the Portola WUI would be wind driven crown fire late in the fire season when fuel moisture is at its lowest. The ignition source could be either a lightning strike or human start driven by erratic winds from thunderstorms. Thunderstorms which bring lightning, also bring strong winds when they begin to collapse. Feather River is a natural channel to the prevailing SW flow, but in the summer valley diurnal winds also blow down canyon from east to west such as occurred during the 1988 Portola Fire which was driven from east to west burning 528 acres.

7.0 PROJECTS COMPLETED TO REDUCE WILDFIRE RISK

The Plumas County CWPP prepared by Fire Safe Council in 2005 includes Portola and has been used to obtain funding and implement many fuel reduction projects in the county. Projects have been initiated by the Quincy Library Group and the US Forest Service (Figure 4). The types of projects completed have included forest thinning, brush mastication, and thinning from below to remove smaller trees and leave large trees to dominate the site.

Educational workshops have also been conducted for the citizens of Portola by the Plumas County Fire Safe Council. On September 19, 2012, Plumas County Fire Safe Council held a Living With Fire presentation at the Portola Library that was poorly attended.

8.0 RECOMMENDATIONS FOR THE CITY OF PORTOLA

While it is not feasible to expect all structures in the wildland-urban interface area to be rebuilt with non-combustible materials, there are steps that can be taken to address specific elements that strongly affect structure ignitability in the interface area.

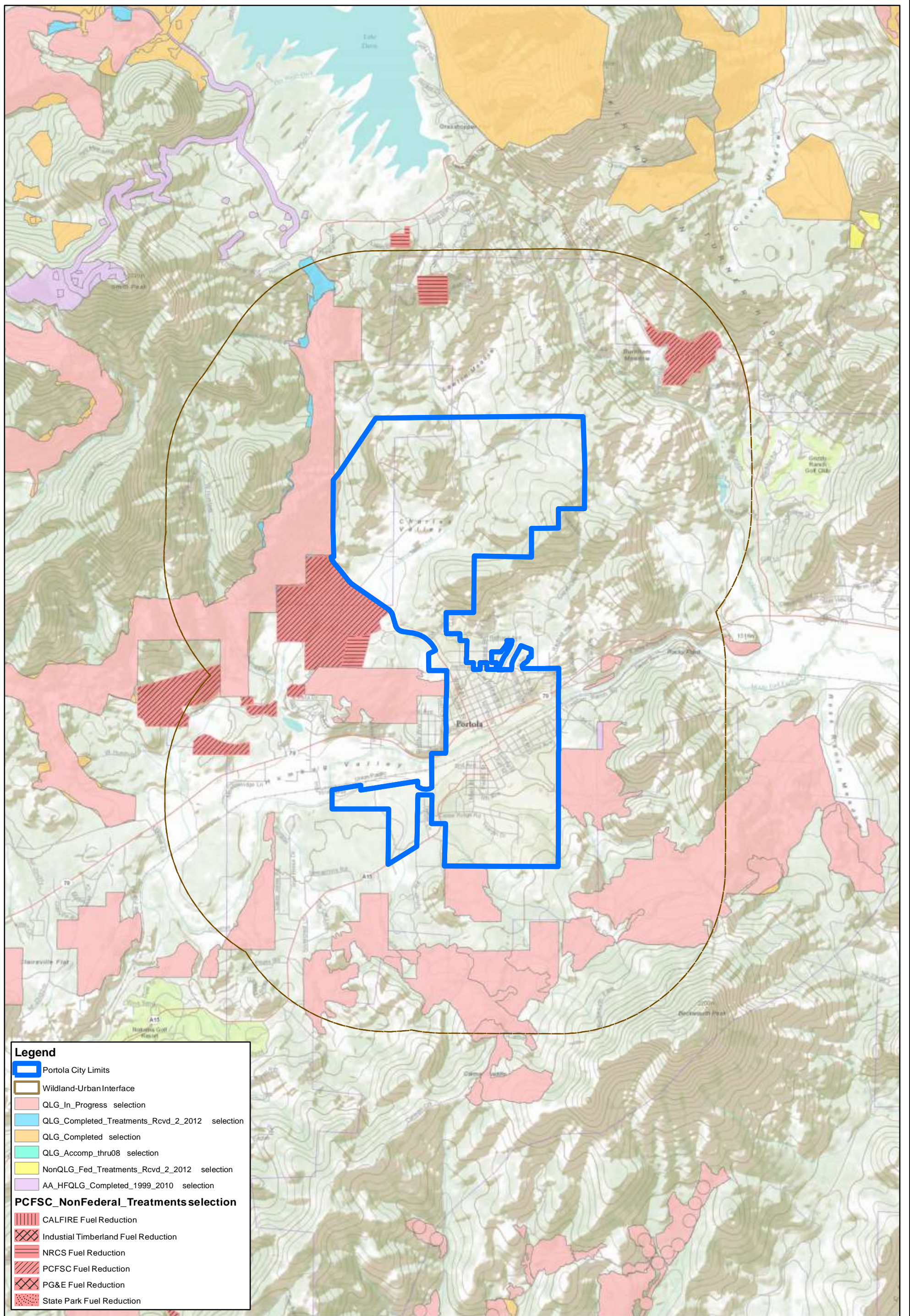
The following recommendations are made to promote effective and efficient wildland fire suppression in the interface communities and protect lives, property and natural resources.

8.1 Community Development

It is imperative that the City of Portola continue to require all future development to meet California Fire Safe Regulations PRC 4290 and 4291 and California Wildland-Urban Interface Building Code Chapter 7A with regard to community design, construction materials, housing density, road design and access routes, and water supplies for fire suppression.

Appropriate regulations and ordinances must be enforced to require property owners in existing and future developments to maintain adequate defensible space around their residences in order to reduce hazardous conditions for firefighters and to save lives, property, and natural resources. Enforcement of fuel reduction treatments must also apply to owners of vacant lots and absentee homeowners.

The City should also adopt a policy to standardize the size and reflectivity of address and street signs to increase the likelihood of locating homes during low visibility conditions that occur during a wildfire.



Legend

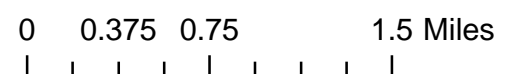
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- Wildland-Urban Interface
- QLG_In_Progress selection
- QLG_Completed_Treatments_Rcvd_2_2012 selection
- QLG_Completed selection
- QLG_Accomp_thru08 selection
- NonQLG_Fed_Treatments_Rcvd_2_2012 selection
- AA_HFQLG_Completed_1999_2010 selection

PCFSC_NonFederal_Treatments selection

- CALFIRE Fuel Reduction
- Industrial Timberland Fuel Reduction
- NRCS Fuel Reduction
- PCFSC Fuel Reduction
- PG&E Fuel Reduction
- State Park Fuel Reduction

Figure 4.
Completed Fuel Reduction Projects in the Vicinity of
the Portola Wildland-Urban Interface.

