

MONO COUNTY PLANNING COMMISSION

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Bridgeport, CA 93517
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AGENDA

August 20, 2020 – 10 a.m.

As authorized by Gov. Newsom’s Executive Orders, N-25-20 and N-29-20, the meeting will be accessible remotely by live cast with Commissioners attending from separate remote locations. There is no physical meeting location. This altered format is in observance of recent recommendations by local officials that certain precautions be taken, including social distancing, to address the threat of COVID-19.

The meeting may be observed (no commenting) at

http://monocounty.granicus.com/MediaPlayer.php?publish_id=6fc98582-2685-444c-a990-efca1a85fde0

The meeting may be joined by video at <https://monocounty.zoom.us/j/96157421508> and by telephone at 669-900-6833 (Meeting ID# is 961 5742 1508) where members of the public shall have the right to observe and offer public comment. If you are unable to join the Zoom meeting and wish to make a public comment prior to the meeting, please submit your comment, limited to 250 words or less, to cddcomments@mono.ca.gov by the close of the public hearing or public comment portion of an agenda item. Comments longer than 250 words may be summarized, due to time limitations. All comments will be made a part of the record.

An alternate method to access the video meeting is visit <https://zoom.us/join> and enter Meeting ID: 961 5742 1508.

**Agenda sequence (see note following agenda).*

1. CALL TO ORDER & PLEDGE OF ALLEGIANCE

2. REVIEW OF REMOTE MEETING MANAGEMENT & PROTOCOLS – p. 1

3. PUBLIC COMMENT: Opportunity to address the Planning Commission on items not on the agenda

4. MEETING MINUTES: Review and adopt minutes of July 16, 2020 – p. 2

5. PUBLIC HEARING: None

6. WORKSHOPS:

A. GENERAL PLAN AMENDMENT – SAFETY ELEMENT: Proposed amendments to the General Plan Safety Element as required after the Housing Element update cycle, and for consistency with CalFire requirements and the recently adopted Local Hazard Mitigation Plan. – p. 4

B. GENERAL PLAN AMENDMENT – LAND USE ELEMENT CHAPTER 16 (ACCESSORY DWELLING UNITS): Proposed amendments to General Plan Land Use Element Chapter 16, Accessory Dwelling Units, to ensure consistency with recent state law changes. – p. 74

DISTRICT #1
COMMISSIONER
Patricia Robertson

DISTRICT #2
COMMISSIONER
Roberta Lagomarsini

DISTRICT #3
COMMISSIONER
Daniel Roberts

DISTRICT #4
COMMISSIONER
Scott Bush

DISTRICT #5
COMMISSIONER
Chris I. Lizza

7. REPORTS

A. DIRECTOR

B. COMMISSIONERS

8. INFORMATIONAL

9. ADJOURN to regular meeting September 17, 2020

***NOTE:** Although the Planning Commission generally strives to follow the agenda sequence, it reserves the right to take any agenda item – other than a noticed public hearing – in any order, and at any time after its meeting starts. The Planning Commission encourages public attendance and participation.

In compliance with the Americans with Disabilities Act, anyone who needs special assistance to attend this meeting can contact the Commission secretary at 760-924-1804 within 48 hours prior to the meeting to ensure accessibility (see 42 USCS 12132, 28CFR 35.130).

Agenda packets are posted online at www.monocounty.ca.gov / Planning Commission under the “Government, Boards and Committees” menu / Agendas and Minutes. For inclusion on the e-mail distribution list, send request to mbell@mono.ca.gov

Interested persons may appear before the Commission in the remote meeting to present testimony for public hearings, or prior to or at the hearing file written correspondence with the Commission secretary. Future court challenges to these items may be limited to those issues raised at the public hearing or provided in writing to the Mono County Planning Commission prior to or at the public hearing.

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Remote Meeting Procedures

Instructions for observing the meeting only (no commenting): 1) Click on the “live video” link found on the email/calendar posting for the meeting or 2) search “Mono County Granicus” and click on that link or [here](#) which will bring up the webpage with all live stream County meetings, find the appropriate meeting under “Upcoming Events” and click on “View Event”.

Instructions for joining the videoconference meeting with option to comment: Click the weblink provided in the agenda or go to <https://zoom.us/join> and input the *Meeting ID* posted on the agenda. Audio conferencing options will pop up; join through your computer speaker and microphone, or by phone by dialing (669) 900-6833 and entering the same *Meeting ID* that is posted on the agenda.

Instructions for joining the meeting by phone only (no video) with option to comment: Dial (669) 900-6833 and enter same *Meeting ID* posted on the agenda.

Upon Meeting Entry

- All participants will be muted and video will be off. *Please remain muted and keep your video off until asked to speak by the meeting moderator.*
- Participants may only chat with the host on technical issues. Any comments of substance on projects should be stated in the meeting and will not be answered or read from the Zoom chat.

To comment

- **Time Limits:** Please limit comments to the time specified by the Chair. Do not restate points that have already been made; instead, state your agreement with previous speakers.
- **On the Zoom videoconference meeting:** When the Chair calls for public comment, please select “Participants” at the bottom of the screen and then select “Raise Hand.” Wait for the meeting moderator to call your name and unmute you. At that time, you may turn on your video if you wish. Once you have finished speaking, please turn off your video and mute yourself.
- **On the phone:** When the Chair calls for public comment, please dial *9 to raise your hand and be placed in the comment queue. Wait for the meeting moderator to ask you to speak and unmute you. Once you have finished speaking, please mute yourself (*6).
- **Written comments:** Written comments will be accepted until the start of the meeting at cddcomments@mono.ca.gov. Written comments will not be accepted during the meeting; participants can provide comments and testimony via the Zoom meeting.
- Planning Commissioners will not respond to comments in the Chat Room. The chat for participants with each other is disabled.

Meeting Decorum and Ground Rules

- Verbal comments and video must remain respectful and appropriate with the same expectations as a physical meeting.
- Participants shall remain muted and with video off until asked to speak by the meeting moderator.
- The connection will be terminated immediately with no warning for “Zoom bombing.”

Technical Support: For technical support during the meeting, email cddcomments@mono.ca.gov or post a comment to staff hosts in the Zoom chat room.

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DRAFT MEETING MINUTES

July 16, 2020 – 9 am

COMMISSIONERS: Scott Bush, Roberta Lagomarsini, Chris Lizza, Dan Roberts, Patricia Robertson

STAFF: Wendy Sugimura, director; Michael Draper, planning analyst; Christy Milovich, deputy county counsel; Gerry Le Francois, principal planner; Nick Criss, code compliance officer; Melissa Bell, planning commission clerk;

PUBLIC: Charles, George Larson, Jin Hewett, korijensen, Maciek Napierala, Marmotly, Mary Cheffers, Tim Schnabel, George Coon, 760-818-5162, 775-560-9031, Jim, susfo

1. **CALL TO ORDER & PLEDGE OF ALLEGIANCE:** Chair Scott Bush called the meeting to order at 9:02 am in Zoom meeting room and attendees recited the pledge of allegiance to the flag.
2. **REVIEW OF REMOTE MEETING MANAGEMENT & PROTOCOLS:** Wendy Sugimura reviewed meeting procedures and format.
3. **PUBLIC COMMENT:** No public comment.
4. **MEETING MINUTES**
 - A. **April 16, 2020 minutes:**
MOTION: Approve April 16, 2020 minutes.
Lizza/Bush. Roll-call vote- Ayes: Lizza, Roberts, Robertson, Lagomarsini, Bush.
 - B. **May 21, 2020 minutes:**
MOTION: Approve May 21, 2020 minutes.
Bush/Lagomarsini. Roll-call vote- Ayes: Lizza, Roberts, Robertson, Lagomarsini, Bush.
 - C. **June 18, 2020 minutes:**
MOTION: Approve June 18, 2020 minutes.
Lagomarsini/Lizza. Roll-call vote- Ayes: Lizza, Robertson, Lagomarsini, Bush. Abstain: Roberts.
5. **PUBLIC HEARING**
 - A. **JUNE LAKE HIGHLANDS SPECIFIC PLAN AMENDMENT #2 AND MODIFICATIONS TO TRACT MAP #34-24 and #34-26** to amend the 2001 June Lake Highlands Specific Plan in order to allow properties to conduct short-term rental (rental less than 30 days) in compliance with the Mono County General Plan Land Use Element, potentially subject to certain criteria such a cap on the number of properties that may be approved and other restrictions.
 - Michael Draper presented project and answered questions from the Commission.
 - **PUBLIC COMMENT:** Chair Bush advised that there had been two previous meetings on this project and that all testimonies made in previous meetings are carried over and are in the record. Wendy Sugimura moderated the Public Hearing. Commissioners heard from the applicant, George Larson, who provided additional background and information on the project. Commissioners heard comments from the public via Zoom. Public comments were provided by Kurt Erickson, Jin

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Hewett, Andre Blain, George Cool, Charles (?), Gary Johansen, and Mary Cheffers. No additional email comments were received.

CLOSE PUBLIC COMMENT

- **DISCUSSION:** Commissioners discussed optional permit types, vehicle or person limitations per rental, permit quantity cap, noise impacts, increased activity, property value impacts, community & neighborhood impacts, hot-bed needs in June Lake, possible lottery system for permit issuance, limitation on compliance violations, restricting permits to parcels with built residences, compliance enforcement, and permit application processes.

Break: 11:41 am - 11:57 am

MOTION: Find that the project qualifies as a Categorical Exemption under CEQA guidelines §15301(a) and adopt Resolution R20-02 with the findings listed under section 2 in the staff report, with the modifications that short term rentals will be authorized under a Vacation Home Rental Permit rather than a Use Permit, that the number of permits be limited to twenty-seven (27) units in the sub-division, and a limit of one (1) permit per owner.
Roberts/Bush. Roll-call vote- Ayes: Lizza, Roberts, Robertson, Lagomarsini, Bush.

6. **WORKSHOP:** None.

7. **REPORTS**

- A. **DIRECTOR:** Director Wendy Sugimura provided a report on upcoming projects.
- B. **COMMISSIONERS:** No reports.

8. **INFORMATIONAL:** None.

9. **ADJOURN** at 12:08 pm to the next regular meeting on August 20, 2020.

Prepared by Melissa Bell, Planning Commission clerk

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Planning Division

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August 20, 2020

To: Mono County Planning Commission

From: Kelly Karl, Associate Planner

Re: WORKSHOP – Safety Element

RECOMMENDATION

Conduct workshop and provide direction to staff on proposed changes.

BACKGROUND

General Plan Safety Elements are required by State Planning law (Government Code § 65302 (g)) to provide "for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, slope instability leading to mud slides and landslides, liquefaction, and other seismic and geologic hazards known to the legislative body, flooding, and wildland and urban fires." The Mono County Safety Element establishes goals, policies and implementation measures intended to reduce the risk from locally significant hazards (including avalanches, floods, fires, and geologic hazards) to an acceptable level.

Updates to the Safety Element are typically triggered by an adoption of or an update to a Local Hazard Mitigation Plan (LHMP). The "Mono County and the Town of Mammoth Lakes Multi-Jurisdictional Hazard Mitigation Plan (including the Mono County Community Wildfire Protection Plan)" (MJHMP) was adopted by the Mono County Board of Supervisors on May 21, 2019. Per SB 1241, Safety Elements are required to be reviewed and updated following the next revision of the Housing Element of the General Plan on or after January 1, 2014. The 2019-2027 Mono County Housing Element was adopted November 5, 2019. The Safety Element was last updated in 2015, shortly after the 2014 Housing Element update. A comprehensive update to the Safety Element is required to be consistent with the updated MJHMP and the Housing Element.

DISCUSSION

The Community Development Department is proposing to update the Safety Element to be consistent with the recently adopted Housing Element & Mono County and Town of Mammoth Lakes Multi-Jurisdictional Hazard Mitigation Plan (Attachment 1). Per SB 379, all counties must include climate adaptation and resiliency in the Safety Element of their General Plan upon the next revision beginning January 1, 2017. Thus, this draft Safety Element includes new goals, policies, and strategies for climate change resiliency and adaptation based on the analysis and recommendations of the 2018 Mono County Vulnerability Assessment (Attachment 3).

Government Code § 65302.5 specifies Safety Element review procedures which requires notification be sent to the California Geological Survey of the Department of Conservation, State Board of Forestry and Fire Protection, the Governor's Office of Emergency Services (Cal OES), and every local agency that provides fire protection to territory in the County. The draft amendment to the Safety Element is required to be submitted to the State Board of Forestry and Fire Protection 90 days prior to adoption. However, before submitting a formal review request to the Board of Forestry and Fire Protection, local jurisdictions are encouraged to submit their draft Safety Element to the Office of the State Fire Marshal, Land Use Planning Program for pre-review comments. Mono County's draft Safety Element was submitted to the State Fire Marshal's Land Use Planning Program and received a completeness checklist with recommended edits/updates in February 2020 (Attachment 2). Below are four items that Land Use Planning Program staff recommended Mono County update in the next draft of the Safety Element:

1. Recommend a policy addressing re-development after a large fire.
2. Recommend a policy addressing evacuation routes.
3. Recommend a policy addressing the maintenance of vegetation clearance on public and private roads.
4. Recommend a policy to include fuel breaks in the layout/siting of subdivisions and a policy to identify a policy for the ongoing maintenance of existing or proposed fuel breaks.

Planning Division staff is seeking input from the Planning Commission on the proposed updates prior to resubmitting the draft Safety Element for a second pre-review by the Office of the State Fire Marshal, Land Use Planning Program. After the second pre-review, staff will submit a formal request for review to the State Board of Forestry and Fire Protection which requires 90 days notice. After approval by the State Board of Forestry and Fire protection, staff will agendize the 2020 Safety Element update for formal review and approval by the Planning Commission and Board of Supervisors.

This staff report has been reviewed by the Community Development Director.

ATTACHMENTS

- Attachment 1: 2020 Mono County Safety Element (draft redline)
- Attachment 2: Office of State Fire Marshall's Safety Element Recommendations
- Attachment 3: Mono County Vulnerability Assessment

MONO COUNTY GENERAL PLAN

SAFETY ELEMENT

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I. INTRODUCTION

State Planning law (Government Code § 65302 (g)) requires the Safety Element of a General Plan provide "for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, slope instability leading to mud slides and landslides, liquefaction, and other seismic and geologic hazards known to the legislative body, flooding, and wildland and urban fires." In addition, the General Plan Guidelines state that the aim of the Safety Element is to "reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides and other hazards."

This Element outlines goals, policies and implementation measures designed to reduce the risk from locally significant natural hazards to an acceptable level. Successful implementation of this Element should reduce the loss of life, injuries, major damage to property, and the economic and social dislocation which may result from public safety hazards. Maps of known natural hazard areas are included in the **Master Environmental Assessment (MEA)**, ~~and~~ the General Plan map at <https://monomammoth.maps.arcgis.com/home/>, and the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) at https://www.monocounty.ca.gov/sites/default/files/fileattachments/planning_division/page/9617/mono_county_mjhmp_final_052919_w-appdx.pdf.

RELATIONSHIP TO OTHER ELEMENTS AND PLANS

Issues and policies presented in this Element are closely linked to the Land Use, Conservation and Open Space, **Housing**, and Circulation elements of the Mono County General Plan.

This Element outlines goals, policies and action items designed to reduce the risk from locally significant hazards to an acceptable level. A number of other planning documents also address hazards in the county. A complete list of those documents is included in the Safety section of the Mono County Master Environmental Assessment.

MONO COUNTY MASTER ENVIRONMENTAL ASSESSMENT (MEA)

The MEA contains background information on hazards in the county including maps of known hazard areas ~~are included in the MEA~~ and is complemented by additional information and maps in the 2015 Environmental Impact Report for the General Plan/Regional Transportation Plan Update at (<https://monocounty.ca.gov/planning/page/general-plan-eir>).

CLIMATE CHANGE VULNERABILITY ASSESSMENT

Section 65302 of the California Government Code requires every general plan safety element to include a vulnerability assessment identifying the risks that climate change poses and the geographic areas at risk from climate change impacts. The Mono County Vulnerability Assessment was completed in 2018 and includes the technical basis for informing policies that address changing vulnerabilities as a result of climate change included in this element. A copy of the assessment is available by request from the Community Development Department.

