EXECUTIVE SUMMARY

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I. EXECUTIVE SUMMARY AND ACTION PLAN INTRODUCTION

In 2003, the Amador Fire Safe Council contracted with EIP Associates[1] to prepare a Community Wildfire Protection Plan (CWPP) for Amador County. EIP Associates hired a local Registered Professional Forester (RPF), Ron Monk, to gather data and write the plan. The plan divided the county into nine planning units. Each planning unit represents a distinctly different wildfire environment. The Amador County Fire Hazard Reduction Plan (CWPP) was approved by CAL FIRE and all local fire agencies. It was adopted by the Amador County Board of Supervisors in 2005.

Following the completion of EIP's plan, the council prepared an addendum titled "Steps to Implementation" which is a five-year action plan to implement the Amador County CWPP. These two documents are collectively referred to as the Amador County Generic Community Wildfire Protection Plan.

In 2006, all fuel reduction projects (wildfire mitigation) proposed in the CWPP were incorporated into the Amador County Multi-hazard Mitigation Plan (MHMP). The purpose of the MHMP is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Amador County. This plan was prepared to meet the Disaster Mitigation Act of 2000 (DMA 2000) requirements in order to maintain Amador County's eligibility for the Federal Emergency Management Agency's (FEMA) Pre-disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP).

Amador Fire Safe Council recognized the need to reevaluate the recommendations in the Amador County CWPP within five years from its adoption. Instead of reevaluating all nine planning units simultaneously, the council decided to revisit each of the units separately starting with the most at risk areas. The Pioneer/Volcano Planning Unit is the most at risk planning unit in the county.

Amador Fire Safe Council obtained funding from the Sierra Nevada Conservancy and Amador County[2] in 2009 to update the Pioneer/Volcano Planning Unit. This update is written as a Community Conservation and Wildfire Protection Plan (CCWPP). The difference between a CWPP and CCWPP is that the latter recognizes the impact of post European settlement on forest health and composition; and how these have influenced wildfire in the Sierra.

This document summarizes the process and information developed for the Pioneer/Volcano Planning Unit update. Detailed information for this plan can be found in the relevant appendices, which are referenced for additional information.

This plan identifies wildfire risks and hazards in the Planning Unit and the mitigations needed to reduce them. It also provides residents with a step-by-step guide on how to fire-safe their homes, businesses, and community and how to best prepare for the threat of wildfire. The appendices and reference sections can be copied or removed for reference.

This document and all its associated appendixes, maps, and supporting documentation are written for multiple audiences. Audiences that include homeowners, policy makers, public land managers, private land managers, and fire agencies. Readers will note that at times the writing style will be formal and somewhat technical. Other parts are written in an informal style that is more informative than technical. These different styles are intentional and represent the broad audience this plan is intended to inform and influence.

Along with preparing this plan, the Amador Fire Safe Council was responsible for several ancillary products. These additional items were developed to assist implementation of this plan. Because of the nature of these products, all but one covers the entire county. These products are:

- Reverse 911® database – This product provides the tools to activate evacuations using the Reverse 911® software. This software allows the Office of Emergency initiate phone calls to all residents within a selected area. These phone calls will contain a message warning residents of existing emergencies, pending evacuations, and order evacuations.

- Reverse 911® Field Guide – This guide is provided to emergency services agencies. The guide is an indexed map book of Reverse 911® areas. The Reverse 911® areas developed for the database and guidebook are based on neighborhoods and expected wildfire behavior.

- Controlled Intersection Guidebook- This guidebook provides law enforcement agencies with lists of intersections requiring control to affect orderly evacuations, road closures, and prevent looting. The intersections are cross-referenced with the Reverse 911® Field Guide.

- Helicopter Landing Zone Field Guide – This guide provides emergency service personnel and pilots with a map of pre-inspected landing zones and flight approach hazards.

- Community Evacuation Guides – These are pamphlets outlining evacuation routes. Each pamphlet is individualized to a community or neighborhood and contains a map if evacuation routes for that community. These pamphlets are designed for mass mailing or handouts and are available on the Amador Fire Safe Council's website *http://www.amadorfiresafe.org*.