Community Wildfire Protection Plan



Source: The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information visit http://www.fed.usgs.gov/maps/USA_Topo_Maps

8.2 Defensible Space Requirements

Defensible space is the homeowner's responsibility, and it is an essential first line of defense for improving firefighter safety and saving lives and property during a catastrophic wildland fire. On an individual basis, the most widespread recommendation for City of Portola residents is to create and maintain defensible space.

Homeowners should create and maintain a minimum 100 foot defensible space around all structures. In high density development areas this will require cooperation between landowners and neighbors helping neighbors.

8.3 Landscape Level Fuel Reduction Treatments

Fuelbreaks, greenstrips, and fuel reduction treatments that include tree and brush thinning have been proposed and for several locations within and adjacent to the Portola WUI. Follow-up with implementation of these plans is critical to the City.

The Portola VFD should meet annually with the US Forest Service to discuss and prioritize maintenance of fuel reduction treatments. Maintenance must be scheduled on a regular basis to protect the long-term effectiveness of past fuel treatment investments.

8.4 City of Portola Fuels Reduction Treatment Recommendations

Numerous areas within the City Limits are identified in Table 2 and shown on Figure 5 that should be treated to reduce fuel hazards, lessen the likelihood of a an ignition, and lower the potential for extreme fire behavior following an ignition. The highest wildfire risk in and around Portola is Teanna Ranch, which currently poses an extreme wildland fire risk to the City.

Table 2. Fuels Reduction Treatment Priorities Within The City of Portola

	LOCATION	TREATMENT
1	East- southeast of hospital	Thin trees and masticate brush
2	Teanna Ranch	Thin trees, masticate brush and reduce dead and down fuels
3	Gully between N. Gulling Street and N. Pine Street	Remove dead trees and enforce 100 foot defensible space on private property
4	Developed and undeveloped forested lots throughout the City	Thin trees to open up crowns and improve forest health and vigor of remaining trees
5	Woodbridge Development	Thin trees and masticate brush and dead and down
6	Taylor and S. 5 th Streets	Thin trees and masticate brush
7	Southwest Portola	Retreat area to remove dead and down and thin remaining trees to create crown openings and masticate brush.

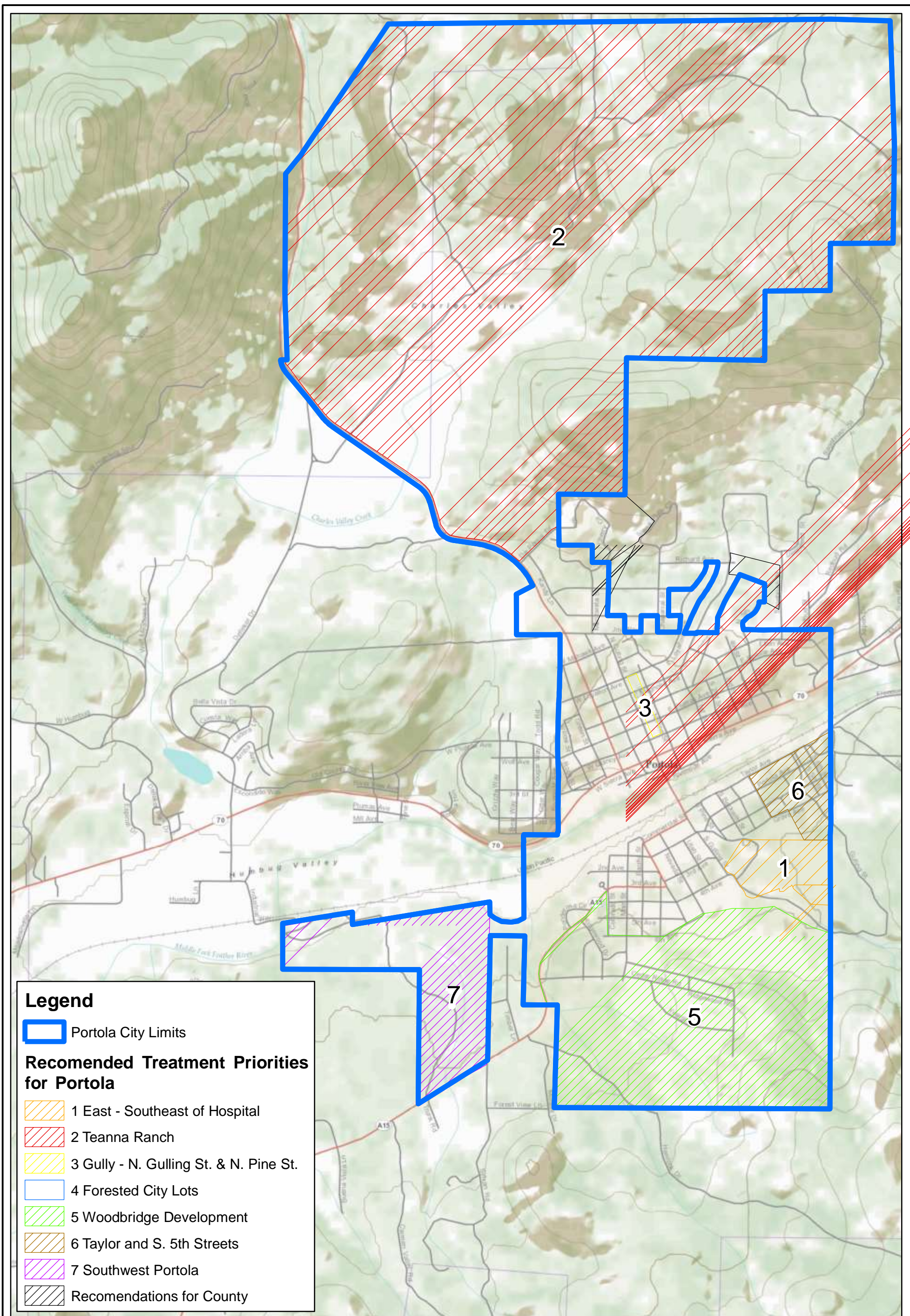


Figure 5.
Priority Fuel Reduction Treatment Areas in the Vicinity of
the Portola Wildland-Urban Interface.

Community Wildfire Protection Plan

0 0.15 0.3 0.6 Miles

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Source: The TOPOI maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://goto.arcgisonline.com/maps/USA_Topo_Maps

Path: R:\projects\wood_rodgere\MXDs\Report_Figures\Fig5_Recommended Treatment Areas.mxd

Through a federal program, funding is available to assist private land owners who are adjacent to public land where the US Forest Service will conduct planned, prescribed burning, to reduce hazardous fuel conditions. Currently the Plumas National Forest has a project immediately adjacent to the Teanna Ranch property, making it a likely candidate for funding. The funding typically covers a majority of the costs of the treatment and forest products recovered such as small logs or chips help offset the additional costs.