MONO COUNTY GENERAL PLAN

MONO COUNTY ~~MULTI-JURISDICTIONAL LOCAL~~ HAZARD MITIGATION PLAN (LMJHMP)

The Mono County ~~Multi-Jurisdictional Local~~ Hazard Mitigation Plan (~~MJL~~HMP) ~~is a multi-jurisdictional hazard plan that~~ addresses the unincorporated areas of Mono County as well as the Town of Mammoth Lakes, the county's only incorporated area. It also considers areas outside the county that either may impact areas within the county; e.g., Rock Creek Lake in Inyo County, or that are accessed from the county; e.g., Reds Meadow in Madera County. The ~~LMJHMP~~ is a planning document intended to identify hazards and provide mitigation so impacts to people and property from identified hazards can be minimized. ~~The MJHMP is incorporated by reference and cross-referenced when applicable.~~

FIRE PLANS

The Mono County California Community Wildfire Protection Plan (CWPP) outlines fire hazards in Mono County, analyzes existing local preparedness and firefighting capabilities, and contains suggested solutions to address identified hazards. In addition, local fire protection districts, in some cases, have ~~local community wildfire protection plans (CWPP) or other~~ fire protection planning documents. ~~The CWPP and local fire district plans are integrated into the Mono County MJHMP.~~

EMERGENCY OPERATIONS PLAN (EOP)

The Mono County Emergency Operations Plan (EOP) addresses specific emergency procedures for a variety of events, including natural hazard events, terrorism, airplane crashes, bioterrorism, etc. ~~The EOP is available by request from the Mono County Sheriff's office, which is also the Mono County Office of Emergency Services.~~ The Town of Mammoth Lakes also has an Emergency Operations Plan.

MONO COUNTY LAND DEVELOPMENT REGULATIONS

The Mono County Land Development Regulations in the Land Use Element contain regulations that specifically address flood and fire hazards; i.e., Chapter 21, Floodplain Regulations, and Chapter 22, Fire Safe Regulations.

AIRPORT LAND USE COMPATIBILITY PLANS

The Airport Land Use Compatibility Plans for the County airports address safety issues at Bryant Field in Bridgeport and at Lee Vining Airport. Mammoth Yosemite Airport, which is owned and operated by the Town of Mammoth Lakes, also has an Airport Land Use Compatibility Plan. Those plans focus primarily on safety issues related to land use in the area surrounding the airports.

FEDERAL AGENCY DOCUMENTS

The majority of the land in Mono County is public land. The various state and federal agencies responsible for the management of those lands have land management plans and specific hazard management plans such as fire safety plans that address hazard prevention on public lands. In addition, federal agencies responsible for certain hazards, such as the US Geological Survey, have documents that focus on specific hazards in the county such as volcanic hazards.

II. ISSUES/OPPORTUNITIES/CONSTRAINTS

Significant potential hazards to public health and safety exist in Mono County. ~~The Safety Element contains a discussion, goals and policies for hazards that pose the greatest risk including: These hazards include:~~ avalanches; floods; fires; geologic hazards such as landslides ~~and~~, mudflows, ~~and~~ seismic hazards; and volcanic eruptions. ~~The following section briefly discusses the constraints to development posed by each of these high-risk hazards. In addition, the County's Multi-Jurisdictional Hazard Mitigation Plan contains additional measures to address these and other hazards that may affect the county's population and assets. Additional hazards addressed by the Multi-Jurisdictional Hazard Mitigation Plan include dam failure, diseases and pests, drought, earthquake, extreme heat, severe wind, hazardous materials, severe winter weather and snow, wildlife collisions, and climate change--related hazardous conditions.~~

~~The following section briefly discusses the constraints to development posed by each of these hazards.~~

SEISMIC HAZARDS

Earthquakes

Mono County covers an area that is relatively young by geologic standards. It is located at a stress point where the earth's crustal plates are exerting opposite pressures against each other. This combination creates both "tectonic" earthquakes (e.g., land mass movement) and volcanic activity that can trigger earth shaking (e.g., magma chamber movement and lava dyke formations).

Fault Movement

Earthquakes are usually caused by sudden movement along geologic faults. The California Department of Conservation, Division of Mines and Geology (DMG), has evaluated potentially and recently active faults throughout Mono County including most of the community areas. Based upon these DMG studies, fault hazard zones (Alquist-Priolo Special Studies Zones) have been designated for the county (see the ~~MEA or~~ **General Plan Map or MJHMP**).

Ground Shaking

The primary seismic hazard in the county is strong to severe ground shaking generated by movement along active faults. The entire county, except for a small portion of the Sierra crest, is in an area where intense ground shaking is possible. This area has been designated as a Seismic Zone D, the zone of greatest hazard defined in the California Building Code. Probabilistic Seismic Hazard Assessment (PSHA) maps prepared by the California Geological Survey (CGS) and the USGS show that the areas with the greatest earthquake shaking hazard in Mono County include the Long Valley Caldera, the western portion of the Mono Basin extending north along the Eastern Sierra escarpment, the western edge of the White Mountains, the southeast corner of the county around Oasis, and the northern tip of the county around Topaz.

The Long Valley-Mammoth Lakes region has experienced numerous earthquakes caused by the movement of magma below the earth's surface. The oval-shaped Long Valley Caldera spans an area approximately 10 by 20 miles, and is among the largest volcanoes

MONO COUNTY GENERAL PLAN

in the continental United States. Scientists suspect that the earthquakes are caused by shifts of buried stone slabs that are made unstable as magma moves within the volcano.

Ground Failure

Ground failure induced by ground shaking includes liquefaction, lateral spreading, lurching, and differential settlement, all of which usually occur in soft, fine-grained, water-saturated sediments, typically found in valleys. Areas at high risk are mapped in the **MJHMP–MEA**. During the 1980 Mammoth Lakes earthquake sequence, ground failure was prevalent at Little Antelope Valley, along margins of the Owens River in upper Long Valley, along the northwest margins of Lake Crowley, and along Hot Creek Meadow.

All of Mono County is situated within Seismic Zone D, and consequently new construction in the county must comply with stringent engineering and construction requirements. Existing buildings that may be subject to seismic hazards must comply with the requirements of the unreinforced masonry building law (Government Code § 8875).

OTHER GEOLOGIC HAZARDS

Rockfall, Mudflow and Landslide Hazards

Rockfalls and landslides are particularly common along the very steep slopes of the eastern scarp of the Sierra Nevada, where talus slopes provide evidence of abundant past rockfalls. During the winter and spring months, rockfalls can be lubricated with snow and ice and can become extremely fast moving and destructive. Landslides in areas of hilly and mountainous terrain can be triggered by ground shaking, heavy rains or human activities such as road cuts, grading, construction removal of vegetation, and changes in drainage.

The state Department of Conservation, Division of Mines and Geology has yet to prepare maps of earthquake-induced landslide hazards for Mono County as required by the Seismic Hazards Mapping Act. **However, a landslide susceptibility map is included in the MJHMP based on California Geological Society mapping.** Maps of rockfall hazard areas are based upon slope conditions and local and historical knowledge. Community areas in the county affected by rockfall hazards include Lundy Canyon and the June Lake Loop (primarily the Down Canyon area). The remaining rockfall risk areas are outside community areas.

Mud and debris flows involve very rapid downslope movement of saturated soil, sub-soil, and weathered bedrock. Large mud and debris flows, such as the one that occurred in 1989 in the Tri-Valley area, can be destructive, particularly at the mouths of canyons. Previous evidence of extensive mud and debris flows are evident in the large alluvial fans in the Tri-Valley area.

Subsidence

Subsidence in Mono County has been caused primarily by the tectonic movement of the earth and the movement of magma beneath the Long Valley Caldera. During the May 1980 sequence of earthquakes near Mammoth Lakes, the ground surface dropped about four inches at several locations near the Hilton Creek fault, and up to 12 inches of vertical offset occurred along the Mammoth Yosemite Airport fault zone. Magma movement in the Long Valley Caldera has caused bulging of the resurgent dome in the Casa Diablo area by about two and a half feet since 1980.

No subsidence has been observed in the county due to fluid withdrawals, or hydrocompaction of water impoundment. All major groundwater basins (see the **MEA**), however, have been identified by the Division of Mines and Geology as areas where subsidence could occur as a result of excessive groundwater pumping. **None of these basins are identified as medium or high priority under the Sustainable Groundwater Management Act (SGMA) except, possibly, the Owens Valley basin in the Tri-Valley, which has been reprioritized from a medium to low basin.**

Volcanic Hazards

Evidence of volcanic activity in Mono County extends from Black Point north of Mono Lake to the deposits of Bishop Tuff in southern Mono County. The source of volcanic risk in Mono County is the Inyo-Mono crater chain and the Long Valley Caldera. Vents in the Inyo-Mono crater chain have erupted about every 500 years over the last 2,000 to 3,000 years, with the most recent eruption occurring approximately 500 years ago. Eruptions in the Long Valley Caldera have occurred approximately every 2,000 years over the last 7,000 years. The volcanic hazards mapped in the **MEA-MJHMP** estimate the extent of explosive blasts, hot flowing material, and ash flow.

FLOODING

Flood Hazards

The Federal Emergency Management Agency (FEMA) has prepared Flood Insurance Rate Maps illustrating 100-year flood hazard areas for several streams. Floods in these areas have a 1% probability of occurring in any given year. Such flooding could result in the loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief. Flood losses may be increased by the cumulative effect of obstructions in flood hazard areas that increase flood heights and velocities, and when inadequately anchored, can damage downstream uses.

Flooding is a potential risk to private properties situated in the vicinity of several waterways within the county. The community areas most likely to be impacted by a 100-year flood include properties along the East and West Walker River, Reversed Creek, and Spring Canyon Creek including portions of the Antelope Valley, Bridgeport Valley, the June Lake Loop, and the Tri-Valley area (see **General Plan maps**).

Some FEMA maps lack information regarding the base flood elevation, and are therefore of limited use for local development review and site-specific planning purposes. Some maps lack information concerning local alluvial fan and mudflow hazards. There is a significant need to update the flood hazard maps where these deficiencies exist. The California Department of Water Resources publishes flood-awareness area maps that, while non-regulatory, can provide additional flooding potential information, particularly for areas that remain unmapped by FEMA.

Dam Failure

The Mono County Multi-Jurisdictional ~~Local~~ Hazard Mitigation Plan (**LMJHMP**) indicates that ~~22-18~~ dams are located in Mono County. The Lower and Upper Twin Lakes, Lundy Lake, Long Valley/Crowley Lake, Rush Creek meadows, and Saddlebag dams are identified as presenting some threat to downstream developed areas ~~infrastructure~~ if dam failure were to occur.

The ~~MEA-MJHMP~~ illustrates the areas subject to flood hazards and dam failure inundation, ~~as well as the area that would be inundated if the dam at Crowley Lake were raised an additional 20 feet to provide an increased storage area.~~

Seiches

Seiches are earthquake-generated waves within enclosed or restricted bodies of water such as lakes and reservoirs. Similar to the sloshing of water in a bowl or a bucket when it is shaken or jarred, seiches can overtop dams and pose a hazard to people and property within their reach. There is no available evidence that seiches have occurred in Mono County lakes and reservoirs.

FIRE

Wildland Fires

The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of wildland fire potential in most of Mono County. Wildland fires can result in death, injury, economic loss, and significant public investment in firefighting efforts. Woodlands and other natural vegetation can be destroyed resulting in a loss of timber, wildlife habitat, scenic quality and recreational resources. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also result.

Fire hazard severity has been mapped by Cal Fire for most of the privately owned land in Mono County. ~~Portions of the Antelope Valley, Sonora Pass (Sonora Junction), Swauger Creek, Lundy Canyon (Mono Basin), June Lake, Upper Owens, Mammoth Vicinity, and Long Valley Planning Areas are in the High Fire Hazard Severity Zone. Portions of June Lake and Sonora Junction are in Very High Fire Severity Zones. Most of the Bridgeport Valley, Mono Basin and Tri-Valley Planning Areas are mapped Moderate Hazard Severity Zones. All areas except the Bridgeport Valley and Antelope Valley have been rated as having a very high fire hazard. The Bridgeport Valley has a moderate fire hazard rating, and the Antelope Valley has not been rated. With the exception of the Antelope Valley, all privately owned lands in Mono County are within the State Responsibility Area (SRA).~~

The Mono County Community Wildfire Protection Plan (CWPP) and the Cal Fire San Bernardino/Inyo/Mono Unit Fire Plan are incorporated by reference into this Safety Element. The CWPP provides community-level data concerning fire hazards in the county, including community fuel reduction treatment areas and fuel breaks and other wildfire mitigation recommendations, particularly in Wildland-Urban Interface areas.

Much of the privately owned land in the county is located outside of fire protection districts, and therefore lacks formal emergency fire protection service. It is difficult for existing fire districts to receive additional property tax revenues for annexation of these unserved areas, or for new fire districts to be formed. Consequently, future development in these areas without adequate fire protection will be limited.

The State of California ~~recently updated~~ ~~has adopted~~ wildland protection regulations for future development in the SRA; Mono County has adopted and periodically updates a local ordinance that has the same practical effect as the Cal Fire regulations (Mono County Land Use Element Ch. 22, Fire Safe Regulations).

These fire safe regulations address requirements for adequate clearance of flammable vegetation around individual structures and clusters of structures and construction methods to prevent the spread of fire from the wildland to structures, and from structures

to wildlands. Minimum water capacities for fire protection purposes are established in the regulations to ensure the availability of water for fire suppression purposes. Adequate road widths and load capacities are required to ensure ready movement of fire engines, and other heavy firefighting equipment to developed areas of the county; the Mono County Department of Public Works also has established similar road improvement standards for new development.

Structural Fires

The 11 fire protection districts in the county provide fire-prevention services through such activities as education and development review. The districts also provide varying levels of fire suppression and emergency medical response services to community areas. The ~~MJHMP and 2015 General Plan/Regional Transportation Plan Environmental Impact Report Community Services Section of the MEA~~ provides a summary description of fire district service levels and capabilities, including the general capabilities and availability of local community water service in the county.

AVALANCHE

Avalanche Hazards

Although avalanches in Mono County occur primarily on national forests in the Sierra Nevada backcountry, some avalanche hazards present a significant risk to community areas. Both property damage and loss of life have resulted from avalanches in Mono County. Community areas influenced by avalanche hazards include ~~Swauger Creek, Twin Lakes (Bridgeport area), Virginia Lakes, Lundy Lake, Bridgeport Valley, Mono Basin, Mono Basin,~~ June Lake, Long Valley/McGee Creek, Mammoth Vicinity and Wheeler Crest. In addition, roadway sections threatened by potential avalanches include portions of Lower Rock Creek Road; US 395 at Long Valley, Wilson Butte, and just north of Lee Vining; S.R. 158 entering the June Lake Loop; and several County roads entering eastern-slope community areas.

Avalanche Studies and Maps

In accordance with State law, avalanche hazard maps have been developed to illustrate areas of known avalanche occurrences. These maps were prepared by five Board-appointed avalanche advisory committees consisting of local residents and landowners. All pertinent information concerning the work of the five appointed committees and the avalanche policy formulation process – including committee recommendations and position papers – is ~~posted as part of the General Plan maps and~~ on file in the county Planning Division. Other County avalanche hazard studies prepared by avalanche consultants and that project potential avalanche run-out areas, and an archive of photographs documenting evidence of avalanche damage and occurrences are also on file in the Planning Division.

Avalanche Monitoring and Evacuation

A backcountry avalanche monitoring program is operated by the Eastern Sierra Avalanche Center. This monitoring program issues avalanche hazard warnings during periods of high avalanche danger in the backcountry. The county Sheriff's Department keeps in contact with avalanche experts and should a hazardous situation develop, advises those within the hazard-prone area of the critical nature of the hazard.

EVACUATION ROUTES

The Mono County ~~Multi-Jurisdictional-Local~~ Hazard Mitigation Plan indicates that major routes (State and County), immediate access routes to community areas, and internal community street systems could be subject to closure by avalanches, landslides, snow and fog whiteouts, and flooding. In addition, imminent hazards such as high avalanche hazard conditions could prohibit travel even along open access routes. ~~Several community areas have only a single access route, including portions of June Lake, McGee Creek, Crowley Lake, and Chalfant, and the entire community of Swall Meadows. Area Plan policies The developed areas of Wheeler Crest, Lundy Lake, Virginia Lakes, and Twin Lakes all have only one access. Several community area plans call for development of additional emergency access routes into these community areas.~~

The Mono County ~~Multi-Jurisdictional-Local~~ Hazard Mitigation Plan, sets general evacuation procedures ~~and available routes during all seasons~~ for various emergency situations.