Initially, the council agreed to develop a county road atlas for the emergency services agencies. This product was dropped because of an effort already in progress by Amador County's Technical Information Department. A county road atlas was completed in the summer of 2010. This atlas was produced in two formats – a public format and an emergency services format. The public format is available as a downloadable PDF file on Amador County Office

of Emergency Services website, *http://www.co.amador.us*. The emergency services atlas was provided to emergency services agencies on a DVD.

I.A. PLAN GOALS, INTRODUCTION, AND BACKGROUND

I.A.1 OVERALL PLAN PURPOSE

The purpose of this plan is several-fold:

- To identify priority projects to reduce risks and hazards from wildfire while protecting conservation values. Goals are to be achieved principally through prioritization and implementation of fuel hazard reduction, community education, and fire-suppression projects and activities.
- To provide community priorities for conservation-based fuel reduction on public lands
- To provide conservation-based fire safety educational information to residents of the Pioneer/Volcano Planning Unit
- To provide a positive balance among fire prevention, conservation, and wildlife protection
- To provide a guidance document for future actions of the Amador Fire Safe Council, County of Amador, CAL FIRE, United States Forest Service, Bureau of Land Management, Pacific Gas & Electric Company and local emergency service providers.
- To coordinate fire protection strategies across property and administrative boundaries to achieve landscape scale wildfire defenses.
- To integrate private land management goals with community needs and expectations for fire safety.
- To create ecologically sustainable biomass utilization and removal projects within Pioneer/Volcano Planning Unit.
- To provide tools to emergency response agencies that improves response capabilities.
- To reduce damage from wildfire by recreating a pre-European settlement *fire adaptive ecosystem*[3].
- To reduce the potential of large scale damage from the historic large fire scenario in the foothill and mountain regions of Amador County

- Finally, this document is being written as a Community Wildfire Protection Plan, in order to meet the requirements for future National Fire Plan and other government funding sources, and to provide community direction for federal lands management within the planning area.

I.A.2. CONSERVATION PRINCIPLES FOR COMMUNITY WILDFIRE PROTECTION IN CALIFORNIA'S SIERRA NEVADA

This document is based on the following Conservation Principles.

1. **Remember the Vegetation (Native Trees and Other Plants)**
    a. Discover and monitor forest and vegetation's dynamic changes.
    b. Act conservatively.
    c. Protect native species
    d. Keep favor and retain the largest, most fire-resilient, and healthiest trees adapted to the location.
2. **Remember the Wildlife**
    a. Provide local wildlife a place to live.
    b. Provide access to food and water.
    c. Protect future generations of wildlife.
    d. Value the standing dead trees.
    e. Conserve rare and endangered species.
3. **Remember the Soil**
    a. Maintain the life in the soil.
    b. Ensure the soil cover is fire safe.
    c. Minimize erosion.
    d. Protect soil after a fire.
4. **Remember the People**
    a. Plan actions with neighbors
    b. Find experienced workers and treat them well.
    c. Work with the local fire department.

I.A.3. FIRE SAFE OBJECTIVES

The objectives for fire safety will drive the development of the assessment and eventual solutions. These objectives reflect the particular characteristics of Pioneer/Volcano Planning Unit. The overall objectives for this plan are to decrease the intensity of fire behavior and minimize ignitions, while increasing *permeability*[4] and *resiliency*[5] of landscapes—e.g. a fire-resistant landscape—to decrease damage from wildfires.

These objectives reflect the particular wildfire characteristics facing Amador County.

1. Prevent damage to the environment and structures caused by the historic large wildfire scenario[6] in Amador County.
2. Prevent damage to the environment and infrastructure caused by wildfires occurring during "average bad[7]" fire weather.
3. Provide safe evacuation of citizens during wildfires
4. Assist fire and other emergency agencies to respond to emergencies
5. Obtain compliance with the defensible space requirements[8]
6. Educate the citizens of Amador County about the importance of re-establishing a pre-European forest landscape and its importance on fire safety and forest health.

I.A.4. PIONEER/VOLCANO PLANNING UNIT PROFILE

The Pioneer/Volcano Planning Unit is located in the midsection of Amador County. The plan area contains 5,159 parcels of land totaling 23,029.5 acres. The estimated population is approximately 5,000. There are no incorporated towns within the planning unit. However, there are several small communities - Buckhorn, Pioneer, and Volcano. In addition to these communities, there are numerous enclaves of commercial development. Most of the area is zoned R1, R1A, R2, R2A, R3, and RE.[9] *See Plate 1 next page.*

Amador County is currently updating its General Plan. All versions of zoning for the new plan increase the residential zoning within the Pioneer/Volcano Planning Unit. Increased residential development with a corresponding increase in commercial development is expected. The large number of residential parcels intermixed with highly flammable forest fuels places the residents of the planning unit at risk of large damaging wildfires.