The City should work with Plumas County Fire Safe Council to obtain additional grant funding for implementing fuels reduction and maintenance programs within the City.

8.5 Community Coordination and Public Education

Public awareness, neighbors helping neighbors, and concerned, proactive individuals setting examples for others to follow are among the most important initiatives involved in reducing the risk of wildfire ignition and managing the hazards inherent in wildland interface areas. There are many existing resources to facilitate public education through the *Fire Wise Communities* and *Fire Adapted Community* programs. The City should incorporate these programs into an annual wildfire safety event and adopt and complete steps to meet FEMA's Fire-Adapted Communities requirements and to become a 'Fire Wise Community [Appendix A].

8.6 Recommendations for the Portola Volunteer Fire Department

Members of the Portola VFD should continue upgrading fire equipment by creating and adopting a five-year plan for funding of fire equipment upgrades.

Hold annual meetings with the City Council to ensure that the City becomes an active partner in Fire Wise Community program.

Portola VFD should become the official representative for the City of Portola to coordinate important risk reduction projects for the City by:

- Facilitating the weed abatement program, defensible space requirements, and yard cleanup;
- Working with State Fire Marshall's Office to complete annual commercial fire inspections within the City; and
- Working with USFS and Plumas County to continue fuels treatment projects along City boundaries.
- Inspect powerlines annually to assure that vegetation clearance is maintained beneath poles and transformers.

The following agencies or organizations can be contacted for additional information and assistance.

Plumas County Fire Safe Council	Jerry Hurley jerry.hurley@sbcglobal.net
Plumas National Forest	Don Fregulia dfregulia@fs.fed.us

9.1 CONCLUSIONS

There is no way to completely eliminate the threat of wildfire in the wildland-urban interface. Acknowledging the need for ongoing fuels management on public and private lands is vital for fire safe living in a wildfire-prone environment. The best possible assurance for long-term community safety from wildfire requires a permanent commitment to the enforcement of fire safe ordinances at the local level. Mandatory fuels management includes regular monitoring and evaluation of fuel conditions and maintenance or implementation of additional fuel reduction treatments as development continues to encroach at the wildland-urban interface.

APPENDIX A

Becoming a Recognized Firewise Community/USA Your Role in Fire-Adapted Communities



Becoming a Recognized Firewise Community/USA®

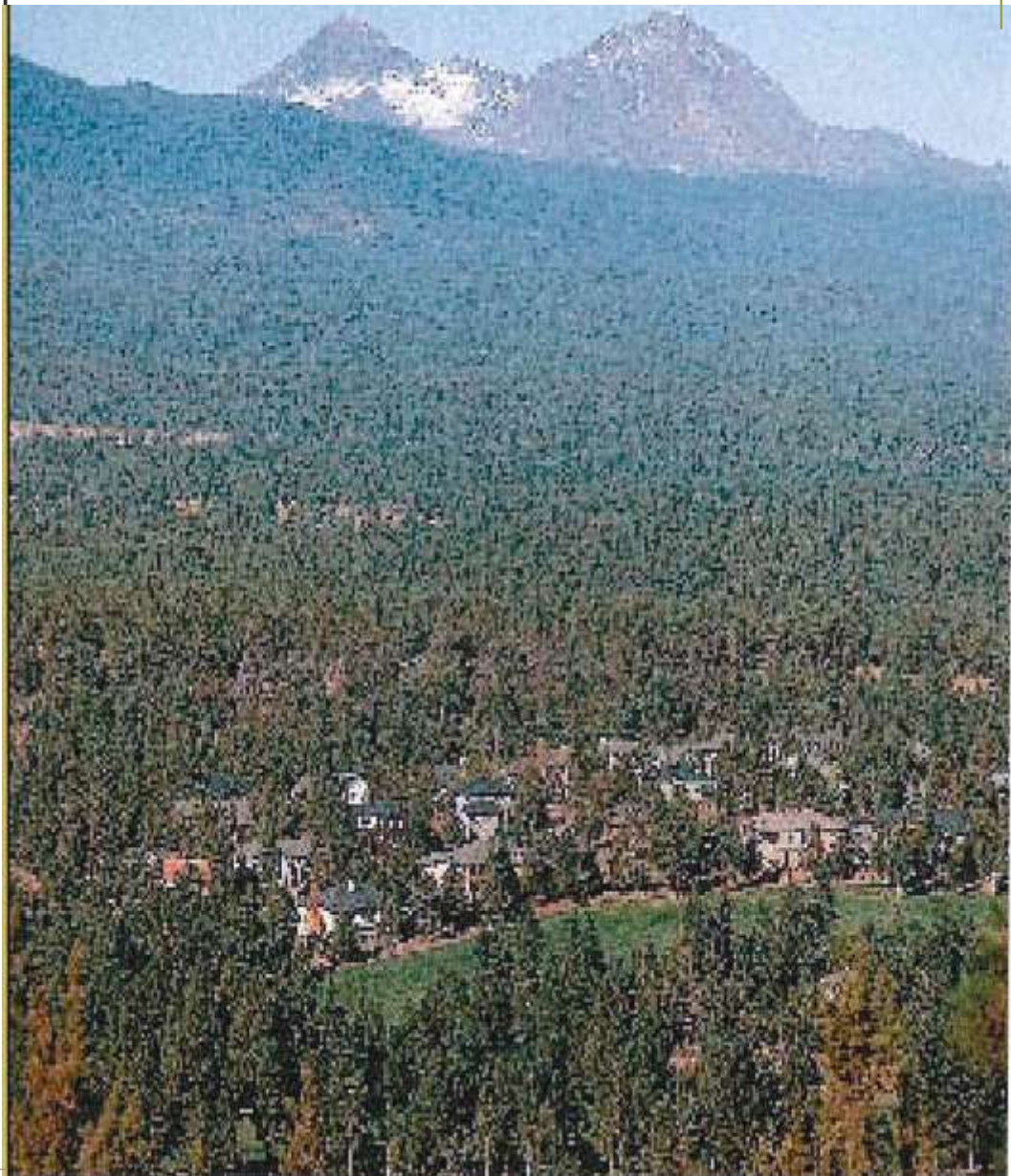
*What is Firewise
Communities/USA®?*

*How Can My Community
Become A Recognized
Firewise Community?*

*What are the Recognition
Criteria?*

*What is the Home Ignition
Zone and Why is it so
Important?*

*What are the Benefits
of Being a Firewise
Community?*



Living with Wildfire

Whether you've lived in the wildland/urban interface for years, or are purchasing or renting your dream home away from the hectic pace of city life, you may be concerned about wildfire. Living where wildfires can occur poses a risk to your property and loved ones- but it is possible to live compatibly with this natural event. Read on to learn more about how your participation in the Firewise Communities/USA Recognition Program can make you and your home safer.