III. POLICIES

GOAL 1. Avoid the exposure of people and improvements to unreasonable risks of damage or injury from earthquakes and other geologic hazards.

Objective 1.A.

Direct development to occur in a manner that reduces the risks of damage and injury from seismic and other geologic hazards to acceptable levels.

Policy 1.A.1. In order to mitigate risk from seismic hazards such as surface fault-rupture, and other geologic hazards, regulate development near active faults, seismic hazard zones and other geologic hazards consistent with the provisions of the Alquist-Priolo Special Studies Zone Act and the Seismic Hazard Mapping Act.

Action 1.A.1.a. Applicable development proposals in Alquist-Priolo fault hazard zones, seismic hazard zones, or other known geologic hazard areas, shall provide a geologic or geotechnical report prior to project approval. The report shall:

- a. be funded by the applicant;
- b. be prepared by a registered geologist or certified engineering geologist;
- c. if a fault hazard, locate existing faults, evaluate their historic activity and determine the level of risk they present to the proposed development;
- d. if another geologic hazard, including a seismic hazard other than a fault hazard, locate site-specific geologic/seismic hazards affecting the project, identify areas containing geologic/seismic hazards that could adversely affect the site in the event of an earthquake or other geologic episode, and determine the level of risk they present to the proposed development;
- e. recommend measures to reduce risk to acceptable levels; and
- f. be prepared in sufficient detail to meet the criteria and policies of the State Mining and Geology Board, and to allow for review by the County's consulting geologist (see also Action 1.3).

Mitigation measures shall be included in the project plans and specifications and shall be made a condition of approval for the project.

Action 1.A.1.b. Require the scope of investigation for geologic and geotechnical reports to be commensurate with the complexity and exposure to risk of the proposed project. As an example, reports for hospitals, multi-story buildings, and other critical, sensitive, or high-intensity structures should be prepared in greater detail than those for lower-density wood-frame structures.

Action 1.A.1.c. Retain a qualified consulting geologist to review geologic/geotechnical studies prepared in accordance with Action 1.A.1.a. The consulting geologist shall evaluate the adequacy of the report, interpret or set standards where they are unclear, and advise the County of the report's acceptability. Project proponents shall be required to fund the costs associated

with the County's consulting geologist's review of project geologic hazard studies. The County's consulting geologist shall be retained in conformance with the Mono County Environmental Handbook.

Action 1.A.1.d. During the initial project review process, encourage applicants to design or redesign their projects as necessary to avoid unreasonable risks from surface fault rupture and other geologic/seismic hazards. Work with the State Geologist to exempt from special geologic study requirements those projects that will clearly not be impacted by fault rupture or other geologic/seismic hazards.

Action 1.A.1.e. Deny applications for planning permits where geologic studies provide substantial evidence that the proposed project will be exposed to unreasonable risks from surface faulting, fault creep or other seismic hazards. Projects that include measures to reduce risks to acceptable levels may be approved. Consistent with Seismic Hazard Mapping Regulations, "acceptable level" means a reasonable assurance of public safety, although structural integrity and continued functionality are not ensured.

Action 1.A.1.f. Work with the State Geologist to address development proposals in areas where recent geologic/seismic episodes have occurred, but where special study zones or seismic zones have yet to be delineated.

Action 1.A.1.g. Require that all applicants for County permits in delineated special study zones or geologic/seismic hazard zones be notified of the area's potential for surface displacement or other seismic/geologic hazards, and that they be referred to this Element, support documents, seismic hazard-zone maps (when available) and the Alquist-Priolo maps on file in the county Planning Division for further information.

Policy 1.A.2. Identify and mitigate seismic/geologic hazards to existing structures, and ensure that new construction is designed to withstand seismic/geologic events.

Action 1.A.2.a. Consider conducting a comprehensive survey of the structural condition of all buildings, and identify potentially hazardous buildings in accordance with the Unreinforced Masonry Building Law (Government Code Section 8875). Input the results into the GIS system and update as needed.

Action 1.A.2.b. Utilizing the structural survey detailed in Action 1.A.2.a., consider developing a mitigation program for potentially unsafe structures in accordance with the Unreinforced Masonry Building Law.

Action 1.A.2.c. Continue to require new construction to comply with the engineering and design requirements of Seismic Design Category D.

Action 1.A.2.d. The County may require geotechnical studies as necessary to comply with the California Building Code.

Policy 1.A.3. Identify areas of seismic and geologic hazards.

Action 1.A.3.a. Utilize historical data and geotechnical studies to designate areas of geologic hazards.

Action 1.A.3.b. Work with the Federal Emergency Management Agency, the State Department of Water Resources, and other appropriate agencies to designate alluvial fans and mudflow areas on Flood Insurance Rate Maps where appropriate.

Action 1.A.3.c. Coordinate with the US Geologic Survey and other research entities in volcanic hazard research and monitoring activities for the Long Valley Caldera and the Inyo-Mono Crater chain.

Action 1.A.3.d. Request the Division of Mines and Geology to establish Mono County as a priority area for mapping areas of ground shaking, liquefaction, and earthquake-induced landslides in accordance with Seismic Hazard Mapping Regulations.

Policy 1.A.4. Limit the intensity of development in seismic and other geologic hazard areas.

Action 1.A.4.a. Designate known hazardous areas for low-intensity uses in the Land Use Element; assign low-intensity land use designations for such areas.

Action 1.A.4.b. Utilizing the established land ownership adjustment process, facilitate land trades or purchases that result in placing properties subject to major geologic hazards into federal ownership or into the ownership of land conservation organizations.

Action 1.A.4.c. Through the permit process, including site plan review, direct development to avoid locating in hazardous areas.

Policy 1.A.5. Regulate land uses that may increase the potential for natural hazards, such as activities that disturb vegetative cover on steep slopes, or which could divert hazard flows toward down-gradient development.

Action 1.A.5.a. Prior to site development, require geotechnical evaluation of the potential for landslides and mudslides in applicable areas.

GOAL 2. Avoid exposure of people and improvements to unreasonable risks of damage or injury from flood hazards.

Objective 2.A.

Plan for and regulate development in flood hazard areas in a manner that protects people and property from unreasonable risks of damage due to flooding.

Policy 2.A.1. *Seek to reduce the number of structures, or R*regulate the placement of new structures and major renovation of existing structures, in the 100-year flood plain.

Action 2.A.1.a. *Work with the Federal Emergency Management Agency, the State Department of Water Resources, and other appropriate agencies to update flood hazard studies and FEMA NFIP maps for developing areas of the county.*

Action 2.A.1.b. Continue to participate in the National Flood Insurance Program (NFIP) by enforcing and updating as necessary the provisions of the Mono County Flood Plain Regulations (Chapter 21 of the Land Development Regulations)

Action 2.A.1.c. In accordance with the stream setback requirements of the Mono County General Plan, require new development to set back adequately from surface waters for flood and habitat protection purposes. Any deviations from the stream setback requirements within the 100-year floodplain should be reviewed by the county Floodplain Administrator prior to permit issuance.

Action 2.A.1.d. Future development projects with the potential to cause substantial flooding, erosion, or siltation shall provide an analysis of the potential impacts prior to project approval. The analysis shall:

- a. be funded by the applicant;
- b. be prepared by a registered geologist or civil engineer;
- c. identify the nature of the hazard, and assess the impacts of the development on downstream development and resources; and
- d. recommend alternatives and/or mitigation measures to mitigate potential impacts to downstream resources to a level of non-significance, unless a statement of overriding considerations is made through the EIR process.

Mitigation measures shall be included in the project plans and specifications and shall be made a condition of approval for the project.

Action 2.A.1.e. Limit the intensity of development within the 100-year floodplain in the Land Use Element.

Action 2.A.1.f. Continue to implement Mono County Code Chapter 13.08, Land Clearing, Earthwork and Drainage Facilities, and update as necessary.

Action 2.A.1.g. Continue to address flood management issues during the planning and implementation of stream restoration efforts.

Action 2.A.1.h. Document past flood events and incorporate local data into the County GIS.

Action 2.A.1.i. Update the County GIS as new FEMA Flood Insurance Rate Maps and DWR flood-awareness area maps are made available.

Action 2.A.1.j. Seek priority funding from FEMA and the SWRCB to update the flood hazard maps of community areas where needed, including providing information regarding base-flood elevations, alluvial fans and mudflow hazards.

Action 2.A.1.j. Seek priority funding from FEMA and the SWRCB to establish a program to fund homeowners to lift existing residential structures out of the 100-year floodplain and fund buyouts for repetitive loss structures.

Action 2.A.1.k. Require flood proofing of existing public structures and critical facilities that are in the 100-year flood plain and 500-year floodplain.

Action 2.A.1.l. Regularly update and revise flood risk data and flood maps in coordination with FEMA to reflect the most current scientific data.

Action 2.A.1.m. Develop plans for phased use and adaptation of infrastructure that can be used as floodwater levels rise over time due to climate change.

GOAL 3. Avoid exposure of people and improvements to unreasonable risks of damage or injury from fire hazards.

Objective 3.A.

Plan for and regulate development in a manner that protects people and property by minimizing risks from wildland and structural fire hazards.

Policy 3.A.1. Continue to plan for wildfire protection in Mono County.

Action 3.A.1.a. The Mono County Community Wildfire Protection Plan (CWPP) Wheeler Crest CWPP, Mammoth Lakes CWPP, and any other CWPPs within Mono County, and the Cal Fire San Bernardino/Inyo/Mono Unit Fire Plan are incorporated by reference into this Safety Element.

Action 3.A.1.b. Ensure that the CWPP and Unit Fire Plan are updated as needed to contain up-to-date evaluations of fire hazards, assessments of assets at risk, prioritization of hazard mitigation actions, and implementation and monitoring elements.

Action 3.A.1.c. Facilitate implementation of development and education measures identified in the Mono County Community Wildfire Protection Plan (CWPP) to protect human life and property, critical infrastructure, and natural resources associated with wildfire.

Action 3.A.1.de. Utilize fire hazard maps to identify and disclose wildland urban interface hazards. Fire hazard maps in the MJHMP and CWPP are incorporated by reference in the Element.

Action 3.A.1.e. Work with Calfire to update fire hazard mapping to reflect changing fuels and climate conditions. Upon release of updated hazard severity zones, incorporate revised mapping into this plan the CWPP and update community fire risk assessments contained in the CWPP.

Action 3.A.1.f. Facilitate distribution of information from the Great Basin Air Pollution Control District to the public on the status of air quality as requested, provide alerts on poor air quality days, and include educational materials on the health effects of air pollution.

Policy 3.A.2. Require adequate structural fire protection for new development projects.

Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with ~~SB-1241~~

California Government Code §66474.02– and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of permit issuance. Applicants shall provide either a will-serve letter from the applicable fire protection district or a fire protection plan. The fire protection plan shall be part of the development application and shall identify the nature of the local fire hazard, assess the risk of wildland and structural fires presented by the project, and specify measures for detecting and responding to fires on the project site throughout all phases of the proposed development. Project approvals shall include a finding that adequate structural fire protection is or will be available.

Action 3.A.2.b. Require development projects within the sphere of influence of a fire protection district to annex into the district.

Action 3.A.2.c. Require the formation of a fire protection entity for specific plan areas that include significant residential uses, unless the area is within the Sphere of Influence of an existing local fire protection agency

Policy 3.A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.

Action 3.A.3.a. Work with Cal Fire to implement the county's Fire Safe Regulations.

Action 3.A.3.b. Adopt the Wildland Urban Interface Building Codes, established by the Office of the State Fire Marshall.

Action 3.A.3.c. Request the Mono County Fire Services Association, which consists of the 11 fire protection districts in the county, to review and comment on fire protection plans and major development proposals situated outside existing fire district spheres of influence.

Action 3.A.3.d. When the subdivision ordinance is updated, consider a policy stipulating that approval of parcel maps and tentative maps in SRAs or very high fire hazard severity zones is conditional based on meeting the SRA Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access. (See Government Code §66474.02).

Action 3.A.3.e. Consider programming, as resources allow, emergency access routes identified in the MJHMP.

Action 3.A.3.f. Require development proposals to meet emergency access routes a specified in Chapter 22 of the Land Use Element and Public Resources Code §4290 and §4291.

Action 3.A.3.g. When the subdivision ordinance is updated, consider a requirement to identify fuel breaks in the layout/siting of subdivisions and an ongoing fuel break maintenance plan.

Action 3.A.3.h. Require development projects to provide ongoing maintenance of existing or proposed fuel breaks within the project site.

Policy 3.A.4. Mitigate fire hazards through the environmental and project review process.

Action 3.A.4.a. Consider the severity of natural fire hazards, the potential for damage from wildland and structural fire, the adequacy of fire protection, appropriate project modifications and mitigation measures consistent with this Element in the review of projects.

Action 3.A.4.b. Refer project proposals to local fire protection districts and Cal Fire for review and comment.

Action 3.A.4.c. Require on-site detection and suppression, such as automatic sprinkler systems consistent with the California Building Code.

Action 3.A.4.d. Limit the intensity of development in areas lacking adequate structural fire protection.

Policy 3.A.5. Assist fire protection districts in securing adequate funding for capital facilities and ongoing operations to serve new development.

Action 3.A.5.a. Assist fire protection districts in the establishment and implementation of appropriate funding sources – such as fees, exactions, charges, and assessments – to enable existing fire districts to annex appropriate areas, and to enable new fire protection districts to be formed.

Action 3.A.5.b. Continue to allocate the "First Responders Fund" through the augmentation hearing process to assist fire districts, as well as other appropriate special districts.

Policy 3.A.6. Consider mitigating fire hazards in previously developed areas that do not meet current fire safe development standards.

Action 3.A.6.a. Consider identifying and mapping existing housing that does not conform to current fire standards in terms of building materials, access, and vegetative hazards as identified in the CWPP.

Action 3.A.6.b. Consider developing plans to address the substandard housing identified above, including structural rehabilitation, occupancy reduction, fuels hazard reduction projects, community education, and improvements pertaining to access, fire flows, signage, and defensible space.

Policy 3.A.7. Reduce fuel around developed areas throughout the county to minimize wildland fire hazard risks to people and property.

Action 3.A.7.a. Review the County's land use designation maps to ensure that land uses near high or very-high-hazard fire severity zones are compatible with wildland fire protection and suppression activities.

Action 3.A.7.b. Consider amending the CWPP to establish wildfire defense zones around community areas (e.g., fuel breaks, shelter zones, back fire areas, and staging areas to support fire-suppression activities.)

Action 3.A.7.c. Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.

Action 3.A.7.d. Coordinate with Public Works, CAL FIRE, U.S. Forest Service, local fire districts, and private property owners to maintain fuel breaks and appropriate flammable vegetation clearance along public and private roads.

Action 3.A.7.e. Support fuel management programs and plans, consistent with state law, that require fuel management/modification within established defensible space boundaries and when strategic fuel modification is necessary outside of defensible space, balance fuel management needs to protect structures with the preservation of native vegetation, wildlife, and sensitive habitats.

Action 3.A.7.f. Coordinate with and consider comments from CAL FIRE, U.S. Forest Service, local fire districts, and wildlife agencies for recommendations regarding mitigation for impacts to habitat and species into fuel management projects.

Action 3.A.7.g. Support appropriate fuel management projects such as removal of dead, dying, and diseased trees to reduce hazardous fuel loads and improve forest ecosystem health.

Policy 3.A.8. Mitigate the effects of fire hazards within Mono County.

Action 3.A.8.a. Implement the fire hazard mitigation recommendations contained in the CWPP, which pertain to addressing, public education, local preparedness and firefighting capabilities, home mitigation, and fuels modification projects.

Policy 3.A.9. Ensure the existing and future transportation system within Mono County adequately supports fire protection and suppression activities.

Action 3.A.9.a. Work with local fire districts, Cal Fire and federal and state land management agencies to prioritize pertinent transportation-related recommendations in the CWPP.

Action 3.A.9.b. Ensure that the Mono County Regional Transportation Plan (RTP) and the Mono County Circulation Element contain adequate policies pertaining to fire infrastructure; e.g., turnouts, helispots, safety zones, and vegetation management programs for state and county streets and highways.

Policy 3.A.10. After a large fire, evaluate the potential to reduce future vulnerabilities to fire hazard risks through site preparation, redevelopment layout (when possible), landscape design, and fire-resistant building materials.

Action 3.A.10.a. Coordinate with appropriate public and private entities to remove debris and promote the sound, equitable, and expedient ~~rapid~~

reconstruction of property damaged/destroyed by wildfire and facilitate the upgrading of the built environment as expeditiously as possible.