The largest federal landowner is the Bureau of Land Management that holds approximately ten percent of the land within the planning unit. The United States Forest Service's landholding is very small, about forty acres[10]. The parcels owned by the Forest Service and the Bureau of Land Management are scattered throughout. The largest private landowner is

Sierra Pacific Industries, a timber company. Most of the land within the planning unit is privately owned by individuals. Some of the land is devoted to timber production and other agricultural uses. The entire area is unincorporated.

Several large drainages are within or adjacent to the planning unit. Most significant of these are the Mokelumne River, Consumnes River, Antelope Creek, and Ashland Creek. The influence of these drainages on potential wildfire damage is related to their east/west orientation, fuel load, and the historic large fire weather events. *See Appendix 3; page 63- Topography for more information.*

Much of the planning unit contains an abundance of forest fuels capable of supporting intense fire behavior, including crowning. Intermingled with the forest are many homes and businesses. Many of these structures were constructed before the adoption of modern fire safe building and development standards and would not be permitted today.

I.A.5. COMMUNITIES AT RISK

On January 4, 2001, for the purposes of the National Fire Plan, the Department of Interior (DOI) published in the *Federal Register* a "Notice of Urban-Wildland Interface (WUI) Communities within the Vicinity of Federal Lands That Are at High Risk from Wildfire." In Pioneer/Volcano Planning Unit, Pioneer and Volcano were the first communities to be designated as a Community at Risk. In 2001, the DOI added these communities to the list.

After the 2000 fire season, the California Department of Forestry and Fire Protection (CAL FIRE), working with the California Fire Alliance, developed a list and associated map of communities at risk from wildfire using 1990 Census and USGS Geographic Names Information System data to identify populated places, and CAL FIRE's Fire and Resource Assessment Program (FRAP) fuel hazard data.[11] This data describe relative risk to areas of significant population density from wildfire by combining residential housing unit density with the proximate fire threat to give a relative measure of the potential loss of structures and threats to public safety from wildfire. CAL FIRE's designation of the Pioneer WUI encompasses all of the Pioneer/Volcano Planning Unit and thus, no further proposals for areas within the planning unit to be designated as Communities at Risk are required.

Figure 1. Communities at Risk in Pioneer/Volcano Planning Unit

Community at Risk	Threat Level[12]	Federal Adjacency?[13]	Source of Designation
Pioneer	3-Very High	✓	California Fire Alliance and Cal Fire (FRAP)
Volcano	3-Very High	✓	California Fire Alliance and Cal Fire (FRAP)

I.B. FIRE PLANNING PROCESS OVERVIEW

I.B.1. FIRE PLANNING AREA BOUNDARIES

This CCWPP update covers the entirety of Pioneer/Volcano Planning Unit. This area is described as starting from the intersection of Highway 88 and Highway 26 on the western extent of Planning Unit and moving east to Dew Drop encompassing all lands between. The northern boundary is the Consumes River and the southern boundary is the Mokelumne River, Volcano is the most westerly community within the plan area*. (See Plate 2 on next page)*

I.B.2. PLANNING PROCESS SUMMARY

The planning unit is comprised of numerous small and large subdivisions, several mercantile areas, and many ranches. The planning group discussed the best way to reach this diverse community to explain the planning process and obtain input regarding community concerns. It was neither possible nor practicable to gather all stakeholders in one place at one time. The planning group chose to go to individual groups that represented a neighborhood or community. To this end, the council prepared a PowerPoint presentation explaining the wildfire threat and the Conservation and Community Wildfire Plan development process. This PowerPoint presentation was used at all group meetings and was posted on the council's website.

Where there were identified groups (homeowners associations, etc), these groups were contacted and offered a presentation and discussion about the planning process. Attendees were invited to contact the council regarding projects and concerns they wished to be addressed in the plan. One group, the Upcountry Community Council, proved invaluable as an outreach group. This group has a membership comprised of representatives from many of the smaller homeowners associations and acts as a central clearinghouse for issues affecting the Pioneer/Volcano Planning Unit.