What is Firewise Communities/ USA[®] ?

Citizen involvement is the cornerstone of the Firewise Communities/ USA[®] Recognition Program. If you are a homeowner or community resident whose home is located in a region susceptible to wildfires, this brochure will offer you relevant information on how you can help your community to become Firewise. As participants in the Program, you and your neighbors will learn how to decrease the risk of losing your homes and to best protect yourselves in the event of wildfire.

Within wildland/urban interface areas, firefighters lack the resources to defend every home that is threatened during ex-

treme wildfires. However, communities whose residents take steps to reduce their vulnerability have a greater chance of surviving a wildfire. Firewise Communities/USA offers residents in fire-prone areas a unique opportunity to implement Firewise practices specially tailored to individual and community needs. You and your neighbors will gain useful knowledge and skills to prepare for a wildfire before it occurs, while also helping you maintain an acceptable level of fire readiness. Firewise homes and communities allow fire fighters to concentrate on fighting the wildfire - which ultimately saves more homes and lives. What's more, even a few preventive

actions can prove critical, because when adequately prepared, homes have often survived a wildfire without the intervention of the fire department.

The Program draws on a community's spirit, its resolve, and its willingness to

take responsibility for reducing wildfire risks by providing the resources needed to achieve both a high level of protection against wildland/urban interface fire and ecosystem balance. The Program utilizes the following three-legged template:

- *Wildland fire staff from federal, state or local agencies provide a community with information about living with wildfire with mitigation information tailored to your specific community or region.*
- *With the assistance of wildland fire staff, you and your neighbors assess wildfire risks around you and devise a cooperative network of other homeowners, agencies, and organizations.*
- *You and your neighbors identify and implement local solutions.*



How Can My Community Become A Recognized Firewise Community?

Ultimately, it all begins with you. Becoming Firewise takes time and coordination with your neighbors and others, but getting started is actually quite straightforward. The Firewise Communities/USA standards offer flexibility in creating the most appropriate plan and actions for your community. You will find that the effort expended reaps many rewards.

Following these steps, your community will be on its way toward becoming Firewise.

- 1) *Contact Firewise* — A community representative (you or another interested member of your community) completes an on-line request for contact by a Firewise representative on the Firewise Communities/USA web site, www.firewise.org/usa.
- 2) *Site Visit* — At an agreed-upon time, your state's Firewise Communities/USA liaison, a specialist in wildland/urban interface (WUI) fire, will visit your area and assess the proposed site. The visit is coordinated with local fire officials.

3) *Community Representatives* — At the same time, your community "spark plug" (again, this could be you) recruits community representatives to create a multi-disciplined Firewise board or committee. This group should include homeowners and fire professionals but may also include planners, land managers, urban foresters and members of other interest groups. Be aware that the development of the Firewise Community plan may take up to six months.

4) *Assessment & Evaluation*- Upon completing a site assessment and evaluation of the community's wildfire readiness, the WUI specialist schedules a meeting with your local Firewise board to present the assessment for review and acceptance by the board. If accepted, the process continues; if not, it is terminated.

5) *Moving Forward/Creating A Plan* — Your local Firewise board develops area-specific solutions to its WUI fire issues based on the WUI specialist's report. All members of the Firewise board must concur with the final plan. The recommendations are presented to and approved by the WUI specialist. The specialist may work with your community to seek project implementation funds, if needed.

6) *Implement Solutions* — Local solutions are implemented following a schedule designed by your Firewise group, who will be responsible for maintaining the program into the future.

?) *Apply for Recognition*- FirewiseCommunities/USA recognition status is achieved after your community submits its application form along with a completed Firewise community plan and Firewise event documentation to your state's Firewise liaison. *The application form is available online and more information on Firewise Recognition Criteria is on Page 5.*

8) *Renewing Your Recognition Status* — Annual renewal of your recognition is completed by submitting documentation of your community's continued participation to the state Firewise liaison. *This can be easily accomplished with the on-line form.*

www.firewise.org/usa

What are the Recognition Criteria?

Neighborhoods, subdivisions, and small towns in fire-prone areas of the United States can earn Firewise Communities/USA Recognition status by creating dedicated local Firewise task forces and by implementing Firewise principles tailored to their specific community needs. This nationwide initiative recognizes communities for taking action to protect people and properties from the risk of fire in the wildland/urban interface. Communities create their programs themselves with cooperative assistance from local fire staff and state forestry agencies.

Fire-prone communities earn Firewise Communities/USA recognition status by meeting the following criteria:

Enlisting a wildland/urban interface specialist to complete an assessment and create a plan that identifies locally agreed-upon solutions that the community can implement.

Sponsoring a local Firewise task force, committee, commission or department which maintains the Firewise Community program and tracks its progress or status.

Observing a Firewise Communities/USA Day each year that is dedicated to a local Firewise project.

Investing a minimum of \$2.00 annually per capita in local Firewise Communities/USA efforts. (Work by municipal employees or volunteers using municipal and other equipment can be included, as can state/federal grants dedicated to that purpose.)

Submitting an annual report to Firewise Communities/USA, documenting continuing compliance with the program.



What is the Home Ignition Zone and Why is it so Important?

The Home Ignition Zone is the key to preparing your home for wildfire readiness.

Your home ignition zone- including the condition of the house and its immediate surroundings within 100 to 200 feet and other structures such as garages, decks, porches, or fences that come in contact with the house- is what determines your home's susceptibility to ignition during a wildfire. "The more you can eliminate the things that can lead a wildfire to your home, the more likely your home will survive," notes Judith Leraas Cook, project manager of the Firewise Communities/USA Recognition Program. She offers some simple steps for evaluating your home ignition zone and making it a deterrent to the progress of the fire:

- Clear the build up of pine needles and leaves from the base of the house and any connecting structures which could otherwise ignite the home's siding.
- Create a three-foot, fire-free area on all sides of your home.
- Clear gutters of leaves and debris.
- Trim any limbs on trees hanging over the house.
- "Limb up" trees around the house by removing lower limbs that are 10 to 15 feet from the ground.
- Use metal flashing at all connection points of structures, such as wooden fences attached to the house.
- Clear trees and shrubs of dead material and keep them pruned. Space trees and shrubs far enough apart to slow the spread of an approaching wildfire.
- Regularly care for your property to keep it free of all dead leaves and needles.
- Choose deciduous trees, rather than evergreens, when planting close to your home. Sap from evergreens is good fuel for fire. Deciduous plants burn more slowly.