Action 3.A.10.b. Seek resources to address fire hazard vulnerabilities and bring sub-standard development/subdivisions into compliance with current fire safe standards.

GOAL 4. Avoid exposure of people and improvements to unreasonable risks of damage or injury from avalanche hazards.

Objective 4.A.

Limit development that attracts concentrations of people in historical avalanche paths (Conditional Development Areas) during the avalanche season.

Policy 4.A.1. Prohibit new subdivisions, new winter commercial uses, and multi-family developments in conditional development areas unless proper mitigation is provided. A Conditional Development Area¹ denotes private property that has previously experienced avalanche activity.

Action 4.A.1.a. Prior to approving new development, other than single-family residential, in conditional development areas or within the Twin Lakes Avalanche Influence Area, the Planning Commission or Board of Supervisors shall either find:

- a. On the basis of a site-specific study by a qualified snow scientist, that the site is not within a potential avalanche hazard; or
- b. That the project has been designed by a registered civil engineer to withstand potential avalanche impact, or other appropriate structural mitigation measures have been incorporated into the project.
- c. Unless otherwise mitigated, all building sites created through new subdivisions shall be identified and located outside avalanche areas.

Action 4.A.1.b. Impose subdivision and use restrictions in conditional development areas through future rezoning and Use Permit conditions.

Policy 4.A.2. Promote seasonal rather than year-round land uses in conditional development areas.

Action 4.A.2.a. Require new commercial development projects in conditional development areas to discontinue operations during the avalanche season, unless mitigated as specified in Action 4.A.1.a. The avalanche season is considered to run from November 1 to April 15 of the following calendar year. Upon application,

¹Conditional Development Areas have been identified by local avalanche advisory committees appointed by the Board of Supervisors. In some communities where insufficient historical data exist, the high-hazard zones identified in prior avalanche studies (i.e., Wilson, Beck, or Mears/Whitmore) have supplemented available historical information in defining the Conditional Development Area.

the Board of Supervisors may change the foregoing dates for specific areas if it finds that public health and safety will not be affected.

Action 4.A.2.b. Encourage the use of seasonal trailers in conditional development areas where such use does not conflict with local land use designations or private restrictive covenants.

Policy 4.A.3. Utilizing the established land ownership adjustment process, facilitate land trades or purchases that result in placing properties, which on the basis of prior studies may be impacted by avalanches, into federal ownership or into the ownership of land conservation groups, for permanent open-space use.

Action 4.A.3.a. Survey landowners who own properties which, on the basis of prior studies, may be impacted by avalanches, for interest in land trades or purchases.

Action 4.A.3.b. Initiate land trade/purchase discussions between landowners and appropriate federal, state, or county agencies, or land conservation groups.

Action 4.A.3.c. Request applicable federal or state agencies to assign high-priority land acquisition status to private lands in areas that, on the basis of prior studies, may be impacted by avalanches.

Policy 4.A.4. Maintain and update historical avalanche data.

Action 4.A.4.a. Appropriate County agencies shall continue to compile avalanche data, including photographing and archiving avalanche damage when it occurs.

Action 4.A.4.b. The historical maps contained in the **MEA** should be revised and updated as necessary to reflect the run-out boundaries of actual avalanches; maps shall be compiled by the Planning Division and approved by the Board of Supervisors.

Action 4.A.4.c. Where the boundary of an actual avalanche area is in question, require site-specific analysis of the historical avalanche impact to the parcel prior to issuance of any County permits, other than building permits for single-family residential development. Such analysis should be conducted by a qualified snow scientist, and the conclusions of the analysis should be incorporated into this Element.

- APN 015-085-010-000 in June Lake: a site-specific avalanche study concluded this parcel is in the White Zone, which is a low-risk zone with an estimated return period of 300 years or impact pressures less than a gale force wind (21 lbs/ft²).²

Objective 4.B.

Inform residents and visitors of the potential avalanche hazards in or near local communities.

Policy 4.B.1. Inform affected persons of potential avalanche hazards in the area during the permit process and during transfer of property ownership.

² Use Permit 18-003/High Sierra Cannabis Retail (DeCoster)

Action 4.B.1.a. Designate community areas containing private lands influenced by historic avalanche path as "Avalanche Influence Areas" in this Element. The Avalanche Influence Area designation shall define community areas in which residents and visitors should be notified of where potential avalanche hazards exist in the vicinity.

Action 4.B.1.b. Designate historical avalanche paths as "conditional development zones" in this Element.

Action 4.B.1.c. Require that all applicants for County permits in avalanche influence areas be notified of the area's potential avalanche hazards, and require that they be referred to this Element and avalanche documents on file in the county Planning Division for further information.

Action 4.B.1.d. In accordance with State law, sellers of property will notify buyer/transferees of potential avalanche and seismic hazards affecting subject property.

Policy 4.B.2. Inform visitors of potential avalanche hazards by posting notification signs on roadways entering avalanche areas as designated by the Board of Supervisors.

Action 4.B.2.a. Continue to post signs on local roads warning of avalanche potential.

Action 4.B.2.b. Require that new roads constructed in areas which may be impacted by avalanches be properly signed to notify of potential avalanche hazards.

Objective 4.C.

Plan for and provide emergency services in the event of avalanches.

Policy 4.C.1. Initiate avalanche warning procedures during hazard periods in accordance with adopted procedures such as the Mono County Sheriff Code Red Emergency Alert System.

Policy 4.C.2. Provide emergency access to avalanche-influence areas where feasible.

Action 4.C.2.a. Evaluate potential emergency access routes for avalanche influence areas in the county Circulation Element.

Action 4.C.2.b. Seek state or federal funding for emergency access road construction in avalanche-influence areas.

Policy 4.C.3. Provide snow-removal services to County roads only during periods of acceptable avalanche risks.

Action 4.C.3.a. The Director of Public Works will utilize broad discretion in determining when roads should be plowed.

Objective 4.D.

Work cooperatively with the US Forest Service (USFS) and Caltrans in mitigating local avalanche hazards.

Policy 4.D.1. Seek cooperation from the USFS in mitigating avalanche hazards that originate on land managed by the USFS and that threaten private property.

Action 4.D.1.a. Continue to promote and encourage local and/or regional USFS offices to:

- a. Support and expand the backcountry avalanche forecasting program to include threatened community areas;
- b. Structurally mitigate (i.e., environmentally sensitive supporting structures, deflecting berms, retarding mounds, catching dams, snow fences, etc.) avalanche hazards threatening community areas; and
- c. Initiate land exchanges with willing property owners in avalanche hazard areas.

Policy 4.D.2. Seek cooperation from Caltrans in mitigating avalanche hazards to local State highways.

Action 4.D.2.a. Promote and encourage Caltrans' assistance in funding local avalanche forecasting programs.

Action 4.D.2.b. Support Caltrans efforts to expand avalanche mitigation efforts in the June Lake community. Implement pertinent policies of the June Lake Area Plan.

Action 4.D.2.c. Encourage Caltrans to post avalanche warning signs along potential avalanche sections of US 395, such as in the Long Valley area, the Wilson Butte area, and the area north of Lee Vining during the avalanche season.

GOAL 5. Reduce the risks from natural hazards by planning for safe development, increasing public awareness of the natural hazards in Mono County, and providing an integrated multi-agency approach to emergency response.

Objective 5.A.

Identify areas of the county susceptible to hazards.

Policy 5.A.1. The County GIS system should include or integrate all available hazard mapping, including multi-hazard and repetitive-loss properties.

Action 5.A.1.a. Periodically assess the data and mapping products available on the County GIS system to integrate additional hazards information as it becomes available.

Policy 5.A.2. Maintain an inventory of existing assets (structures, infrastructure) in order to understand more fully the areas and types of development most susceptible to identified hazards and to identify more-specific mitigations for each hazard.

Action 5.A.2.a. Complete a detailed inventory of existing assets and enter that inventory into the County GIS. The inventory should include all data required by hazard mitigation planning such as type of structure, occupancy, construction type, size, value, etc.

Policy 5.A.3. Identify areas with the greatest potential for loss from identified hazards.

Action 5.A.3.a. In compliance with FEMA requirements for loss estimation, develop loss-estimation values and corresponding GIS products and update as needed.

Objective 5.B.

Limit development in areas identified as hazardous.

Policy 5.B.1. Restrict development in areas subject to hazards, including but not limited to, fire, flood, geologic, seismic, volcanic, and avalanche.

Action 5.B.1.a. Limit the intensity of development in hazard areas through the assignment of appropriate land use designations.

Action 5.B.1.b. Design public facilities such as power and water distribution pipes and sewer lines to avoid hazard areas and utilize valves and switches to mitigate hazards when no routing alternatives are feasible.

Action 5.B.1.c. Consistent with government code 66474.2, avoid intensive development outside existing fire protection districts, unless an appropriate fire protection entity is established as a condition of project approval.

Policy 5.B.2. Maintain, update and integrate hazard planning documents.

Action 5.B.2.a. Update and work to integrate the Safety Element, Multi-Jurisdictional ~~Local~~ Hazard Mitigation Plan, Emergency Operations Plans, Airport Land Use Compatibility Plans, Community Wildfire Protection and other fire plans, and any other safety documents on a regular basis.

Action 5.B.2.b. Work with local fire protection districts, law enforcement, land management agencies, and Cal Fire to pursue funding and update and integrate planning documents.

Policy 5.B.3. Utilize Local Agency Formation Commission (LAFCO) municipal service reviews to evaluate existing emergency service providers and to identify needed improvements.

Action 5.B.3.a. Map existing emergency service facilities and areas lacking service, analyze which areas in identified hazard zones are missing adequate emergency services and integrate into applicable safety plans.

Objective 5.C.

Inform the public as to the nature and extent of natural hazards in Mono County.

Policy 5.C.1. Inform affected persons during the County permit process and during the transfer of property of potential seismic, geologic, volcanic, fire, flood, avalanche, and other natural hazards in the area.

Action 5.C.1.a. Prior to issuing planning or building permits in hazardous areas, refer the applicant to this Element, and support documents and studies on file in the county Planning Division for further information concerning potential hazards. In order to ensure that the applicant has been notified of potential hazards, the applicant may be required to sign a statement recognizing that potential hazards exist in the area.

Action 5.C.1.b. In accordance with State law, sellers of property will notify buyer/transferees of all potential hazards affecting subject property, including but not limited to, geologic, seismic, fire, flood, and avalanche.

Policy 5.C.2. Work cooperatively with other public agencies in the area to develop a public awareness program to inform residents and visitors of natural hazards in the county and emergency response procedures.

Action 5.C.1.a. In accordance with procedures adopted by the county Office of Emergency Services, provide notification to residents and visitors during emergencies and elevated hazard periods.

Objective 5.D.

Provide for safe ingress and egress of emergency vehicles/equipment and evacuation of populations.

Policy 5.D.1. Assess and pursue primary and secondary access improvements for all community areas for emergency purposes.

Action 5.D.1.a. Review development proposals to ensure the provision of primary and secondary access.

Action 5.D.1.b. Refer applications for planning and building permits to Cal Fire and local fire protection districts for review and comment regarding, emergency-access considerations.

Action 5.D.1.c. The Department of Public Works shall continue to review the adequacy of primary and secondary access for development projects on a case-by-case basis.

Action 5.D.1.d. Delineate community evacuation routes and plans for areas with high or very-high fire hazard residential areas, flood areas, avalanches influence areas, etc.

Action 5.D.1.e. Work with federal land management agencies to ensure adequate access to high-hazard wildland areas, particularly adjacent to communities, for fire suppression activities and public evacuation.

Policy 5.D.2. All projects using hazardous materials or generating hazardous waste shall conform to the requirements of the county's Integrated Waste Management Plan for transportation, storage, and disposal.

Policy 5.D.3. Transportation, storage, and use of explosive materials shall comply with applicable county, state, and federal permit requirements.

Objective 5.E.

Work with local, state, and federal agencies and organizations to provide an integrated approach to emergency response, including search-and-rescue operations, in Mono County for all hazards.

Policy 5.E.1. Implement and update as needed the Mono County Emergency Operations Plan, Mono County Multi-Jurisdictional ~~Local~~ Hazard Mitigation Plan, and the Mono County Community Wildfire Preparedness Plan.

Action 5.E.1.a. Periodically review emergency response plans during the General Plan review process.

Policy 5.E.2. Work toward implementing a standardized emergency management system for responding to large-scale situations requiring multi-agency response.

Action 5.E.2.a. Review mutual aid agreements with adjoining emergency service providers to ensure a coordinated approach to emergency services.

Goal 6. Prepare for changing climate conditions in Mono County.³

Objective 6.A. Prepare for changing precipitation levels in the region.

Policy 6.A.1. Plan for reduced levels of precipitation and mitigate the impacts that will occur to water availability.

Action 6.A.1.a. Encourage water conservation regulations and encourage public reporting of violations.

Action 6.A.1.b Protect groundwater resources from contamination and overdraft through methods such as encouraging capture of precipitation in tanks and the use of treated wastewater for groundwater recharge and protecting important groundwater recharge areas.

Objective 6.B. Prepare for an increase in severe weather conditions and storm events.

Policy 6.B.1. Develop procedures and practices to reduce the impacts of increasing temperatures and more extreme storms in Mono County, and to help protect residents from the health hazards associated with high heat.

Action 6.B.1.a. Follow County procedures in the event of severe weather conditions such as extreme heat events and more frequent and severe combined snow and rainstorms, including the deployment of emergency services, opening of additional local heating/cooling shelters, and community notification procedures. Cooling shelters may be of particular importance in the Tri-Valley.

³ Policies to address climate change related to wildfire and flood are incorporated directly into those goals in the Safety Element.

Action 6.B.1.b. Coordinate with health and social service providers from multiple sectors to identify data sources and strategies for community resilience and reaching out to vulnerable populations.

Action 6.B.1.c. Assist with seeking funding to address anticipated additional repairs to damaged infrastructure that will be required due to increased stress from climate effects such as intense snow and rainstorms.

Objective 6.C. Increase the resiliency and adaptability of residents, buildings, infrastructure, the natural environment, and the Mono County economy to climate change hazards.

Action 6.C.1.a. Prepare to address environmental hazards and vulnerabilities that climate change influences currently and in the future.

Action 6.C.1.b During the periodic future updates of the Safety Element, hazards and vulnerabilities shall be reviewed, updated and new policies adopted to reflect the most current information available regarding climate change and strategies to reduce hazard risks compounded by climate change.

Action 6.C.1.c. Identify strategies to foster resiliency to climate change influences in both the built and undeveloped lands based on current and updated science.

Action 6.C.1.d. Identify mitigation measures to reduce climate change causes and adaptation plans to decrease the effects of climate change and protect residents and business from increased risks of natural disasters, such as flooding, drought, severe weather events and wildfire.

Action 6.C.1.e. Work with State agencies on adaptation strategies to address climate change impacts.

General Plan Safety Element Assessment

Board of Forestry and Fire Protection



October 2019

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Purpose and Background

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

The safety element is required to include:

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

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

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

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

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

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

The Technical Advice Series is also available from the OPR website ([Technical Advice Series link](#)).^{*} The Technical Advice Series provides policy guidance, information resources, and fire hazard planning examples from around California that shall be considered by local jurisdictions when reviewing the safety element of its general plan.

The Board of Forestry and Fire Protection (Board) utilizes this Safety Element Assessment in the Board's review of safety elements under Government Code section 65302.5. At least 90 days prior to the adoption or amendment of their safety element, counties that contain SRAs and cities or counties that contain VHFHSZs shall submit their safety element to the Board. (Gov. Code, § 65302.5, subd. (b).) The Board shall review the safety element and respond to the city or county with its findings regarding the uses of land and policies in SRAs or VHFHSZs that will protect life, property, and natural resources from

unreasonable risks associated with wildfires, and the methods and strategies for wildfire risk reduction and prevention within SRAs or VHFHSZs. (Gov. Code, § 65302.5, subd. (b)(3).)

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

Methodology for Review and Recommendations

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

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

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

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

General Plan Safety Element Assessment

Jurisdiction: Mono County	Notes:	CAL FIRE Unit: San Bernardino	Date Received:
County: Mono County	LUPP Reviewer: Curtis	UNIT CONTACT: Littlefield	Date Reviewed: 02/19/20

BACKGROUND INFORMATION SUMMARY

The safety element must contain specific background information about fire hazards in each jurisdiction.