One of the major outreach efforts involved the risk assessments. This process systematically assessed the risk from wildfire for individual subdivisions. This risk assessment provided a beginning point for discussing the wildfire threat to a particular community. When possible, residents accompanied the staff member conducting the survey.

To allow all stakeholders to comment on the plan each section of the plan was posted on the Amador Fire Safe Council's website. This posting started in mid-October of 2010. A final draft with all displays was posted during the month of December. Hard copies of the final draft were provided to CAL FIRE, the Amador County Board of Supervisors, the boards of Lockwood and Amador Fire Protection Districts, Eldorado National Forest, Folsom Bureau of Land Management, Sierra Nevada Conservancy, and Sierra Pacific Industries.

I.B.3. STAKEHOLDERS

The following stakeholders participated in this process:

- Eldorado National Forest, Amador District
- California Department of Forestry and Fire Protection, Amador Eldorado Unit, Zion Battalion
- Amador Fire Protection District and Lockwood Fire Protection District
- Amador Fire Safe Council
- Upcountry Community Council
- Sierra Highlands Recreation District
- Amador Pines Unit 1,2, and 5 homeowners associations
- Carson Pines Road Association
- Sherwood Forest homeowners
- Amador Master Gardeners
- Amador Fire Chiefs Association
- Lockwood FPD Auxiliary
- Sierra Pines Home Owners Association
- Progressive Women's Committee
- Amador County RAC
- Pioneer Mobile Home Park
- Amador Calaveras Consensus Group
- Animal Control (open house)
- Lockwood Fire Protection District
- Amador Fire Protection District

I.C. FIRE SAFETY AND DEFENSIBLE SPACE

When residents in the wildland-urban interface understand what steps they can take to make their homes and properties more fire safe, they are generally interested in doing it. Background B begins with a broad description of what is necessary for a fire to begin and how communities can defend themselves when faced with a wildfire. Wildfire behavior depends on *fuel,*[14] weather, and topography. Clearly, fuel is the one factor that communities

have some capacity to control. This plan focuses on how fuel can be mitigated to enhance community safety while protecting conservation values. It outlines necessary steps to ensure local fire protection efforts are successful (e.g. residence addressing, adequate roads, proper turnarounds, secondary access, water supply, etc.).

One of the most important concepts introduced in the plan is that of defensible space. In short, this means creating a space around residences/structures to enhance the chances of structural and human survivability. Thus, one of the priority goals of the plan is to document the various elements that make up defensible space and to do so in clear, action-oriented terms. The Plan lists various additional ways that a community can enhance its chances of surviving a fire, including the use of fire ignition-resistant building materials and construction methods, water availability, escape plans, landscaping, and fuel hazard reduction. Recent evidence indicates that a structure has a greater than 80% chance of surviving a wildfire if it has adequate brush clearance and is made of ignition-resistant materials.[15]

This Plan outlines various actions that community members should take when a wildfire threatens. These include actions such as evacuation; keeping friends and family members informed of their plans and whereabouts; gas/propane shut-off; water preparation and use; closing of all interior and exterior doors; and emergency communication.

Beyond the home, fuel reduction in the wildland-urban interface is critical for fire-permeable and fire-resilient landscapes. Fuel reduction methodologies can be consistent with conservation goals to restore *fire-adapted ecosystems.* In fact, they ultimately must be if they are to be effective. Fuel reduction methods are described in Background C, with practices identified that are consistent with the Conservation Principles.

I.D. WILDFIRE ENVIRONMENT

It is generally believed today that fires in the Sierra Nevada landscape are less frequent and more severe compared to the wildfire patterns present before Europeans settled in the area. The absence of fire combined with historic logging practices has led to a build-up of *surface fuels*[16] and *ladder fuels.*[17] In many cases, small trees and shrubs have become a fire hazard to both the natural environment as well as to the human communities who live there.