- Install glass skylights. Plastic melts during a fire.
- Store firewood well away from your house, particularly during fire-season.
- Remove excess vegetation along roads and remove chipped wood immediately after cutting.
- Use non-flammable (Class A) roofing materials.
- Plant native wildflowers and fire-resistant plants; keep lawns green and irrigated as they serve as good fire breaks, as do rock gardens and xeriscapes.
- Remember that wide driveways, non-flammable walkways and other pathways can slow or stop the spread of a wildfire.



The national Firewise Communities program is an interagency program designed to encourage local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from the risk of wildfire. The Firewise Communities program is sponsored by the National Wildfire Coordinating Group's Wildland/Urban Interface Working Team, a consortium of wildland fire agencies that includes the USDA Forest Service, the Department of the Interior, the Federal Emergency Management Agency, the International Association of Fire Chiefs, the National Emergency Management Association, the US Fire Administration, the National Association of State Fire Marshals, the National Fire Protection Association, and state forestry organizations. For more information, visit www.firewise.org.

What are the Benefits of Being a Firewise Community?

While the benefits can vary, there are a number of positive outcomes experienced by communities that become members of the Firewise Communities/USA Recognition Program. Being "Firewise":

- Creates defensible space that prevents fires from advancing and endangering homes and lives.
- Improves property value while reducing risk of loss.
- Improves community relationships with local fire staff, since firefighters can concentrate their efforts on fighting wildfires rather than devoting often limited resources to protecting homes - which may ultimately be lost if the fire can't be contained.
- Encourages good neighbors, since the more homes within a community that adopt "Firewise" practices, the greater the impact on reducing the heat and speed of the fire.
- Offers peace of mind, knowing that your home is prepared to survive a wildfire in the event one should occur.



Where Can I Get More Information about Firewise Communities/USA?



For more information on the Firewise Communities/USA Recognition Program, visit www.firewise.org/usa or contact your state forestry agency.

U.S. Fire Administration

Your Role in Fire-Adapted Communities

How the fire service, local officials, and the public can work together.

February 2012



FEMA



U.S. Fire Administration Mission Statement

We provide National leadership to foster a solid foundation for our fire and emergency services stakeholders in prevention, preparedness, and response.



FEMA



This guide was developed by the International Association of Fire Chiefs (IAFC) under a cooperative agreement from the Forest Service based against an Interagency Agreement that the U.S. Fire Administration (USFA) has with the Forest Service, HSFEEM-09-X-0265 .

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Fire-Adapted Communities Introduction

The Threat

They are called grass fires, forest fires, wildland fires, or by a variety of names. Yet, no matter the name, they pose an evolving threat to lives and property in an increasing number of communities across the United States. Homes near natural areas, the wildland/urban interface (WUI), are beautiful places to live. These pristine environments add to the quality of life of residents and are valued by community leaders seeking to develop new areas of opportunity and local tax revenue, but these areas are not without risk. Fires are a part of the natural ecology, living adjacent to the wilderness means living with a constant threat of fires. Fire, by nature, is an unpredictable and often uncontrollable force.



Recent fires in 2011, like those seen in Texas, the West, and even the Mid-Atlantic States, serve as a reminder to the fire service, emergency managers, local decisionmakers, and the public of the need to better understand the environment we live in and the positive role each group can collaboratively play in a wildland fire solution.



The concept of fire-adapted communities (FACs) holds that, with proper community-wide preparation, human populations and infrastructure can withstand the devastating effects of a wildland fire, reducing loss of life and property. This goal depends on strong and collaborative partnerships between agencies and the public at the State, Federal, and local levels, with each accepting responsibility for their part. This guide will frame the FAC concept and current efforts to define its scope, explain the roles that groups can adopt to improve their fire safety, and provide guidance on future

steps. The U.S. Fire Administration (USFA) believes that by reviewing the roles and responsibilities each group can adopt now, communities will become better prepared to realize the FAC goal in the future.

Developing the Concept

The National Cohesive Strategy: Why You Should Pay Attention

The concept of FACs is one piece of a three-part focus outlined by the evolving National Cohesive Wildland Fire Management Strategy.

It is important for the fire service, local officials, and the public to understand the development and goals of this effort because, upon completion, the cohesive strategy will influence and direct how the various Federal agencies that fund and engage in wildland fire suppression—such as the U.S. Department of the Interior, the U.S. Department of Agriculture (USDA) Forest Service, the Federal Emergency Management Agency (FEMA), and the USFA—interact and assist local entities.

Directed by Congress in 2009, this cohesive strategy allows stakeholders to systematically and thoroughly develop a dynamic approach for planning, responding to, and recovering from wildland fires. Three primary factors were identified as presenting the greatest challenges and the greatest opportunities for making a difference in addressing wildland fire problems.

- **Restoring and maintaining resilient landscapes.** The strategy must recognize the current lack of ecosystem health and variability of this issue from geographic area to geographic area. Because landscape conditions and needs vary depending on local climate and fuel conditions, among other elements, the strategy will address landscapes on a regional and subregional scale.
- **Creating FACs.** The strategy will offer options and opportunities to engage communities and work with them to become more resistant to wildfire threats.
- **Responding to wildfires.** This element considers the full spectrum of fire management activities and recognizes the differences in missions among local, State, tribal, and Federal agencies. The strategy offers collaboratively-developed methodologies to move forward.

This cohesive strategy is being developed over three phases to incorporate land management considerations from a wide array of Federal, State, and local participants; the identification of geographically regional goals; and quantitative modeling for future benchmarks of success. Once the strategy is finalized, it will be implemented across the country and a 5-year review cycle will be established to provide updates to the U.S. Congress.

The Current Definition and Its Goal

In the 2000s, various Federal reports and advisory groups progressively built upon the foundation of the FAC concept. The "2005 Quadrennial Fire and Fuel Review" promotes a strategy of fostering FACs rather than escalating protection of communities at risk in the WUI. It highlighted that the ultimate objective is to enable communities to create their own fire-safe environment, lessening the need for Federal protection, which will free up Federal dollars for ecological restoration and reducing risk to residents and firefighters alike. The subsequent "Quadrennial Fire Review 2009" took the concept further, explaining that implementation should include strategies for increasing knowledge and commitment that will build a sense of responsibility among landowners, homeowners, the insurance industry, fire districts, local governments, and other key players in WUI communities for wildland fire prevention and mitigation. Supported by an integrated fuels management portfolio, these strategies include building community defensible space and fuel reduction zones, and recalibrating public expectations in the FAC area.



Yet, the concept is not just illustrated in defensible space techniques and preparedness. It seeks to explain how a community can coexist with wildland fire and, ultimately, reduce large fire threats and eliminate the need for a large and expensive fire-suppression response. This is achieved through the understanding of the role of fire on the traditional environment that a community is now located in and the subsequent impacts of land development and introductions of nonindigenous vegetation.