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

Required Information	Yes or No	Comments and Recommendations
Are Fire Hazard Severity Zones Identified? <i>CAL FIRE or Locally Adopted Maps</i>	Yes	Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Mono County Wildfire Hazard Severity Zones Figure 7.1 Pg. 7-9
Is historical data on wildfires or a reference to where the data can be found, and information about wildfire hazard areas that may be available from the United States Geological Survey, included?	Yes	MJHMP Figure Appendix H-Historic Fire List Fire Regime Condition Class pg. 7-20-21
Has the general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities, been identified?	Yes	MJHMP Appendix C-Critical Facilities
Have local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services, been identified?	Yes	Safety Element pg.VI-7 The 12 fire protection districts in the county provide fire-prevention services through such activities as education and development review. The districts also provide varying levels of fire suppression and emergency medical response services to community areas.
Are other fire protection plans, such as Community Wildfire Protection Plans, Local Hazard Mitigation Plans, CAL FIRE Unit or Contract County Fire Plans, referenced or incorporated into the Safety Element?	Yes	Safety Element pg.VI-6 The Mono County Community Wildfire Protection Plan (CWPP) and the Cal Fire San Bernardino/Inyo/Mono Unit Fire Plan are incorporated by reference into this Safety Element. The CWPP provides community-level data concerning fire hazards in the county, including community fuel reduction treatment areas and fuel breaks and other wildfire mitigation

Required Information	Yes or No	Comments and Recommendations
		recommendations, particularly in Wildland-Urban Interface areas.

Is there any other information in the Safety Element regarding fire hazards in SRAs or VHFHSZs?
N/A

GOALS, POLICIES, OBJECTIVES, AND FEASIBLE IMPLEMENTATION MEASURES

The safety element must contain a set of goals, policies, and objectives based on the above information to protect the community from unreasonable risk of wildfire and implementation measures to accomplish those stated goals, policies, and objectives.

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

Section 1 Avoiding or minimizing the wildfire hazards associated with new uses of land

Questions	Yes or No	Comments and Recommendations
Does local ordinance require development standards that meet or exceed title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) (SRA Fire Safe Regulations) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) (Fire Hazard Reduction Around Buildings and Structures Regulations) for SRAs and/or VHFHSZs?	Yes	The Mono County Land Development Regulations in the Land Use Element contain regulations that specifically address flood and fire hazards; i.e., Chapter 21, Floodplain Regulations, and Chapter 22, Fire Safe Regulations. pg. 316 Mono County has adopted and periodically updates a local ordinance that has the same practical effect as the Cal Fire regulations (Mono County Land Use Element Ch. 22, Fire Safe Regulations)
Are there goals and policies to avoid or minimize new residential development in VHFHSZs?	Yes	Policy 3. A.2. Require adequate structural fire protection for new development projects. Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.
Has fire safe design been incorporated into future development requirements?	Yes	Policy 3. A.2. Require adequate structural fire protection for new development projects. Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development

Questions	Yes or No	Comments and Recommendations
		Regulations) and consistent with State laws 4290 and 4291.
Are new essential public facilities located outside high fire risk areas, such as VHFHSZs, when feasible?	Yes	Action 3.A.1.c. Facilitate implementation of development and education measures identified in the Mono County Community Wildfire Protection Plan (CWPP) to protect human life and property, critical infrastructure, and natural resources associated with wildfire.
Are there plans or actions identified to mitigate existing non-conforming development to contemporary fire safe standards, in terms of road standards and vegetative hazard?	Yes	Policy 3. A.6. Consider mitigating fire hazards in previously developed areas that do not meet current fire safe development standards. Action 3.A.6.a. Consider identifying and mapping existing housing that does not conform to current fire standards in terms of building materials, access, and vegetative hazards as identified in the CWPP. Action 3.A.6.b. Consider developing plans to address the substandard housing identified above, including structural rehabilitation, occupancy reduction, fuels hazard reduction projects, community education, and improvements pertaining to access, fire flows, signage, and defensible space.
Does the plan include policies to evaluate re-development after a large fire?	No	Recommend a policy addressing re-development after a large fire.
Is fuel modification around homes and subdivisions required for new development in SRAs or VHFHSZs?	Yes	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.
Are fire protection plans required for new development in VHFHSZs?	Yes	Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with SB 1241 (recommend the reference of the code rather than the bill) (66474.02) and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of

Questions	Yes or No	Comments and Recommendations
		<p>permit issuance. Applicants shall provide either a will-serve letter from the applicable fire protection district or a fire protection plan. The fire protection plan shall be part of the development application and shall identify the nature of the local fire hazard, assess the risk of wildland and structural fires presented by the project, and specify measures for detecting and responding to fires on the project site throughout all phases of the proposed development. Project approvals shall include a finding that adequate structural fire protection is or will be available.</p>
Does the plan address long term maintenance of fire hazard reduction projects, including community fire breaks and private road and public road clearance?	Yes	<p>Policy 3. A.7. Reduce fuel around developed areas throughout the county to minimize wildland fire hazard risks to people and property</p>
Is there adequate access (ingress, egress) to new development in VHFHSZs?	Yes	<p>Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with SB 1241 (recommend the reference of the code rather than the bill) (66474.02) and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of permit issuance</p>
Are minimum standards for evacuation of residential areas in VHFHSZs defined?	Yes	<p>MJHMP indicates that major routes (State and County), immediate access routes to community areas, and internal community street systems could be subject to closure by avalanches, landslides, snow and fog whiteouts, and flooding.</p> <p>CWPP addresses two concepts of evacuation, Shelter in place and Citizen Safety Zone, the CWPP goes into detail about each community with recommendations for mitigation and evacuations and has developed a goal identified below to address evacuations.</p> <p>Very High Priority: Develop an annual operating plan to coordinate wildfire management. An annual operating plan would be prepared cooperatively with local, state, and federal government agencies to encourage the following: evacuation planning and coordination. Pg.32</p>

Questions	Yes or No	Comments and Recommendations
<p>If areas exist with inadequate access/evacuation routes, are they identified? Are mitigation measures or improvement plans identified?</p>	<p>Yes</p>	<p>Several community areas have only a single access route, including portions of June Lake, McGee Creek, Crowley Lake, and Chalfant, and the entire community of Swall Meadows. Area Plan policies call for development of additional emergency access routes into these community areas. MJHMP sets general evacuation procedures and available routes during all seasons for various emergency situations</p> <p>Action 3.A.6.a. Consider identifying and mapping existing housing that does not conform to current fire standards in terms of building materials, access, and vegetative hazards as identified in the CWPP.</p> <p>Action 3.A.6.b. Consider developing plans to address the substandard housing identified above, including structural rehabilitation, occupancy reduction, fuels hazard reduction projects, community education, and improvements pertaining to access, fire flows, signage, and defensible space.</p>
<p>Are there policies or programs promoting public outreach about defensible space or evacuation routes? Are there specific plans to reach at-risk populations?</p>	<p>Yes</p>	<p>Action 3.A.1.c. Facilitate implementation of development and education measures identified in the Mono County Community Wildfire Protection Plan (CWPP) to protect human life and property, critical infrastructure, and natural resources associated with wildfire.</p> <p>CWPP-Provide information to citizens during emergencies such as wildfire. Use the PIO position to coordinate public information. Use local radio (English and Spanish), reverse 911, internet and local phone trees to provide the public with information. Early notification to residents and visitors to the area will provide the greatest benefit</p> <p>-Educate homeowners about forest health and fire prevention. Programs should provide the public with information about mechanical treatments and the use of prescribed fire for fuels treatments. Workshops should include information on how to create</p>

Questions	Yes or No	Comments and Recommendations
		defensible space and promote the safe use of chainsaws (professional instruction and PPE). -Promote the defensible space and hazard reduction recommendations for each community.
Does the plan identify future water supply for fire suppression needs?	Yes	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291. Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with SB 1241 (recommend the reference of the code rather than the bill) (66474.02) and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of permit issuance.
Does new development have adequate fire protection?	Yes	Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with SB 1241 (recommend the reference of the code rather than the bill) (66474.02) and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of permit issuance.

Section 2 Develop adequate infrastructure if a new development is located in SRAs or VHFHSZs.

Does the plan identify adequate infrastructure for new development related to:	Yes or No	Comments and Recommendations
Water supply and fire flow?	Yes	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing

Does the plan identify adequate infrastructure for new development related to:	Yes or No	Comments and Recommendations
		and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.
Location of anticipated water supply?	Yes	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.
Maintenance and long-term integrity of water supplies?	Yes	Action 3.A.2.a. Development projects including subdivisions shall demonstrate the availability of adequate structural fire protection consistent with SB 1241 (recommend the reference of the code rather than the bill) (66474.02) and the California Building Code, including safe access for emergency vehicles, safe egress for residents, and adequate water supply prior to or as a condition of permit issuance.
Evacuation and emergency vehicle access?	No	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291 Recommend a policy addressing evacuation routes.
Fuel modification and defensible space?		Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification,

Does the plan identify adequate infrastructure for new development related to:	Yes or No	Comments and Recommendations
		as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291
Vegetation clearance maintenance on public and private roads?	No	Recommend a policy addressing the maintenance of vegetation clearance on public and private roads
Visible home and street addressing and signage?	Yes	Policy 3. A.3. Require new construction in State Responsibility Areas (SRAs) to comply with minimum wildland fire safe standards, including those established for emergency access, signing and building numbering, private water supply reserves for fire use, and vegetation modification, as contained in the county Fire Safe Ordinance (Ch. 22 of the Mono County Land Development Regulations) and consistent with State laws 4290 and 4291.
Community fire breaks? Is there a discussion of how those fire breaks will be maintained?	No	Recommend a policy to include fuel breaks in the layout/siting of subdivisions and a policy to identify a policy for the ongoing maintenance of existing or proposed fuel breaks.

Section 3 Working cooperatively with public agencies responsible for fire protection.

Question	Yes or No	Comments and Recommendations
Is there a map or description of existing emergency service facilities and areas lacking service, specifically noting any areas in SRAs or VHFHSZs?	No	No maps or description were located within the Safety element but the county has identified an action to do to create one. Action 5.B.3.a. Map existing emergency service facilities and areas lacking service, analyze which areas in identified hazard zones are missing adequate emergency services and integrate into applicable safety plans.
Does the plan include an assessment and projection of future emergency service needs?	No	There is not a document however the county has a policy within the SE to produce one. Policy 5. B.3. Utilize Local Agency Formation Commission (LAFCO) municipal service reviews to evaluate existing emergency service providers and to identify needed improvements.

Question	Yes or No	Comments and Recommendations
Are goals or standards for emergency services training described?	Yes	<p><u>CWPP</u> Develop a Regional Training program to facilitate local training for structural and wildland firefighting. Pg.41 Work with state and federal agencies to conduct basic wildfire suppression and multi-agency ICS training. Pg.41</p> <p><u>MJHMP</u> C.1 Develop a regional training program to facilitate local training for structural and wildland firefighting. Pg. 7-71</p>
Does the plan outline inter-agency preparedness coordination and mutual aid multi-agency agreements?	Yes	<p>Policy 5. E.2. Work toward implementing a standardized emergency management system for responding to large-scale situations requiring multi-agency response.</p> <p>Action 5.E.2.a. Review mutual aid agreements with adjoining emergency service providers to ensure a coordinated approach to emergency services.</p>

Sample Safety Element Recommendations

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

A. MAPS, PLANS AND HISTORICAL INFORMATION

1. Include or reference CAL FIRE Fire Hazard Severity Zone maps or locally adopted wildfire hazard zones.
2. Include or reference the location of historical information on wildfires in the planning area.
3. Include a map or description of the location of existing and planned land uses in SRAs and VHFHSZs, particularly habitable structures, roads, utilities, and essential public facilities.
4. Identify or reference a fire plan that is relevant to the geographic scope of the general plan, including the Unit/Contract County Fire Plan, Local Hazard Mitigation Plan, and any applicable Community Wildfire Protection Plans.
5. Align the goals, policies, objectives, and implementation measures for fire hazard mitigation in the safety element with those in existing fire plans, or make plans to update fire plans to match the safety element.
6. Create a fire plan for the planning area.

B. LAND USE

1. Develop fire safe development codes to use as standards for fire protection for new development in SRAs or VHFHSZs that meet or exceed the statewide minimums in the SRA Fire Safe Regulations.
2. Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.
3. Identify existing development that do not meet or exceed the SRA Fire Safe Regulations or certified local ordinances.
4. Develop mitigation measures for existing development that does not meet or exceed the SRA Fire Safe Regulations or certified local ordinances or identify a policy to do so.

C. FUEL MODIFICATION

1. Develop a policy to communicate vegetation clearance requirements to seasonal, absent, or vacation rental owners.
2. Identify a policy for the ongoing maintenance of vegetation clearance on public and private roads.
3. Include fuel breaks in the layout/siting of subdivisions.
4. Identify a policy for the ongoing maintenance of existing or proposed fuel breaks.
5. Identify and/or map existing development that does not conform to current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance in SRAs or VHFHSZs.
6. Identify plans and actions for existing non-conforming development to be improved or mitigated to meet current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance.

D. ACCESS

1. Develop a policy that approval of parcel maps and tentative maps in SRAs or VHFHSZs is conditional based on meeting the SRA Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access. (See Gov. Code, § 66474.02.)
2. Develop a policy that development will be prioritized in areas with an adequate road network and associated infrastructure.
3. Identify multi-family housing, group homes, or other community housing in SRAs or VHFHSZs and develop a policy to create evacuation or shelter in place plans.
4. Include a policy to develop pre-plans for fire risk areas that address civilian evacuation and to effectively communicate those plans.
5. Identify road networks in SRAs or VHFHSZs that do not meet title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 2 and 3 (commencing with section 1273.00) or certified local ordinance and develop a policy to examine possible mitigations.

E. FIRE PROTECTION

1. Develop a policy that development will be prioritized in areas with adequate water supply infrastructure.
2. Plan for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure.
3. Map existing emergency service facilities and note any areas lacking service, especially in SRAs or VHFHSZs.
4. Project future emergency service needs for the planned land uses.
5. Include information about emergency service trainings or standards and plans to meet or maintain them.
6. Include information about inter-agency preparedness coordination or mutual aid agreements.

Fire Hazard Planning in Other Elements of the General Plan

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

LAND USE ELEMENT

Goals and policies include mitigation of fire hazard for future development or limit development in very high fire hazard severity zones.

Disclose wildland urban-interface hazards, including fire hazard severity zones, and/or other vulnerable areas as determined by CAL FIRE or local fire agency.

Design and locate new development to provide adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allow citizen egress during emergencies.

Describe or map any Firewise Communities or other fire safe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organization.

HOUSING ELEMENT

Incorporation of current fire safe building codes.

Identify and mitigate substandard fire safe housing and neighborhoods relative to fire hazard severity zones.

Consider diverse occupancies and their effects on wildfire protection (group housing, seasonal populations, transit-dependent, etc).

OPEN SPACE AND CONSERVATION ELEMENTS

Identify critical natural resource values relative to fire hazard severity zones.

Include resource management activities to enhance protection of open space and natural resource values.

Integrate open space into fire safety planning and effectiveness.

Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.

CIRCULATION ELEMENT

Provide adequate access to very high fire hazard severity zones.

Develop standards for evacuation of residential areas in very high fire hazard severity zones.

Incorporate a policy that provides for a fuel reduction maintenance program along roadways.

CLIMATE CHANGE VULNERABILITY ASSESSMENT

Administrative Review Draft

Prepared for:

Mono County
and
Town of Mammoth Lakes

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VULNERABILITY ASSESSMENT

Section 65302 of the California Government Code requires every general plan safety element to include a vulnerability assessment identifying the risks that climate change poses and the geographic areas at risk from climate change impacts. The research conducted for the Vulnerability Assessment (VA) summarized herein is the technical basis for informing policies in the Mono County General Plan Safety Element and Town of Mammoth Lakes General Plan Public Health and Safety Element.

The VA is a best estimate of likely future conditions, based on local demographic projections and the most recently available scientific projections of future climate conditions, given current trends. Like most long-range plans, the Mono County General Plan considers the expected changes to population and the economy, and the needs of the community as a result of these changes; these long-range projections are incorporated into this VA. The VA builds on baseline conditions and anticipated future conditions summarized in the General Plan.