The Pioneer/Volcano Planning Unit is no exception to the increasingly common problem of large structure and resource loss from wildfire. Fuel loads have been accumulating to abnormal levels throughout the Sierra due to decades of fire suppression and timber harvesting. Annually, state and federal agencies respond to more than 600 fires in Amador and Eldorado Counties[18], not including fires responded to by local fire departments. One of the largest recent fires was the Power Fire (2004), which burned a total of 16,800 acres in eastern Amador County. Condition Class level III is present in planning unit. *For an explanation of Condition Class, see Appendix 3 Fire Behavior.*

The historic large damaging wildfires in Amador County occur during a relatively rare weather event known as foehn wind[19]. Foehn winds occur when a High-pressure system exits east of the Sierras and Low-pressure system exist west of the Sierras. Foehn winds flow over and down the Sierras in a westerly direction. These winds can reach speeds in excess of sixty miles per hour. Because these winds are caused by subsiding air masses, foehn winds heat and dry as they flow down slope.

Figure 2 Resource damage from Power Fire

The affect of foehn winds is greatest east of Highway 49. The most recent examples of foehn wind driven wildfires are the Power Fire (2004) and the Rancheria Creek Fire (1961). Both fires exhibit the same burn pattern of all large wildfires, in mid to upper Amador County, since 1900.

Appendix 4 – Fire Ecology and Management of Sierra Nevada Vegetation describes the present condition of the planning area; the vegetation that occurs there; and considers how wildfire might change the area. The features and conditions of the planning area are used to develop management prescriptions that:

a) are consistent with the natural disturbance expected for each type
b) promote the Conservation Principles identified in *Background A*, and
c) improve the fire resiliency of the vegetation type

Three fuel types are the primary drivers of wildfire in the planning unit. These are Ponderosa Pine/Mixed Conifer (fuel model 10), Montane Meadow (fuel model 1), and Foothill and Montane Chaparral (fuel model 5). The predominate fuel type in the most populated areas is Ponderosa Pine/Mixed Conifer which is prone to intense fire behavior and crowning.

The historic (pre-European settlement) occurrence of wildfire suggest low intensity wildfires were common and replaced less than 75% of the dominate overstory. Today, because of over 100 years of fire exclusion from the landscape, wildfires exhibit dramatic increase in fire behavior, intensity, severity, and size. Forest stand replacement wildfires are to be expected. In the Planning Unit, stand replacement wildfires are most likely to occur in the pine mixed/conifer fuels (fuel model 10). Where wildland urban interfaces exist, significant loss of structures and loss of life is likely. Most areas zoned for residential development are in pine/mixed conifer fuel types.

I.E. FIRE PROTECTION ORGANIZATIONS

In Pioneer/Volcano Planning Unit there are two local fire departments:

- Amador Fire Protection District

- Lockwood Fire Protection District

There are also a number of governmental fire agencies including:

- California Department of Forestry and Fire Protection, Amador Eldorado Unit, (CAL FIRE)
- US Forest Service, Eldorado National Forest
- US Bureau of Land Management, Folsom District

For more information on fire protection, please see Appendix 6.

I.F. PIONEER/VOLCANO PLANNING UNIT ASSETS AT RISK

II.F.1. PIONEER/VOLCANO PLANNING UNIT ASSETS AT RISK

Assets at risk are all the values, human made and natural, that exists in the Pioneer/Volcano Planning Unit. These values include such diverse things as view shed and power plants. Knowing what values are at risk allows land managers, public officials, and the public to devise and prioritize mitigations that will reduce or eliminate the risks.

Assets and Risks						
Community, Structure, or Area at Risk	**Fuel Hazard**	**Risk of Wildfire Occurrence**	**Structural Ignitability**	**Firefighting Capability**	**Risk Survey Rating Score**	**Overall Risk**
Lower Rabb Park	Extreme	High	High	Low	159	Extreme
Sierra Pines Wandering Hills Area	Extreme	High	High	Low	149	Extreme
Van De Hei Ranch Area	Extreme	High	High	Low	144	Extreme
Amador Pines Unit 1	Extreme	High	High	Low	142	Extreme
Woodland Hills Area	Extreme	High	High	Low	142	Extreme
Amador Pines Units 2&5	High	High	High	Low	140	Very High
Sherwood Forest	Medium	High	High	Low	128	Very High
Silver Lake Pines/Sierra Highlands	High	High	High	High	115	Very High
Sugar Pine Dr Area	High	High	High	High	112	Very High
Carson Pass Pines	High	High	Medium	Low	110	Very High
Williams Tract Area	High	High	Medium	Medium	109	Very High
Upper Rabb Park	Extreme	High	High	High	107	Very High
Buckhorn Area	High	High	High	High	101	Very High
Carson Drive Area	High	High	Medium	Medium	83	High
Black Prince Area	Medium	High	Medium	Low	82	High
Mace Meadows Area	Medium	High	High	High	77	High

Consumnes River and infrastructure	High	High	—	—	—	High
Mokelumne River and infrastructure	High	High	—	—	—	High
Volcano	Medium	High	High	High	72	Medium

II PIONEER/VOLCANO PLANNING UNIT FIRE SAFE ACTION PLAN

This plan identifies several actions to reduce hazards and risks from wildfire and decrease structural ignitability. The following sections and tables summarize these actions. They were identified through a collaborative public process.