In 2011, the Federal-level National Wildfire Coordinating Group's (NWCG's) Wildland Urban Interface Mitigation Committee brought together previous recommendations and presented a working definition for a FAC. Its commonly held definition states that:

A FAC is a community of informed and prepared citizens collaboratively taking action to safely coexist with wildland fire threat. A FAC has, or is striving to achieve, the following characteristics:

- It exists within or adjacent to a fire-adapted ecosystem.
- Adequate local fire suppression capacity is available to meet most community protection needs.

- Structures and landscaping are designed, constructed, retrofitted, and maintained in a manner that is ignition resistant.
- Local codes (building, planning, zoning, and fire prevention codes) that require ignition-resistant home design and building materials are adopted and enforced.
- Fuel treatments are properly spaced and sequenced, and are maintained across the landscape.
- A community wildland fire protection plan is developed and implemented.
- The community has a defined geographic boundary.

As the concept of FAC evolves, agencies and the public at every level can take steps now to better understand the role they play and responsibility they should address.

The Role Each Can Take

Local Fire Service

The responsibility of fire departments in FACs is to engage and educate residents about properly preparing for threats and building situational awareness. Having prewildland fire dialogue with residents is particularly important for the fire service because national studies have shown that firefighters are uniquely respected in their communities and can project a trusted source to the public. Firefighters can deliver the preparedness message to residents in an effective manner so as to best prepare them against wildland fire.

Firefighters are the trusted source in the community. They can deliver the preparedness message to residents in an effective manner.

When considering FACs, local fire service should address

- proficiency of fire department personnel about wildland fires, fuels, operational techniques, safety procedures, qualifications, and response;
- proficiency of fire department personnel in having the right training and equipment for wildland firefighting;
- local building stock vulnerabilities to flame front and ember impingement;
- local wildland fire fuel loads and scope of fire risk;
- at-risk populations and functional-needs populations like elderly or those with limited transportation;
- construction developments in the WUI;
- availability of fire-suppression resources and the public's expectation of response;
- current level of preparedness/response collaboration with local emergency management and public safety agencies;
- the fire department's role in any local Community Wildfire Preparedness Plan (CWPP);
- role of secondary assets like Fire Corps or Community Emergency Response Teams (CERTs); and
- the fire department's role in planning, zoning, and building code development and enforcement.

Planning for functional-needs populations is important to consider and gauge. Such residents in communities at risk of a wildland fire may include the disabled, people living in institutionalized settings, the elderly, children, non-English-speaking populations, and those without access to transportation. Understanding their needs will help your fire department develop proper preplanning and gain them as partners in the preparedness effort.

Vacation homes pose another area of risk. The community may have a high population of seasonal tourists, absentee owners, summer lake cabin residents, hunters, and back country campers. These "part-time" residents may not be familiar with the local WUI threat and may bring with them inaccurate notions of fire and operational response/capabilities. It is important for fire departments to reach out to these populations—either directly or through rental management companies—to inform them of the local situation and build understanding to perform a home assessment on their property.



It is important that the fire department partner with other local emergency response departments, State fire and forestry agencies, and any regional Federal assets before a fire begins. Identifying existing residential wildland fire preparedness groups like Firewise Communities or other groups helps to integrate department efforts with citizens. Resources for fire departments also include the "Ready, Set, Go! Program" which provides the tools and guidance necessary to deliver the wildland fire safety message to individuals at the local level. The program is a three-step process: 1) teaches

homeowners to create their own action plan of preparedness, 2) have situational awareness when a fire starts, and 3) leave early in the event of a fire with the goal of significantly increasing the safety of both residents and firefighters.

Finally, fire department leadership should identify any additional training necessary for their personnel related to wildland fire issues. The NWCG provides both online and in-person training and qualifications courses. An additional resource is the National Fire Protection Association's (NFPA's) "Assessing Wildfire Hazards in the Home Ignition Zone" 2-day seminar. State forestry agencies will also have training opportunities.

Local Officials and Decisionmakers

Local officials and decisionmakers (including elected council members, city managers, and appointed municipal officials dealing with building regulation and community representatives) all work to shape development in their communities and ensure an ideal quality of living. These officials reflect the desires of the local population and ensure a tax base that permits the necessary services used by residents. As populations fluctuate, adding or subtracting new families and retirees, the landscape of communities change as well. Local officials will understandably encourage growth, but as building continues to expand in areas that include the WUI, so must the knowledge of the fire threat. The responsibility of local officials in FACs is to advocate a style of development that permits residents to balance the benefits of the environment in which they live with the risk posed by living there.

Local officials work together to shape development in their communities and ensure an ideal quality of living. They promote the balance between the benefits of the environment in which they live and the risk posed by living there.

When considering FACs, local officials should address

- types of residential and commercial development and future trends;
- existing comprehensive planning, zoning, and ordinances;
- CWPPs;
- existing homeowner association regulations on landscaping, home design, and building material use;

resident's knowledge of the wildland fire risk;

- demographic considerations of at-risk populations;
- existing local organizations involved in wildland fire and natural resources efforts; and
- existing Firewise Communities or other public education wildland fire preparedness programs .

While this section cannot specify what every community should adopt, there are multiple sources that can be used to help frame the process. These include

International Code Council

Annually, the International Code Council (ICC) publishes the International Wildland-Urban Interface Code. This guide contains provisions for constructing buildings near and in wildland areas by outlining details regarding water supply, defensible space, accessibility, fire spread, and more. Another reference is the International Building Code. The ICC classifies the International Building Code as a book that provides "valuable structural, fire, and life-safety provisions that cover means of egress, interior finish requirements, roofs, seismic engineering, innovative construction technology, and building occupancy classifications ." They highlight that the code book's content is, "developed in the context of the broad-based principles that facilitate the use of new materials and building designs, making this an essential reference guide for students seeking a strong working knowledge of building systems."

Insurance Services Office

Local officials can use the Insurance Services Office's (ISO's) Fire Suppression Rating Schedule (FSRS) when reviewing the individual community's capabilities. The schedule measures the key elements of a community's fire-suppression ability which can provide local officials with beneficial building practices. The grading system used is called the Public Protection Classification (PPC) . The ISO is constantly updating its material by incorporating nationally accepted standards from the American Water Works Association (AWWA) and the NFPA. The grading assigned is used as a constructive benchmark for fire departments and other public officials to gauge their efforts and plan accordingly.

National Fire Protection Association

The NFPA maintains numerous codes and standards that provide direction on development in the WUI. Below are a few examples:

- NFPA 1, Fire Code, Chapter 17;
NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas;
NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting;
NFPA 1143, Standard for Wildland Fire Management; and
- NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire.