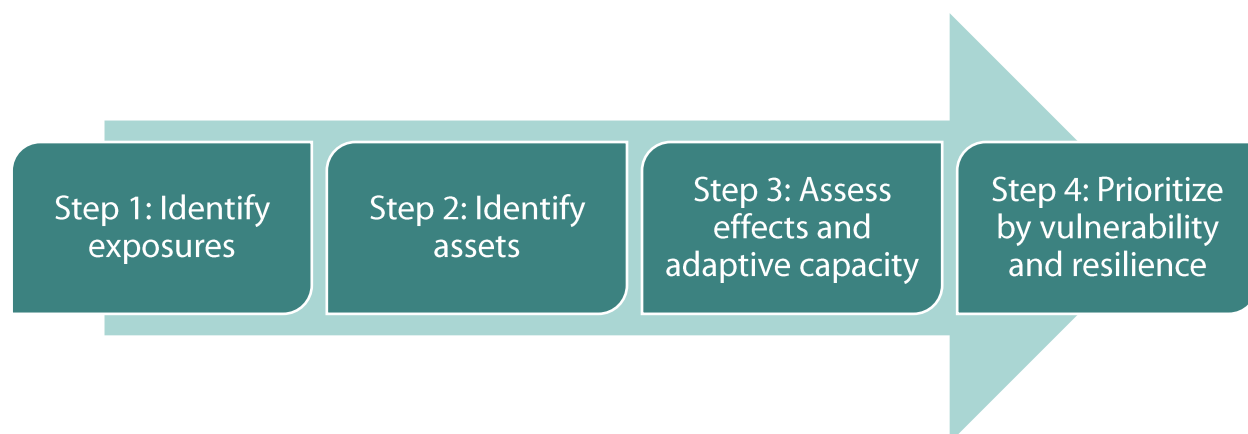
The VA includes a summary of the methods used in relation to the approach in the California Adaptation Planning Guide, a summary of future conditions and vulnerabilities as determined by the assessment, identification of vulnerable populations and assets, and recommended policies for the General Plan.

Method

This VA was completed using a four-part process consistent with the approach outlined in the California Adaptation Planning Guide (**Figure 1**). The process addresses the following questions:

- What **demographic conditions** or climate change-related hazards (known as exposures) could occur in the planning area?
- What **structures or populations** in the planning area (known as assets) could be affected by the exposures?
- How would changes to demographics, the economy, or climate change-related hazards **affect assets** (known as effects), and how are those assets currently prepared to deal with such impacts (known as adaptive capacity)?
- What topics should **adaptation strategies** address?

Figure 1: Vulnerability Assessment Process



This report uses information sources identified in the California Adaptation Planning Guide and assessments of existing conditions completed as part of the Multi-Jurisdictional Hazard Mitigation Plan update process to identify specific assets in the Mono County and Town of Mammoth Lakes planning area, which can include physical properties or structures, land uses, neighborhoods, key services and functions, natural resources, and specific populations. To identify vulnerability, this report first identifies how each exposure would affect each asset and how each asset might already be prepared to mitigate those effects. This analysis assesses how those exposures would affect assets in Mono County by considering existing and projected demographic and development patterns and then assigning a qualitative score for each. This report includes summaries and key outcomes from the vulnerability and resiliency assessment process.

Projected Conditions

As Mono County and the Town of Mammoth Lakes prepare for future natural hazard events, it is important to consider expected changes in socioeconomic and environmental conditions. This report uses information collected during the 2018 update to the Multi-Jurisdictional Hazard Mitigation Plan from sources including the US Census, the California Department of Finance, and Cal-Adapt. It also uses projected population, housing, jobs, and land use densities identified in County and Town General Plans as the best available demographic, economic, and climate change-related hazard projections for the Mono County communities. Since climate change-related hazard projections are based on uncertain future probabilities, many of these outputs are limited in granularity and results will be similar to that of the entire southeast Sierra region, which generally includes Alpine, Mono, and Inyo Counties.

Demographic Change

This section describes population and employment patterns, both current and projected, in the Mono County planning area using the Town and County General Plans, local studies, American Community Survey 2011–2015 data, US Census 2017 estimates, and California Department of Finance 2016 reports and projections. An understanding of expected demographic conditions absent changes to the existing planning framework (known informally as “business-as-usual” conditions) allows the County and Town to understand what changes could best shift development to reduce vulnerability to natural hazards in the future.

Population

The population of Mono County has grown very little since the last US Census. In 2010, the population for Mono County was 14,202, with 8,234 residents in the Town of Mammoth Lakes; in 2015, there were 14,146 residents in the county and 8,104 residents in the town. Future population projections also indicate an increase in the average age of residents, which means the County and Town will need to prepare for growing senior needs. In addition, Mono County hosts over 1.5 million people annually for seasonal recreation and tourist attractions.

The total number of housing units in Mono County for 2015 was 13,982, with 9,695 of them in the Town of Mammoth Lakes. Many of these units are only occupied seasonally. **Figure 2** displays population growth in Mono County and the Town of Mammoth Lakes between 2000 and 2015.

Figure 2: Mono County and Mammoth Lakes Population Growth (2000-2015)



Sources: Mono County 2009; Town of Mammoth Lakes 2007; US Census Bureau 2000, 2010; American Community Survey 2011-15

Employment

Employment in both Mono County and the Town of Mammoth Lakes is heavily based on outdoor recreation and tourism. Since much of this tourism season based, many jobs and residential units are also seasonal. Many residents must travel to other areas for consistent work. The primary employment centers are the Town of Mammoth Lakes and Bridgeport, with government positions, schools, and entertainment being the dominant employers.

Development Pattern

Most development is concentrated in the planning areas clustered along the main highways in the county. The General Plans for both Mono County and the Town of Mammoth Lakes accommodate reasonable growth within existing development boundaries.

The Mono County General Plan projects the greatest growth in certain urbanized communities including Antelope Valley, Bridgeport, Mono City, June Lake, and the Crowley Lake area, and nearly all new housing and commercial development within the Planning Areas defined by the General Plan Land Use Element. Most of the designated land in the county is planned for agricultural and open space uses. Slightly more concentrated residential and commercial development will be accommodated along the main corridors in more populated planning areas such as Bridgeport. The General Plan assumes a likely buildout of 13,930 housing units in the unincorporated area, a growth of just over 4,100 units from existing conditions established in the current General Plan.

The Town of Mammoth Lakes anticipates greater growth, establishing buildout at 52,000 residents, visitors, and workers on a winter weekend, with permanent residents making up 55 percent of that population. This could result in approximately 4,000 additional units for permanent residence. The Town anticipates all this growth will take place within its 12 existing Planning Districts.

Exposures

The following summarizes the exposures that may result from climate change effects predicted for Mono County and Mammoth Lakes. For purposes of this assessment, where predictive data exists, climate change effects are characterized for two milestone years: midcentury (2050) and end of century (2100). Historical data is used to set the baseline for describing the degree of change occurring by these two future dates.

The direct, or primary, effects of climate change summarized here are those identified as being of concern by Cal-Adapt. They include:

- Increased temperature
- Changes in precipitation
- Sea level rise

Secondary consequences, which could occur as a result of one or a combination of these primary effects, are also analyzed. These consequences include:

- Increased frequency, intensity, and duration of extreme heat days and heat waves/events
- Loss of snowpack and decreased water supplies
- Increased wildfire
- Increased flooding

Source data is primarily from Cal-Adapt. The Adaptation Planning Guide encourages communities to use Cal-Adapt as the primary source of information to forecast potential climate change impacts over time. Cal-Adapt is a climate change scenario planning tool developed by the California Energy Commission (CEC) and the University of California Berkeley Geospatial Innovation Facility. This data is supplemented by other state studies, academic research, and publications by the Intergovernmental Panel on Climate Change (IPCC). These projections do not apply solely to the community, but rather to a broader geographic region.

Table 1 summarizes Cal-Adapt projections for Mono County.

Table 1: Summary of Cal-Adapt Climate Projections

	Ranges
Temperature Change 1990–2099	January increase in average temperatures: 1.5°F to 2.5°F by 2050 and 5°F to 10°F by 2099. July increase in average temperatures: 3°F to 5°F by 2050 and 8°F to 10°F (<i>Modeled high temperatures; average of all models; high carbon emissions scenario</i>)
Precipitation	Potential precipitation decline is between 0 and 4 inches by 2050 and 1 and 15 inches by 2100. The range varies widely depending on location. Some areas receive less than 6 inches annually, with projected reductions bringing totals under 4 inches by 2090. In other areas, total rainfall exceeds 45 inches per year and is projected to decrease by roughly 15 inches by 2090. (<i>CCSM3 climate model; high carbon emissions scenario</i>)

	Ranges
Heat Wave	A heat wave is five consecutive days over temperatures in the 80s. By 2050, there will be 2 to 3 more heat waves per year, increasing to over 14 to 16 per year by 2100.
Snowpack	Snowpack levels are projected to decline dramatically by 2090 in some areas, with drops of over 50 percent. <i>(CCSM3 climate model; high emissions scenario)</i>
Wildfire Risk	By 2085, wildfire risk is projected to increase substantially (up to 19.1 times) over current levels in northern part of Mono County. The rest of Mono County is projected to have a wildfire risk between 1.1 to 4.8 times greater than current levels. <i>(GFDL model, high carbon emissions scenario)</i>

Source: Public Interest Energy Research 2011

Expected future climate conditions for Mono County and Mammoth Lakes, based on data from these sources, are summarized in the sections below.

Projected Conditions and Effects

Increased Temperature

Annual average temperatures in Mono County are projected to increase steadily. **Table 2** shows the historical and projected mean temperatures for both maximum and minimum temperatures in Mono County and Mammoth Lakes. Historical annual mean temperature is based on data from 1961 to 1990. According to Cal-Adapt, the County and Town are expected to experience an increase in annual mean temperature for both maximum and minimum temperatures. These increased temperatures are likely to result in the secondary climate impacts discussed below.

Table 2: Projected Mean Temperatures (2050–2099)

	Historical Annual	2050 High Emissions	2050 Low Emissions	2099 High Emissions	2099 Low Emissions
Mono County Max Temperature	56.8°F	60.8°F	60.5°F	63.6°F	62.0°F
Mono County Min Temperature	25.2°F	29.1°F	28.8°F	31.9°F	30.0°F
Mammoth Lakes Max Temperature	52.2°F	55.6°F	55.2°F	58.3°F	56.7°F
Mammoth Lakes Min Temperature	24.9°F	29.2°F	28.8°F	31.9°F	30.1°F

Source: Cal-Adapt 2018

Extreme Heat

Cal-Adapt defines the extreme heat day threshold for the Mono County area as 84.5°F or higher, and for Mammoth Lakes as 79.1°F or higher. An extreme heat day is defined as a day in April through October when the maximum temperature exceeds the location's extreme heat threshold, which is calculated as the 98th percentile of historical maximum temperatures between April 1 and October 31 based on observed daily temperature data from 1961–1990). Under this definition, the county has had a historical average of six extreme heat days per year since the 1960s, and Mammoth Lakes has had a historical average of four extreme heat days per year (Cal-Adapt 2018). Cal-Adapt data shows a projected average for the area of 32 to 38 days per year in 2050 and 35 to 85 extreme heat days by 2099.

While the extreme heat definition is tied to historic maximums, resulting in a threshold of 84.5°F Mono County and 79.1°F for Mammoth Lakes, significant real risk to human health and welfare does not generally occur until temperatures reach above 90 degrees in dry weather conditions, which are typical in Mono County and Mammoth Lakes. Neither the Town nor the County are projected to have any days over 90 degrees by 2099. However, generally higher temperatures contribute more broadly to other hazard vulnerabilities such as drought and wildfire, as discussed below.

Heat Waves

As defined by Cal-Adapt, when extreme temperatures (i.e., 79.1°F or higher for Mammoth Lakes and 84.5°F or higher for Mono County) are experienced over a period of five or more days, they are known as heat waves. Scientists expect climate change to lead to longer, more severe, and more frequent extreme heat events. Heat waves in Mono County occurred at a rate of about one to two per decade between 1950 and 2000. Over the next 50 years, Mono County is unlikely to experience a heat wave each year but may experience up to two or three heat waves per decade by the end of the century (Cal-Adapt 2018). Heat days may also manifest earlier in the year than historically recorded and continue to occur in later months.

Urban Heat Island Effect

Locations where development dominates the landscape experience higher temperatures due to the urban heat island effect (UHIE), compared to landscapes that support mostly landscaped or natural vegetation features (e.g., grass, trees). Human-made materials, such as asphalt and concrete, absorb heat and alter microclimate conditions by several degrees Fahrenheit, exacerbate emissions of air pollutants, and increase the rate of photochemical production of ozone. The California Environmental Protection Agency (CalEPA) has developed a study and an interactive map to track the effects of the UHIE throughout the state. This study shows that UHIE impacts are minimal in Mono County due to its predominantly rural nature.

Changes in Precipitation Patterns

Global climate change will affect physical processes and conditions beyond average temperatures. Historical precipitation patterns could be altered because of climate change. Depending on location, precipitation events may increase or decrease in intensity and frequency, and are difficult to predict. While projections generally show little change in total annual precipitation in the state and trends are not consistent, even modest changes could significantly affect California ecosystems that are conditioned to historical precipitation timing, intensities, and amounts. Reduced precipitation could lead to higher risks of drought, while increased precipitation could cause flooding and soil erosion (California Natural Resources Agency 2014:25).

Cal-Adapt cites a historical annual average rate of precipitation of about 21 inches for Mono County and 31 inches for Mammoth Lakes. Overall precipitation in Mono County is expected to increase slightly to 22 or 23 inches, and in Mammoth Lakes to 34 to 35 inches. That precipitation will likely occur with altered timing and intensities than has been the case historically. As discussed below, it is likely that much more of this precipitation will fall as rain rather than snow compared to historical averages. This could have additional secondary effects for flooding and water storage.

Shifts in precipitation across the state are likely to result in the secondary climate impacts discussed below as they relate to Mono County.

Snowpack

Changes in weather patterns resulting from increases in global average temperature could bring about a decreased proportion and total amount of precipitation falling as snow. This phenomenon is predicted to result in an overall reduction of snowpack in the Sierra Nevada. Based on historical data and modeling, the California Department of Water Resources (2008:4, 2013:3-64) projects that the Sierra Nevada snowpack will decrease by 25 to 40 percent from its historical April 1 average of 28 inches of water content by 2050, and decrease 48 to 65 percent by 2100. Runoff from precipitation and snowmelt from the Sierra Nevada is the main source of surface water supply in Mono County, as well as much of the rest of the state. As discussed further below, this will have secondary effects on both surface water and groundwater supplies, which both have important uses in the county and town.

Surface Water

Water in Mono County is provided through a variety of sources. For the Town of Mammoth Lakes, water and sewer service is through the Mammoth Community Water District. This supply is a mix of surface water and groundwater supplied through wells. County communities are served by a variety of public and private entities including utility districts, community service districts, mutual water companies, and

small private systems. Most unincorporated communities use a combination of surface and groundwater, with surface water being provided through local reservoirs and stream diversions by residents. Mono County also exports large amounts of water through the Los Angeles Aqueduct, supplying the majority of the water for the City of Los Angeles. In years of little snowpack, less water is delivered through the Los Angeles Aqueduct and the City of Los Angeles must purchase water from the Metropolitan Water District.

Major waterways in the planning areas include Mono Lake, Bridgeport Reservoir, Lake Crowley, June Lake, Grant Lake, Twin Lakes, and Topaz Lake, and several rivers and creeks. The flow regimes of these waterways depend on spring and summer snowmelt in the Sierra Nevada. The ability of snowpack to retain water and release it gradually is fundamental to water supply planning in Mammoth Lakes and Mono County, and throughout the watersheds of the Sierra Nevada.

Surface water flowing through Mono County comes through a series of 21 dams constructed to provide California with water security during droughts. Dams also provide flood protection for areas of the county located in floodplains.

Groundwater

Both Mono County and the Town of Mammoth Lakes are supplied partially by groundwater. Groundwater recharge occurs solely from precipitation in the form of rainfall and snowmelt; increased average temperatures and changes in the timing, amounts, and snow/rain form of precipitation will therefore affect local aquifer recharge for groundwater supplies. Groundwater use typically increases during droughts. Due to increased uncertainty in the amount and timing of water availability and the stress placed on aquifers during droughts, Mammoth Lakes and Mono County communities may face increased challenges in providing adequate groundwater supplies to meet future demand.

Groundwater levels are monitored through the California Statewide Groundwater Elevation Monitoring (CASGEM) program. The Owens Valley Groundwater Basin in southern Mono County is rated as a medium priority groundwater basin and therefore requires active monitoring, data collection, and reporting to ensure groundwater levels are adequately maintained (DWR 2015). The Owens Valley Groundwater Basin is monitored by the Tri-Valley Groundwater Management District.