II.A. PROPOSED PROJECTS AND ACTIONS

Priorities				
Community, Structure, or Area	**Overall Risk**	**Community Value**	**Cultural Value**	**Overall Priority**
Amador Pine Unit 1	Extreme	High	High	High
Lower Rabb Park	Extreme	High	High	High
Mokelumne River and infrastructure	Extreme	High	High	High
Sierra Pines/Wandering Hill Area	Extreme	High	High	High
Upper Rabb Park	Extreme	High	High	High
Van de Hei Area	Extreme	High	High	High
Woodland Hill Area	Extreme	High	High	High
Consumes River and infrastructure	Extreme	High	High	High
Amador Pines Units 2 & 5	Very High	High	High	High
Buckhorn Area	Very High	High	High	High
Carson Pass Pines Area	Very High	High	High	High
Silver Lake Pines/Sierra Highlands	Very High	High	High	High
Sugar Pine Drive Area	Very High	High	High	High
Sherwood Area	Very High	High	High	High
Williams Tract Area	Very High	High	High	Medium
Black Prince Area	High	High	High	Medium
Mace Meadows Area	High	High	High	Medium
Carson Drive Area	High	High	High	Medium
Volcano	Medium	High	High	Medium

Projects and Actions			
Community, Structure, or Area at Risk	**Type of Treatment**	**Method of Treatment/implementation**	**Overall Priority**
All communities within the Pioneer/Volcano Planning Unit served by an in-ground community water system	Clear around all hydrants, standpipes, and wharf valves that are currently obscured from plain view by vegetation.	Local community associations clear around hydrants and/or water agencies contract with Cal Fire or Mule Creek to use hand crews	Very high
All communities within the Pioneer/Volcano Planning Unit served by an in-ground community water system	Provide fire flow meeting NFPA standard for residential and where applicable commercial development	See section 8.4.10	Very High
All communities within the Pioneer/Volcano Planning Unit served by an in-ground community water system	Flow test and paint all hydrants according to their flow capacity. The paint scheme recommended by the National Fire Protection Association	Amador Water Agency and other water suppliers test hydrants. Local fire agencies paint hydrants after testing.	Very High
Sherwood Forest Safe Evacuation	200' fuel reduction both sides of Sherwood Road starting from the intersection of Sugar Pine and Sherwood Road and continuing north on Sherwood to Little John Lane.	Amador Fire Safe Council submit grant request for this project	Very High
Silver Lake Pines/Rabb Park Community Fuelbreak	Mastication and hand crew to provide separation from unmanaged wildlands and adjacent development.	Amador Fire Safe Council submit grant request for this project	Very High
Van De Hei Ranch Safe Ingress/Egress	Clearing roadsides of accumulated fuels along roadside to provide safe egress and ingress during wildfires	Amador Fire Safe Council submit grant request for this project and/or work with community to participate in the Council's chipper program to accomplish the work.	Very High
Amador Pine Unit 1 Safe Evacuation	200' fuel reduction both sides of Inspiration Drive West from western intersection of Crowley and Inspiration Drive West to Ashland Creek	Amador Fire Safe Council submit grant request for this project.	Very High
Silver Lake Pines	Strict enforcement of defensible space in specifically identified areas (see summary)	Cal Fire targeted defensible space inspections in areas identified in the risk analysis	Very High
All communities within the Pioneer/Volcano Planning Unit without street signs that meet the current Amador County street sign standard	Install County standard street signs at all intersections (public and private) which lack standard street signs	Purchase signs. Amador Fire Safe council and County OES explore grant funding to purchase signs. Amador Fire Safe Council provide a sample sign format that meets county standards for homeowner associations and others wishing to purchase signs.	High
All communities within the Pioneer/Volcano Planning Unit without in-ground water supplies but with water tanks and other water sources	Identify all water sources with a standard sign indicating the type of water source (hydrant, tank, pond, swimming pool, etc.) all water sources suitable for firefighting.	Purchase signs. Amador Fire Safe Council and County OES explore grant funding to purchase signs. Amador Fire Safe Council provide a sample sign format that meets county standards for homeowner associations and others wishing to purchase signs.	High