In addition to the adoption of codes and standards, local decisionmakers should review their community's comprehensive planning process . One successful example of such an effort comes from Alachua County, FL, in response to State-wide wildland fires in the summer of 1998. Elected officials, homeowner associations, the agricultural community, and the forestry industry came to consensus on a need for action and chose their growth management policies as an area for improvement . The county public safety director, in conjunction with the county planning department, developed a wildland

fire mitigation section for the county's comprehensive growth management plan.' The final plan influenced all new development activities in areas where the risk of wildland fire exists or could be reasonably predicted.

A simple ordinance could have been passed with less effort, but the inclusion of wildland fire language in the comprehensive plan ensured the effort would enjoy the full weight of county law. Numerous public hearings were held and the section required State approval, which it eventually achieved. Many sections of the comprehensive growth management plan were challenged and vetted at the local level, but the wildland fire mitigation piece was not due to early achievement of broad consensus amongst the various stakeholders. While this process took years, it serves as an example of what local decision-makers can achieve through regular municipal processes.

The Public

Many people move to the WUI, bringing with them the same fire-protection expectations they had when living in urban or other suburban communities. The responsibility of the public in FACs is to fully understand and prepare for the risk of wildland fire. Homes that do not reflect the risk pose not only a threat to the residents themselves, but neighboring homes and emergency services as well. FACs support an environment where individuals have access to information and necessary knowledge concerning protection of their life, property, and the community.

When considering FACs, the public should address

- building relationships with local public safety agencies and residents before a fire starts;
- what to expect from local emergency responders in the first 24 hours of a fire;
- understanding of the Home Ignition Zone and Defensible Space;
- how to create and maintain a fuel-free area;
- vegetation along fences and fences made of flammable materials attached to homes;
- proper landscaping and plant selection;
- what the environmental FAC was before local development;
- placement of radiant heat sources near the home (i.e., wood piles, fuel tanks, sheds);
- thinning trees and ladder fuels around the home;
- debris under decking and patios;
- understanding the ember danger;
- having a situational awareness when fire warnings are called;
- having a personal and family preparedness plan; and
- understanding what evacuation means to you and your community.

There are various public education tools focusing on wildland fire preparedness from which individuals and homeowners can learn. At the national level, these include the Firewise Communities Program, created by the NFPA. The program focuses on teaching residents how

The public must understand and prepare for the risk of wildland fire. Homes that are not properly prepared and maintained create a risk for the residents and the emergency services.



For further reading, visit the Alachua County website and find within the Alachua County Comprehensive Plan, page 290, the Conservation & Open Space Element, Objective 5.6. Wildfire Mitigation section.

to adapt to living with wildland fire and encourages neighbors to jointly collaborate in a community-wide effort before a fire threat to prevent the loss of life and property. Many other State-specific programs exist and you can learn more about these from your State forestry departments.

Important wildland fire preparedness concepts for the public to review include

- **Defensible Space:** The required space between a building structure and the wildland area that surrounds it. This area creates a buffer between the structure and the wildland fire, increasing the survivability of the home from radiant heat or direct flame. Zone 1 extends 30 feet from the building. Zone 2 extends 30 to 100 feet. For more information on defensible space, visit the Resources page at www.firewise.org and www.firewise.org/resources/firefighter.htm
- **The Ember Issue:** Windblown embers are a cause of concern in the WUI. Most structures within the WUI are not destroyed from direct-flame impingement, but rather from embers. Embers may precede the flaming fire front, carried by the winds that distribute burning brands or embers over long distances. These embers fall, or are wind-driven into receptive fuels on structures, often going undetected for some time. As the fire front passes, these small embers may ignite incipient fires that spread to the home and potentially the entire neighborhood.
- **Hardening Your Home:** A conceptual plan that looks to protect a home through its actual composition of roofs, eaves, vents, decks, windows, and other aspects. Even making one change can increase a home's possibility of survival.
- **The Home Ignition Zone:** Another concept plan that places the home in the context of its overall surroundings. In a high-hazard area, this zone can extend up to 200 feet from a home and the stepped-zone-focus includes preparedness techniques both to the home and surrounding vegetation.

As you have questions about techniques, materials, and procedures, connect with your local fire department, State forestry personnel, or local landscaping groups. Another resource is provided by the Insurance Institute for Business and Home Safety (IBHS), who conducted a series of beneficial tests in spring 2011 at their research center in Richburg, SC, to explore the effects of ember intrusion on differing home constructions. The tests were covered by NBC's "The Today Show" and illustrate both the threats from wildland fire and preparedness steps residents can take.



Graphic used by permission from NFPA Firewise Communities program.

Land Managers

Whether it be a rancher, timber company, local government, State regulatory body, or Federal land agency, each have a responsibility in understanding their role in land stewardship, their impacts on surrounding lands, and what they need to know to become better neighbors. The umbrella of land managers can be divided into two specific groups: private land managers and the public sector regulators. Private land managers can include ranchers, farmers, corporate entities, timber interests, and large, private landowners. Public sector regulators include the Federal land management agencies, State-level bodies, local governments buying "open space" lands, and water utility districts, hydropower regulators, and ground water recharge lands entities.

Land managers are encouraged to promote relationships between private and public land managers and work toward reducing wildland fire threats.

Land managers, private and public alike, do not manage their land in a vacuum. Vegetation management is important, as is the influence of city and State agencies over land use. Much like the previous groups of fire departments, local officials and the public, and private and public land managers may not be aware of what their management stewardship encompasses relating to vegetation fuels and fuel reduction to protect surrounding or neighboring communities and lands at risk to wildland fire. Mitigation work by one will be negated if neighboring lands do not address their own risks and work collaboratively towards the common goal of risk reduction.

When considering FACs, private and public land managers should address

- identifying types of risk on their land and its impact to surrounding lands, such as overgrown fuels, pests, fire protection lines, sensitive areas, and access;
- the relationships between private and public land managers concerning mutual understanding of land use and ability;
- the role of economic factors on land use and the markets that affect land-use decisions;
- understanding of the role of prescribed fire and the local and State protocols for its use;
- access to risk assessment resources and postassessment assistance;
- existing comprehensive planning, zoning, ordinances, urban/suburban park, and recreation land planning and urban forest initiatives;
- expectations and understanding of local risks and resources by out-of-State land managers; and
- the relationships between private landowners and public safety agencies in sharing information about sensitive areas on lands, gate locations, and water sources.

Land managers must build their own education, access to resources, and relationships with each other. The best initial resource for both private and public landowners is the State forestry agency. They can provide all land managers with a common foundation of State-specific understanding on fuels, fire risks, available resources, pertinent regulations, and existing Statewide wildland fire preparedness and mitigation efforts. The National Association of State Foresters provides resources and research specific to land management, in addition to contact information for each State forestry agency.