Extreme Storms

Changes in precipitation patterns may result in less frequent but more extreme storm events. While the planning area is projected to experience an overall decrease in precipitation, the precipitation that will fall may have more intense characteristics, such as a high volume of rain falling over a shorter period with stronger and more destructive wind patterns. These storms may produce higher volumes of runoff

and/or snowmelt and contribute to an increased risk of flooding. Impacts associated with flooding are discussed in greater detail below under “Increased Flooding.”

Increased Wildfires

Rising temperatures combined with changes in precipitation patterns and reduced vegetation moisture content can lead to a secondary impact of climate change: an increase in the frequency and intensity of wildfires. Changes in precipitation patterns and increased temperatures will alter the distribution and character of natural vegetation and the associated moisture content of plants and soils, according to the California Natural Resources Agency (2012b:11). Increased temperatures will increase the rate of evapotranspiration in plants, resulting in a greater presence of dry fuels in forests and creating a higher potential for wildfires.

Increased wildfire activity across the western United States in recent decades has contributed to widespread forest mortality, carbon emissions, periods of degraded air quality, and substantial fire suppression expenditures. Although numerous factors aided the recent decades’ rise in fire activity, observed warming and drying have significantly increased fire season fuel aridity, fostering a more favorable fire environment across forested systems.

Mapping conducted by the California Department of Forestry and Fire Protection shows that all areas in Mono County are rated as having a very high fire hazard, with the exception of Bridgeport Valley (moderate fire hazard) and Antelope Valley (unrated). With the exception of the Antelope Valley, all privately owned lands in Mono County are within the State Responsibility Area. Cal-Adapt estimates an increase of 1,500 to 2,600 hectares of burn area by the year 2099. The estimated burn area in Mammoth Lakes is approximately double that of the annual mean burn area for the last several decades.

In addition to the direct impacts of fire, wildfires in the Sierra Nevada and areas outside the county affect air quality in the planning area. Wildland fires produce substantial emissions of particulate matter (i.e., smoke, soot), which may cause adverse health effects including restricted breathing and aggravation of existing respiratory and cardiovascular diseases in the short term, as well as alterations to immune systems and cancer from chronic exposure.

Increased Flooding

Climate change is likely to lead to changes in the frequency, intensity, and duration of extreme storm events, such as heavy precipitation amounts with increased rainfall intensity. Further, increases in annual temperature may result in earlier and more rapid melting of the Sierra Nevada snowpack, which could lead to an increase in flow rate of surface waters in the Mono County and Mammoth Lakes planning areas. These projected changes could lead to increased flood magnitude and frequency, and

could place more pressure on the communities as well as the entire region's systems and economy with higher risk of damage to land, buildings, roads, and crops (IPCC 2007:14). While it is uncertain precisely how and to what extent climate change will affect flooding events in the planning area, it is reasonable to expect that an increase in flooding could have serious ramifications because the area is already considerably vulnerable.

Flooding affects a large part of the county. The community areas most likely to be impacted by a 100-year flood include properties along the East and West Walker River, Reversed Creek, and Spring Canyon Creek. Small portions of the developed area in Antelope Valley, Bridgeport Valley, the June Lake Loop, and the Tri-Valley area are also impacted. The Town of Mammoth Lakes only has one potential source of flooding at Mammoth Creek, and generally maintains a low risk of flooding.

Sea Level Rise

Mono County is located approximately 185 miles inland from the California coast, and on the eastern side of the Sierra Nevada range. It is therefore unlikely to be directly affected by sea level rise.

Vulnerable Assets and Recommended Adaptive Capacity Policies and Actions

Increased Temperature

Vulnerable Assets

Population

Higher frequency of extreme heat conditions can cause serious public health impacts, increasing the risk of conditions directly related to heat such as heat stroke and dehydration (California Natural Resources Agency 2012:3). Exposure to excessive heat, generally temperatures over 90 degrees, may lead to heat-related illnesses such as heat cramps, heat exhaustion, and heat stroke. Although temperatures are not projected to reach over 90 degrees in Mono County, heat-related illnesses may still be a risk for specific vulnerable populations such as the elderly, those whose employment requires long hours outdoors such as agricultural laborers, and those without access to shelter, such as homeless people.

Higher temperatures, even at thresholds of 80 to 90 degrees, can also worsen air quality through increased air pollution, such as from ozone formation and particulate matter generation (e.g., wildfire smoke), which poses a health hazard to vulnerable populations. Children, the elderly, and persons with preexisting chronic diseases are particularly susceptible to respiratory and cardiovascular effects from air pollution. Further, elderly persons have a reduced ability to acclimatize to changing temperatures

and are more likely to live alone with limited mobility, which can exacerbate the risk of extreme heat. Those with Alzheimer’s disease and dementia are particularly susceptible due to an inability to notice rising temperatures and failure to stay hydrated or turn on the air conditioning. Agricultural workers are particularly vulnerable to heat-related illnesses because of their unavoidable outdoor exposure during work hours. Disadvantaged communities may also face greater challenges in dealing with extreme heat. Low-income populations may live in aging buildings with poor insulation, leading to higher costs associated with air conditioning. Since lower-income and disadvantaged populations may overlap with populations that speak and read English as a second language, residents may face challenges in knowing what resources and refuges are available to them.

Functions and Structures

Roadway, bridge, and rail degradation is exacerbated by prolonged exposure to extreme heat, which may present unsafe road conditions for motorists, bicyclists, and pedestrians. Extended periods of extreme heat may lead to increased risk of power outages and blackouts. High temperatures decrease the efficiency of power transmission lines, while demand for electricity goes up as operation of air conditioners and cooling equipment increases. This results in more frequent blackouts and could affect the operation of infrastructure and the economic output of businesses, and further jeopardize vulnerable populations as they lose access to air conditioning and other key health technology requiring electric power.

Prolonged periods of high heat will also impact agricultural production, harming and/or killing crops and livestock. These impacts will harm the agricultural economy that is an important component of Mono County’s community and economy, and at the regional level could raise the price of basic food goods.

Recommended Adaptive Capacity Policies and Actions

- *Develop a guide of County procedures in the event of severe weather conditions such as excessive heat, including the deployment of emergency services, opening of local cooling shelters, and community notification procedures.*
- *Incorporate elements of “passive cooling” design elements such as cross ventilation, overhangs, and insulated walls and windows into building design standards.*
- *Establish coordination with health and social service providers from multiple sectors to identify data sources and strategies for community resilience and reaching out to vulnerable populations.*
- *Allocate funding to address anticipated additional repairs to damaged infrastructure that will be required due to increased stress from climate effects such as extreme heat and storms.*

Precipitation Patterns

Vulnerable Assets

Changes in precipitation in the Sierra Nevada may have the greatest impact on the community. Increasing temperatures in the mountains, which result in hastening snowmelt and less captured water runoff into local watersheds (e.g., Mono and Crowley Lakes, Upper Carson, Upper Stanislaus), are likely to cause an overall reduction snowpack. If runoff shifts to earlier in the year, which has already begun to occur, current practices for flood control and water storage may become less effective (California Department of Food and Agriculture 2013:20). As a result, even if precipitation increases slightly or remains the same, local water agencies could struggle in the future to provide adequate water supplies to local residents and businesses. Groundwater sources underlying the City may experience similar changes. Water users could face shortages in normal or dry years if demand increases.

Population

Reduced and altered timing of water flows from the Sierra Nevada, as described above, will likely affect the quality and quantity of water supplies. As water flow decreases, the temperature of the water generally increases, the concentration of pollutants and contaminants in water may increase, and algae blooms can occur, all of which would degrade water quality and can carry illness-producing bacteria. Residents of and visitors to both Mammoth Lakes and unincorporated Mono County rely partially or solely on wells or groundwater; the County and Town may face challenges in meeting increased water demands as rates of groundwater recharge decline (CalBRACE 2018). In years with especially low water flows and snowpack, Mono County and Mammoth Lakes may need to implement very strict restrictions on water usage by the community.

Fluctuations in surface water levels have occurred for the past hundred years, mostly from water diversions from the Owens River beginning in 1913 and Mono Basin beginning in 1941. In recent years, restoration and conservation efforts have allowed Mono Lake to regain much of its volume, but the decline in water level has already had severe impacts on the lake and riparian ecosystems in Mono County. Drought conditions in the past decade have worsened ecosystem impacts.

Coupled with higher temperatures, reduced levels of precipitation could also result in unseen stagnant pools of water that provide the right conditions for the breeding of mosquitoes and the spread of mosquito-borne illnesses, such as dengue fever, West Nile virus, and Zika virus. Vulnerable populations susceptible to these diseases include the elderly and people with compromised immune systems or chronic illness.

Functions and Structures

Hydropower, from dams along several water bodies fed by Sierra Nevada snowpack, supplies a portion of the electricity for the county, as well as other areas in the northeastern California region. A declining volume of snowmelt coupled with earlier periods of melting could have severe consequences for the region's hydroelectricity generation. Power loss associated with extreme storms may disrupt communications and information technology systems, as well as backup pumps and generators that power hospitals, drainage pumps, and other critical operations. Additionally, the potential loss of groundwater supplies could result in land subsidence wherein a gradual settling or sudden sinking of the earth's surface occurs. The effects of subsidence could impact houses and other structures such as transportation infrastructure, cause failure of water well casings, and result in changes to the elevation and gradient of stream channels, drains, and other water transport structures (California Natural Resources Agency 2014:235).

Watersheds and reservoirs located in Mono County and the Mammoth Lakes area offer an array of recreational opportunities and contribute to the predominantly recreation-supported economy. Reduced levels of river flow in watersheds near the planning areas could also affect lake- and river-based economic and recreational opportunities. Similarly, reduced water supplies may affect agricultural irrigation, stressing output and the agriculture-based economy that is essential to Mono County and the surrounding region.

Recommended Adaptive Capacity Policies and Actions

- *Enforce water conservation in Mammoth Lakes and unincorporated communities and encourage public reporting of violations.*
- *Protect groundwater resources from contamination and further overdraft through methods such as encouraging use of water-conserving farming practices, the use of treated wastewater for groundwater recharge and protecting important groundwater recharge areas.*
- *Ensure populated areas have alternative energy sources to supplement the potential reduction or loss of hydro-electrical energy.*

Increased Wildfires

Vulnerable Assets

Increased temperatures, changes in precipitation patterns, and reduced moisture content in vegetation during dry years associated with climate change are expected to increase the potential severity of wildland fire both within and beyond the boundaries of the county. As discussed in the section titled "Exposures," increased temperatures and reduced precipitation in the broader region are predicted to

lead to an increase in the total area burned by wildfire, especially in Mammoth Lakes, June Lake, and Walker areas. Typically, these fires are caused by lightning or human activity, and can result in substantial habitat loss and severe economic impacts.

A changing climate is also expected to subject forests outside the county to increased stress due to drought, disease, invasive species, and insect pests. These stressors are likely to make forests more vulnerable to catastrophic fire (Westerling and Bryant 2008:231). An increased rate and intensity of wildfire in coniferous forests in the Sierra Nevada could adversely impact populations, functions, and structures in Mammoth Lakes and unincorporated Mono County communities.

Population

Because most of Mono County is rural with sloped geography and fire-prone vegetation, most areas are at risk of wildfire. Public lands surrounding the communities are often highly flammable and not adequately thinned, and many residents live in rural areas that are directly in the path of potential fires. Higher temperatures, dryer weather, and high winds make firefighting difficult, as does a lack of highway access. These factors make it likely that human life will likely be at risk during a wildfire.

Another significant impact of wildfire on vulnerable populations is reduced air quality from fires burning elsewhere in the region that affect respiratory health. Particulate matter (i.e., soot, smoke), carbon monoxide, nitrogen oxides, and other pollutants are emitted during the burning of vegetation. It can cause acute (short-term) and chronic (long-term) cardiovascular and respiratory illness, especially in vulnerable populations such as the elderly, children, agricultural and outdoor workers, and those suffering from preexisting cardiovascular or respiratory conditions. Because of wind patterns, residents can be subjected to degraded air quality from both nearby and distant fires. It is anticipated that more frequent and intense wildfires would produce harmful respiratory conditions that could aggravate chronic illnesses in susceptible populations as well as cause acute illness in more resilient populations. Further, as future wildfires burn at higher intensity and for longer durations, periods of exposure to air pollutants will become more frequent and prolonged, causing increased rates of acute and chronic respiratory and cardiovascular illness, and increased emergency room visits and hospitalizations.

Functions and Structures

Although wildfires occur every year in Mono County, fatalities and damage to structures are generally minimal. However, the probability of a fire damaging people or structures has increased within the past 20 years, due to more residences being built at the urban-wildland interface and an increase in permanent residents. Fire activity in the Sierra Nevada region may also damage infrastructure. Much of the infrastructure that provides electricity for Mammoth Lakes and Mono County, such as transmission

lines and hydroelectric facilities, is located in areas predicted to be more frequently affected by wildfire as a result of climate change. Further, the transmission capacity of a power line can be affected by heat, smoke, and particulate matter, even if direct damage does not occur. Wildfire could also make it more difficult for residents to have water available for personal consumption, by affecting the magnitude and timing of snowmelt runoff, increasing sediment and nutrient load of reservoirs, and heightening metal content.

Recommended Adaptive Capacity Policies and Actions

- *Facilitate implementation of measures identified in the Mono County Community Wildfire Protection Plan (CWPP) to protect human life and property, critical infrastructure, and natural resources associated with wildfire.*
- *Update fire hazard mapping to reflect changing fuels and climate conditions. Upon release of updated hazard severity zones, incorporate revised mapping into the jurisdiction's General Plans and CWPPs.*
- *Distribute information from the Great Basin Air Pollution Control District to the public on the status of air quality on a daily basis, provide alerts on poor air quality days, and include educational materials on the health effects of air pollution.*

Increased Flooding

Portions of Mono County are vulnerable to flooding, including the communities of Benton, Hammil, and Chalfant. Over 50 percent of state land and 11 percent of privately owned land are vulnerable to flood risk, although no households in Mammoth Lakes are located in the 100-year flood zone. While it is uncertain exactly how climate change will affect flooding events in Mono County and to what extent, any increase in flooding is highly likely to occur and could have serious ramifications to households located in the 100-year flood zone.

Vulnerable Assets

Population

Populations in Mono County most likely to be directly adversely affected are those living in 100- or 500-year floodplains. Flooding-related impacts will likely disproportionately affect populations considered socially vulnerable, especially those of lower income. Low-income populations generally suffer higher mortality rates and their homes sustain greater damage due to the age of the housing stock and its location. Further, low-income households may not be able to afford structural upgrades or flood insurance to mitigate the effects of flooding associated with dam failure or levee collapse (Burton and Cutter 2008:144). Low-income households may also lack transportation and other resources to respond

to or evacuate during a flood event. These households may not have sufficient financial reserves to afford appropriate flood insurance or pay for the costs to recover from flooding.

Flood events also contribute to the spread of disease and illness. Floodwaters uplift substances including dirt, oil, animal waste, and lawn, farm, and industrial chemicals and carry them downstream, contributing to degraded water quality in receiving streams. Stagnant flood pools can become breeding grounds for mosquitoes, which may lead to an increase in vector-borne diseases.

Functions and Structures

An increase in the number of wildfires and severe storms and subsequent severe flood events may impact streamside land, buildings, roads, and crops. The most vulnerable structures are residential homes, which make up most of the structures in areas most at risk of flooding. Flash floods, stagnant (medium-length) floods, and deep-water (long-length) floods can result in unwanted submergence and/or excessive soil saturation of croplands (California Department of Food and Agriculture 2013). Flooding could also release sewage and hazardous and/or toxic materials if wastewater treatment plants are inundated, storage tanks are damaged, or pipelines are severed. Floods also cause economic losses through the closure of businesses and government facilities, disrupt communications, disrupt the provision of utilities such as water and sewer, result in excessive expenditures for emergency response, and generally disrupt the normal function of a community.

Flooding also presents problems for infrastructure through wear and tear. Localized flooding often damages roadways by “stripping,” a process that separates the aggregates in pavement from the asphalt binder that holds them together. Another potential source of damage occurs when water infiltrates the pavement, either through voids or cracks in the surface, then becomes trapped between two layers of asphalt. Flooding may result in closed roads and reduced access to many people trapped in their homes.