All communities within the Pioneer/Volcano Planning Unit where suitable shelter in place location exist	Identify with a standard sign all locations suitable for shelter-in-place	Purchase signs. Amador Fire Safe council and County OES explore grant funding to purchase signs. Amador Fire Safe Council provide a sample sign format that meets county standards for homeowner associations and others wishing to purchase signs.	High
All communities within the Pioneer/Volcano Planning Unit	Identify evacuation routes with a standard evacuation route sign	Purchase signs. Amador Fire Safe Council and County OES explore grant funding to purchase signs. Amador Fire Safe Council provide a sample sign format that meets county standards for homeowner associations and others wishing to purchase signs.	High
All communities within the Pioneer Volcano Planning Unit not served by an in-ground water system and lacking private water tanks	Install community water tanks for firefighting	Provide to local road and community Purchase signs. Amador Fire Safe council and County OES explore grant funding to purchase signs. Amador Fire Safe Council provide a sample sign format that meets county standards for homeowner associations and others wishing to purchase signs.	High
Sherwood Forest Safe Ingress/egress	Clear roadside of accumulate fuels to provide safe ingress/egress during wildfires	Community and AFSC Chipper Program	High
Amador Pines Unit 1 Safe Evacuation	Create turnouts along Inspiration Drive from Highway 88 to Ashland Creek	Amador Pines Road Association to continue work currently in progress	High
Amador Pine Units1, 2, & 5 Safe Ingress/Egress	Clearing roadsides of accumulated fuels along roadside to provide safe egress and ingress during wildfires	Amador Fire Safe Council submit grant request for this project and/or work with community to participate in the Council's chipper program to accomplish the work.	High
Carson Pass Pines Safe Ingress/Egress	Clearing roadsides of accumulated fuels along roadside to provide safe egress and ingress during wildfires	Amador Fire Safe Council submit grant request for this project and/or work with community to participate in the Council's chipper program to accomplish the work. County road crews and/or Cal Fire hand crews to perform the work.	High
Fortress Way Safe Ingress/Egress	Clearing roadsides of accumulated fuels along roadside to provide safe egress and ingress during wildfires	Amador Fire Safe Council submit grant request for this project and/or work with community to participate in the Council's chipper program to accomplish the work.	High
Amador Pine Unit 2 & 5 Pond Dredging and Drafting Pit	Dredge community pond to restore depth and install drafting pit for firefighting	Amador Fire Safe Council submit grant request for this project	High
Amador Pines Unit 1 Alternate Evacuation Route	Investigate the existence of an easement between Amador Avenue and Whinney Way	Amador Pines Unit 1 Road Association. If an easement exists, the Amador Fire safe Council will submit a grant request to develop the evacuation route.	High

Sherwood Forest Shelter-in-place	Develop shelter-in-place within the development	Local community maintain low fuel volumes in areas suitable for shelter-in-place	High
Sherwood Forest Emergency Egress Route	Develop a second means of evacuation from Sherwood Forest	Amador Planning Commission considers creating an alternate route when new developments are proposed in the area.	High
Carson Pass Pines Vacant Lot Fuel Reduction	Reduce fuels on vacant lots within the development	Amador Fire Safe Council submit grant request for this project.	High
Amador Pine Units1, 2, & 5 Vacant Lot Fuel Reduction	Reduce fuels on vacant lots within the development	Amador Fire Safe Council submit grant request for this project.	High
Entire Planning Unit	Increase crown separation in fuel model 10 so that crown closure is under 70%	Individual landowners	High
Volcano	Construct shaded fuelbreak VL 1 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Volcano	Construct shaded fuelbreak VL 21 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Volcano	Construct shaded fuelbreak VL 3 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Volcano	Construct shaded fuelbreak VL 4 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Volcano	Construct shaded fuelbreak VL 5 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Volcano	Conduct roadside clearance project VL 6 as described in the 2005 Volcano Community Wildfire Protection Plan	Hand, mechanical, or prescribed fire Amador Fire Safe Council submit grant request for this project	High
Amador Pine Unit 1 Cul-de-sac	Create hammerhead cul-de-sac at end of private drive off Crowley	Landowners at the terminus of this lane construct a turnout	Low

The following actions are already taking place in or near the planning area.