In building the understanding of land stewardship and the impacts on surrounding lands, land managers **can review resources** provided by the Extension Disaster Education Network, which connects State university extension educators with shared resources to reduce the impact of disasters.



Now What? Moving Toward a Fire-Adaptive Community



Remembering the Local Context

Achieving FACs is not just found by having an understanding of defensible space and vegetation types, but is gained by creating a community-wide effort, where all parties, citizens and government, are involved in successfully adapting to the wildland fire challenge. Fire departments, local decisionmakers, the public, and land managers each have an important role to play in addressing FACs. Understanding, respecting, and mitigating these risks is important. The responsibility of fire departments in FACs is to

engage and educate residents about properly preparing for threat and building situational awareness. For local officials and decisionmakers, it is to advocate a style of development that permits residents to enjoy the benefits of living near nature, while ensuring that quality of life, property, the tax base, and personal safety is not at risk. For the public, it is understanding the responsibilities of living in wildland fire-prone areas and playing an active and educated role in the wildland fire solution. For land managers, it is understanding their responsibilities in land stewardship, their impacts on surrounding lands, and what they need to know to become better neighbors.

As agencies, organizations, and individuals have sought to address the wildland fire threat over the years, many comprehensive and successful programs have been developed and delivered to specific audiences within the WUI. FACs build on this strong foundation by identifying roles and responsibilities each specific audience should do in relation to each other and encourage a community, cohesive, and synergistic approach to the shared threat. Get into the process and determine what your community both has and needs. Each community will be different, but a FAC can serve as a model for a truly collaborative, multilevel effort for positive change. The following funding, resource, and checklist tools provide you with the ability to take the first step in building the relationships that foster a FAC.

Funding

With any collaborative work at the home, community, and higher level, the issue of funding and availability of resources becomes an important issue to address. Existing wildland fire preparedness programs often highlight the roles and benefits of local partnerships in identifying funding for projects and outreach. Often, communities can access funding through mitigation planning by their State forestry agencies and other regulatory bodies for specific projects and risks. Community work on Hazard Mitigation Plans and CWPPs can also identify needs and specific funding options. Talk with your State forestry agency about available funding. At the Federal level, the NWCG **maintains a grant funding resource roster**. As this list can change, check with their website often for new opportunities. The list includes

- Volunteer Fire Assistance: www.forestsandrangelands.gov/communities/index.shtml
- State Fire Assistance: www.forestsandrangelands.gov/communities/index.shtml
- Rural Fire Assistance : www.nifc.gov/rfalindex.html
- Reimbursement for Firefighting on Federal Property: www.usfa.fema.gov/fireservice/grants/rfff/44cfr.shtm
- Fire Management Assistance Grant Program (FMAGP): www.fema.gov/government/grant/fmagplindex.shtm

Predisaster Mitigation Competitive (PMD) : www.fema.gov/government/grant/pdm/index.shtm

- Hazard Mitigation Grant Program (HMGP): www.fema.gov/government/hmgrp.index.shtm
- Assistant to Firefighter Grant (AFG) Program : www.fema.gov/firegrants/
- Staffing for Adequate Fire Emergency Response Grants: www.fema.gov/firegrants/
- Assistance to Firefighter Station Construction Grants (SCG-ARRA): www.fema.gov/government/grant/arra/index.shtm#O
- Interoperable Emergency Communication Grant Program (IECGP) : www.fema.gov/government/grant/iecgp/index.shtm

Fire-Adapted Communities Checklist for Implementation

Now that you understand the roles and responsibilities of the various local stakeholders in a Fire-Adapted Community (FAC), you can use this checklist to direct next steps towards implementation. Successful efforts rely on building cohesion between the various players, clearly outlining what your community needs and how each group can help.

The steps are as follows.

1. Initiate the FAC process at the local level.

- a. Determine stakeholder participation from fire and public safety, the public, local officials, land managers, and others.
- b. Form a working committee and designate a coordinator.

2. Assess levels of risk, current activity, and local capacity.

- a. Review existing local development plans, wildland fire mitigation efforts, and preparedness programs to assess your community's status.
- b. Consider the level of public understanding of wildland fire risks in the community you have defined and identify preparedness and situational awareness education that can be offered to various groups.
- c. Determine the level of local risk and designate responsibilities for working group members for action.
- d. Define and prioritize a set of long-term FAC issues related to risk within the community and its surrounding environment for the group to track.

3. Develop a set of strategies and actions for each risk category/issue.

- a. Assign responsibility to subgroups based on risk and start "fire adapting" using the FAC tools.
- b. Develop goals, timelines, and needs for each risk area.
- c. Bring in more working group members if necessary.
- d. Hold public workshops to educate the public on the risks faced and resources available for action.
- e. Seek funding if necessary from county, State, and other sources.
- f. Track working group progress and share this with residents often.

4. Maintain the momentum and sustainment.

- a. Encourage continued involvement by the various working group members.
- b. Maintain exposure of working group efforts and regularly inform residents of these actions.
- c. Identify how new residents can become involved in the effort.

Resources

This chart suggests some areas of risk and possible roles for workgroup members.

Risk	Y/N	Responsible Working Group Member
Is there risk from fuel buildup on public and private lands near the community? How do the various land managers interact?		Federal, State, local, public, and private land managers, i.e., U.S. Forest Service, local timber producers, ranchers, etc.
Is there a fuel buffer around the community?		
Are structures defensible from fires and ember intrusion? How do structures interact with their environment in the WUI?		Firewise liaison, Firewise coordinators, active community members who might get the ball rolling.
Is the community Firewise?		
Does the community have a CWPP?		Fire department, local, or regional emergency managers, local citizens, and businesses (also include local forester)?
Is the fire department informed, prepared, and engaged?		
Has the fire department joined the Ready, Set, Go! Program?		Fire department, town board.
Are there codes and ordinances in place to promote safe building practices and proper land management?		Community, county, or State planning and zoning representatives; town board.
Are there safe, maintained, designated, and promoted evacuation routes? Do residents know about them?		Law enforcement, fire department, land managers, town board.
Are there safe zones inside the community in case evacuation is not feasible? Do residents know where they are located?		Law enforcement, fire department, land managers, town board.
Are public safety response mutual-aid agreements in place?		Fire department, land managers with fire authority, nearby fire departments, law enforcement.
Do members of the community understand the local response capability to protect private property and understand the role they play in their own protection?		Fire department, land managers with fire authority, law enforcement, media.

For further reading on FACs and the related wildland fire threat, visit the following resources:

- “2009 Quadrennial Fire Review”;
- The National Cohesive Wildland Fire Management Strategy;
- “Federal Land Assistance, Management and Enhancement Act of 2009 Report to Congress”;
- The Forests and Rangelands website and its sections on wildland fire and forest management;
- The National Wildfire Coordinating Group website; and
- The National Association of State Foresters website sections on Issues and Publications.