Roadways can become clogged with vehicles, restricting transportation. Flooding may also inundate sewage systems, causing backup and release of hazardous materials and exposing people and animals to toxic substances. Furthermore, floods can exacerbate bridge scour, which makes bridges weaker and less safe, and may require repairs or replacement. Electrical boxes and other facilities may also be inundated, disrupting service to infrastructure such as traffic signals and light rail systems. Additionally, underground electrical infrastructure is considered more vulnerable to flooding as prolonged periods of inundation can delay repairs. During fall storms, leaves wash into the drainage systems, further aggravating localized flooding throughout the region.

Recommended Adaptive Capacity Policies and Actions

- *For jurisdictions with existing property in 100-year flood zones, establish programs to fund homeowners to lift existing structures out of the 100-year flood plain.*
- *For jurisdictions with existing property in 100-year flood zones, establish programs to fund buyouts for repetitive loss structures.*
- *Develop plans for phased use and adaptation of infrastructure that can be used differently as flood water levels rise over time due to climate change.*
- *Work with FEMA to ensure flood maps are kept up to date for all inhabited areas of the county, and participate in the FEMA National Flood Insurance Program.*
- *Continually update and revise applicable portions of the Mono County Emergency Operations Plan to remain consistent with the Multi-Jurisdictional Hazard Mitigation Plan and the most current scientific data.*

Sea Level Rise

The Mono County and Mammoth Lakes Planning Areas are not vulnerable to sea level rise, although some secondary impacts such as statewide economic prosperity and inland migration may occur.

Vulnerable Assets

Population

Direct impacts on population due to sea level rise are limited in Mono County. Secondary impacts, however, may impact the population. Reduced economic output in other parts of the state and country could impact the tourist-based economy. Inland migration could result in unplanned levels of growth that in turn stress existing services and resource management.

Functions and Structures

There are no areas in Mono County that will be affected by sea level rise, although the potential for increased flooding may occur due to rising oceanic levels pushing water further inland. Saltwater intrusion has the potential to occur in the freshwater aquifers as a result of sea level rise, but the probability and extent of this is unknown.

Recommended Adaptive Capacity Policies and Actions

Sea level rise will not directly affect Mono County or Town of Mammoth Lakes. Secondary impacts on flood levels can be adequately addressed by the recommended adaptation strategies to reduce flood impacts.

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August 20, 2020

To: Planning Commission
From: Bentley Regehr, Planning Analyst
Subject: Workshop: GPA 20-01, ADU updates

RECOMMENDED ACTION

Conduct workshop and provide direction to staff on proposed changes.

BACKGROUND

In response to updates to state law, staff has revised General Plan Chapter 16, Accessory Dwelling Units (ADUs). The changes are primarily targeted at making regulations less restrictive to allow the construction of more ADUs with less discretionary review. ADUs are often affordable by nature due to their size and compatibility with existing infrastructure, and have therefore been a strategic target at both the state and county level.

Expansion of Ministerial Permitting

Previously, Chapter 16 allowed ADUs with only a building permit (no Use Permit or Director Review) in cases where the unit did not exceed 800 square feet. New state law expands the allowance of ADUs through only a building permit in several additional situations:

- *16.030.* Junior ADUs are permitted in any land use designation where non-Junior ADUs are already permitted. Junior ADUs are defined as a unit that is no more than 500 square feet in size and contained entirely within an existing single-family structure. A junior ADU may include separate sanitation facilities, or may share sanitation facilities with the existing structure. The junior ADU must contain cooking facilities.
- *16.040A(i).* An attached ADU may expand by up to 150 square feet beyond the existing physical dimensions, if it is accommodating ingress or egress, and has exterior access.
- *16.040A(iii).* Multiple accessory dwelling units within the portions of existing multifamily dwelling structures not used as livable space, including, but not limited to, storage rooms, boiler rooms, passageways, attics, basements, or garages, if each unit complies with state building standards for dwellings. An existing multifamily unit is allowed at least one accessory dwelling unit or up to, and not exceeding, 25 percent of the existing multifamily dwelling units.
- *16.040A(iv).* Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling.

Additionally, the size thresholds subject to additional permit requirements have been revised to be consistent with state law. Additional permit requirements, in this case, refers to either a Use Permit or Director Review. A comparison of size thresholds for discretionary review for previous and proposed regulations are outlined in the following subsections.

Previous Discretionary Size Thresholds

Previously, thresholds were based on a combination of parcel size and proposed ADU floor area, and are summarized here:

- A. On parcels less than 7,500 sq. ft. in net area, an attached Accessory Dwelling Unit not exceeding 500 sq. ft. in size may be permitted with a building permit.
- B. On parcels of 7,500 sq. ft. up to 10,000 sq. ft. in net area, an attached Accessory Dwelling Unit not exceeding 640 sq. ft. in size is allowed with a building permit. A detached Accessory Dwelling Unit not exceeding 640 sq. ft. may be permitted by application for a Director Review.
- C. On parcels of 10,000 sq. ft. up to one acre in net area, an Accessory Dwelling Unit not exceeding 640 sq. ft. in size (attached or detached) is allowed with a building permit.
- D. On parcels one acre or greater, an Accessory Dwelling Unit not exceeding 640 sq. ft. in size (attached or detached) is allowed with a building permit. In this same parcel size range, an Accessory Dwelling Unit exceeding 640 sq. ft. but not exceeding 1,400 sq. ft. in size (attached or detached) may be permitted by application for a Director Review. In this same parcel size range, an Accessory Dwelling Unit exceeding 1,400 sq. ft. may be permitted by application for a use permit.

Proposed Changes to Discretionary Size Thresholds, Consistent with New State Law

Revisions to Chapter 16 remove parcel size limits and are based on floor area, dependent on the number of bedrooms. Thresholds are the same for detached and attached units. Updated discretionary thresholds are summarized in Table 1:

Table 1: Updated Discretionary Review Thresholds for ADUs

Required Review	Qualifying Units
Building Permit only	<ul style="list-style-type: none"> • One-bedroom units less 850 square feet • Two-bedroom units less than 1,000 square feet • Units associated with a multi-family development, qualifying under 16.040A
Director Review	<ul style="list-style-type: none"> • One-bedroom units between 850 and 1,400 square feet • Two-bedroom units between 1,000 and 1,400 square feet
Use Permit	<ul style="list-style-type: none"> • Any unit exceeding 1,400 square feet • Any unit associated with a multi-family development, not qualifying under 16.040A

Additional revisions

Other revisions to Chapter 16 per state law include:

- Side and rear yard setbacks may be reduced to four feet provided the design demonstrates snow will not shed onto adjacent properties.
- ADUs are exempt from Housing Mitigation Ordinance (HMO) fees. Units shall also be exempt from all other development impact fees if less than 750-square feet.
- Ministerial reviews shall occur within 60 days (previously 120) after receiving an accessory dwelling unit application unless the accessory dwelling unit is built concurrently with the primary unit.
- Short-term rentals are prohibited in units that qualify under 16.040A. The County has the optional authority to ban short-term rentals in all ADUs, if desired, as outlined in the policy discussion questions below.

Policy discussion questions

New state law also grants authority to local jurisdictions to impose additional restrictions. Staff is seeking recommendations on whether to implement the following restrictions:

1. A prohibition of short-term rentals in all ADUs.
2. Imposing a 16' height limit for units that qualify under 16.040.A (ii) and 16.040.A (iv), as allowed under state law.

The Chapter 16 redline version presented in the attachment is currently under review by the California Department of Housing and Community Development (HCD). Feedback from HCD and today's workshop will be incorporated into a future version that will be brought to the Planning Commission and the Board of Supervisors for final approval.

This staff report has been reviewed by the Community Development Director.

Attachments:

1. Chapter 16 – Accessory Dwelling Units (redline draft)

ATTACHMENT

- Redline version of Chapter 16 updates

CHAPTER 16 – ACCESSORY DWELLING UNITS

Sections:

16.010	Intent.
16.020	Definition.
16.030	Applicable Land Use Designations.
16.040	General Provisions.
16.050	Standards for Accessory Dwelling Units.

16.010 Intent.

The intent of this chapter is to allow for Accessory Dwelling Units in accordance with State law in order to provide additional affordable housing opportunities, including housing for the elderly in Mono County.

16.015 Consistency with State Law

This chapter is consistent with State Law, including AB 881, AB 670, AB 587, AB 671, AB 68, and SB 13.

16.020 Definition.

"Accessory Dwelling Unit" (also referred to as "dependent," "Secondary Housing," or "granny unit") means residential occupancy of a living unit located on the same parcel as the primary residential unit. It provides complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the primary unit is situated. An Accessory Dwelling Unit shall meet the minimum regulations for an efficiency dwelling unit in the California Building Code.

The Accessory Dwelling Unit can be either attached to or detached from the primary residential unit but in either case shall have similar architectural elements as the primary unit (i.e., materials, textures, colors, etc.; see 16.050 G below). The Accessory Dwelling Unit shall be clearly subordinate to the primary unit.

“Junior accessory dwelling unit” means a unit that is no more than 500 square feet in size and contained entirely within an existing single-family structure. A junior accessory dwelling unit may include separate sanitation facilities, or may share sanitation facilities with the existing structure. The junior accessory dwelling unit must contain cooking facilities.

Utilities that are installed for future expansion, such as stub outs that would allow a kitchen to be installed at a later date, shall be considered as complete cooking facilities in accessory dwelling units. In units required by deed restriction, complete cooking facilities shall be installed resulting in a usable kitchen at final permit issuance, and interior access between attached units shall be no more than a single personnel door.

16.030 Applicable Land Use Designations.

An Accessory Dwelling Unit and Junior Accessory Dwelling Unit may be permitted in any land use designation that allows single-family residences as a permitted use or as allowed in Specific Plan (SP) areas subject to the General Provisions below.

16.040 General Provisions.

- ~~A. On parcels less than 7,500 sq. ft. in net area, an attached Accessory Dwelling Unit not exceeding 500 sq. ft. in size may be permitted with a building permit.~~
- ~~B. On parcels of 7,500 sq. ft. up to 10,000 sq. ft. in net area, an attached Accessory Dwelling Unit not exceeding 640 sq. ft. in size is allowed with a building permit. A detached Accessory Dwelling Unit not exceeding 640 sq. ft. may be permitted by application for a Director Review.~~
- ~~C. On parcels of 10,000 sq. ft. up to one acre in net area, an Accessory Dwelling Unit not exceeding 640 sq. ft. in size (attached or detached) is allowed with a building permit.~~
- ~~D. On parcels one acre or greater, an Accessory Dwelling Unit not exceeding 640 sq. ft. in size (attached or detached) is allowed with a building permit. In this same parcel size range, an Accessory Dwelling Unit exceeding 640 sq. ft. but not exceeding 1,400 sq. ft. in size (attached or detached) may be permitted by application for a Director Review. In this same parcel size range, an Accessory Dwelling Unit exceeding 1,400 sq. ft. may be permitted by application for a use permit.~~
- A. Accessory Dwelling Units are permitted with a building permit if any of the following instances apply:
- (i) The accessory dwelling unit or junior accessory dwelling unit is located within a single-family dwelling or existing space of a single-family dwelling, whether existing or proposed, or accessory structure and may include an expansion of not more than 150 square feet beyond the physical dimensions of the existing accessory structure. An expansion beyond the physical dimensions of the existing accessory structure shall be limited to accommodating ingress and egress. The space must have exterior access. Side and rear setbacks must meet fire protection standards and prevent snow shedding onto adjacent properties.
 - (ii) One-bedroom detached accessory dwelling units not exceeding 850-square feet and two-bedroom accessory dwelling units not exceeding 1,000-square feet. The unit may not exceed four-foot side and rear yard setbacks and must meet fire and safety standards, including prevention of snow shedding onto adjacent properties.
 - (iii) Multiple accessory dwelling units within the portions of existing multifamily dwelling structures not used as livable space, including, but not limited to, storage rooms, boiler rooms, passageways, attics, basements, or garages, if each unit complies with state building standards for dwellings. An existing multifamily unit is allowed at least one accessory dwelling unit or up to, and not exceeding, 25 percent of the existing multifamily dwelling units.
 - (iv) Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling. Side and rear yard setbacks may be reduced to four feet provided the design demonstrates snow will not shed onto adjacent properties and fire safety standards are met.
- B. The following accessory dwelling units that do not qualify under 16.040A may be permitted through Director Review:
- (i) One-bedroom units between 850 and 1,400-square feet;

- (ii) Two-bedroom units between 1,000 and 1,400-square.
- C. Accessory dwelling units that do not qualify under 16.040A and exceed 1,400-square feet may be permitted through Use Permit.
- E. Square footage of accessory dwelling units shall be calculated based on the exterior dimensions of the unit. All interior living space shall count toward the total square footage of the unit.
- F. Consistent with Government Code section 65852.2, ministerial reviews shall occur within ~~120~~ 60 days after receiving an accessory dwelling unit application, ~~unless the accessory dwelling unit is built concurrently with the primary unit.~~

16.050 Standards for New Accessory Dwelling Units.

- A. All construction shall conform to the height, setback, lot coverage, fees (including school impact fees and fire district fees), snow storage, and other development requirements applicable to residential construction in the land use designation in which the property is located. ~~Side and rear yard setbacks may be reduced to four feet provided the design demonstrates snow will not shed onto adjacent properties. The unit shall be exempt from development impact fees if less than 750-square feet and all units are exempt from Housing Mitigation Ordinance (HMO) fees.~~
- B. If a well and/or septic system is/are to be utilized, a clearance letter shall be obtained from the Environmental Health director and shall accompany the building permit application (or if applicable, the Director Review or Use Permit application). For Accessory Dwelling Units that are served by a public water and/or sewer system, a letter from the serving entity that indicates adequate service shall be submitted as part of the application.
- C. ~~One of the units on the parcel must be owner occupied if the property contains a junior accessory dwelling unit (either the primary unit or the junior accessory dwelling unit); for detached accessory dwelling units, there is no owner occupancy requirement. For units that do not qualify under 16.040.A, one unit on the property must be owner occupied.~~
- D. ~~If the Accessory Dwelling Unit is 640 sq. ft. or less in size, one off-street parking space must be provided for the Accessory Dwelling Unit in addition to parking required for the primary unit. If the Accessory Dwelling Unit is larger than 640 square feet, two parking spaces must be provided for the Accessory Dwelling Unit in addition to parking required for the primary unit, if it contains two or more bedrooms. Parking shall be in accordance with Chapter 06 of the Mono County Land Use Element, unless the following instances exist, in which case. Required parking shall be one space for a one-bedroom unit and two spaces for units of two or more bedrooms, and is in addition to the required parking for the primary unit. There is no parking requirement for studio units. No parking standards shall be imposed in the following instances:~~
 - (1) The accessory dwelling unit is located within one-half mile of public transit.
 - (2) The accessory dwelling unit is located within an architecturally and historically significant historic district.
 - (3) The accessory dwelling unit is part of the existing primary residence or an existing accessory structure.
 - (4) When on-street parking permits are required but not offered to the occupant of the accessory dwelling unit.
 - (5) When there is a car-share vehicle located within one block of the accessory dwelling unit.

- E. Whether attached or detached, the Accessory Dwelling Unit shall be architecturally compatible with the primary residence. The Community Development Department shall determine the architectural compatibility of the structures and shall consider roofing, siding, trim, door and window frame colors ~~and materials; roofing, siding, trim, door, and window materials~~; roof slope and pitch; and wall articulation, roof line articulation, eaves, railings, chimneys, porches, and similar features; landscaping should also be considered in helping to make the units compatible. The Accessory Dwelling Unit shall be clearly subordinate to the primary unit in terms of size and placement on the property. If attached, the two units shall have the appearance of a single-family residence; the Accessory Dwelling Unit entrance shall be located on the side or rear of the building.
- F. Pursuant to the California Building Code, accessory dwelling units shall not be required to provide fire sprinklers if they were not required for the primary residence. Accessory dwelling unit utility connections and related fees shall comply with Government Code section 65852.2.
- G. No passageway shall be required in conjunction with the construction of an accessory dwelling unit. No setback shall be required for an existing garage that is converted to an accessory dwelling unit, and a setback of no more than ~~five~~ four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is constructed above a garage, provided the design demonstrates snow will not shed onto adjacent properties and fire safety standards are met.
- H. Short-term rentals are prohibited in units that qualify under 16.040A; units qualifying under 16.040B and 16.040C are subject to Mono County's short-term rental regulations (see Chapter 25 and Mono County Code Chapter 5.65).