Agency and Fire Safe Council Projects					
Community, Structure, or Area at Risk	**Project Name**	**Method of Treatment**	**Funding Needs**	**Acres Treated**	**Expected Completion Date**
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Antelope South and Antelope Fuelbreaks (These projects are intended to reduce the potential damage from wildfire during foehn wind events and other wildfires.) These two fuelbreaks are located within the Threat Zone, which lies just east of the Pioneer/Volcano Planning Unit.	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. These fuelbreak are a cooperative effort between Sierra Pacific Industries, Cal Fire, the Amador Fire Safe Council PG&E, BLM, and private landowners	$86,000 initial construction. $43,000 every five years for maintenance	86	Ongoing
Amador Pines Units 2 and 5, Lockwood, Shake Ridge Corridor, Carson Pass Pines, and Volcano	Rams Horn/Shake Ridge Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. These fuelbreak are a cooperative effort between Sierra Pacific Industries, Cal Fire, the Amador Fire Safe Council and private landowners	$113,000 initial construction. $56,500 every five years for maintenance	113	ongoing
Countywide	Public education and outreach regarding wildfire.	Not applicable	$10,000 annually	Not applicable	Ongoing
Countywide	Prepare Community Conservation and Wildfire Protection Plans for eight of the nine Planning Units identified in the Amador County Generic	Not applicable	$50,000 for each plan for a total of $350,000. The Pioneer/Volcano and the Up-	Not applicable	Ongoing

	Community Wildfire Protection Plan		country CCWPPs are currently in development		
Pioneer Volcano and Upcountry Planning Units	SPLATS –these are multiple projects throughout the public lands managed by the USFS Eldorado National Forest	Multiple	Agency funded	Unknown	Ongoing
Pioneer Volcano and Upcountry Planning Units	Oski Bear Fuel Reduction and Stewardship Project	Prescribed fire	Agency Funded	370 +	Ongoing
Pioneer Volcano Planning Unit	View 88	Multiple	Agency funded	Unknown	Ongoing
Pioneer Volcano Planning Unit	Tiger Creek coop-burn	Prescribed fire	Agency funded	Unknown	Ongoing
Pioneer Volcano and Upcountry Planning Units	Cooperative Fire Defense System (See 8.3.3 Industrial lands as these projects involve multiple government and private agencies)	Multiple	Agency and grant funded	Unknown	Ongoing
Pioneer Volcano Planning Unit	Amador Fire Safe Council's Roadside Chipping Project. This project provides a chipper with operator to residents wishing to remove vegetation.	Chipping	This program is grant funded. Typically it requires $100,000 annually	Unknown	Currently funded by a grant from the Bureau of land Management. Will be completed when funds are exhausted in 2011
Countywide	Amador Fire Safe Council's Senior Defensible Space Project. This project provides a crew to qualifying seniors to create defensible space.	Contractor/crew	This program is grant funded. Typically it requires $115,0000 annually	100 to 200 homes annually	Currently funded by a grant. Will be completed when funds are exhausted in 2011 from the USFS

II.B. ACTION PLAN SUMMARY

Summary of Infrastructure and Property Protection Projects						
Community, structure, or area at risk	**Project**	**Project Detail**	**Funding Need**	**Funding Source**	**Time Table**	**Community Recommendations**
Silver Lake Pines	Defesnible Space compliance	Defensible space inspections of the most vulnerable structures on northeast edge of the subdivision		Agency budget	Existing Cal Fire Program	Yes
Silver Lake Pines	Silver Lake Pines/Cedar Highlands Road Signs	Make road names visible from both directions		County of Amador where the road is a county road/home owners where roads are private roads.	Ongoing	Yes
Silver Lake Pines	Defesnible Space compliance	Defensible space inspections of most the vulnerable structures on northeast edge of the subdivision	Existing Cal Fire program	Agency budget	Annually in selected high risk areas	Yes
Sherwood Forest, Amador Pines units 1,2,&5, Rabb Park, Carson Pass Pines, Van De Hei Ranch,	Roadside fuel reduction	Reduce fuel load along roadsides a minimum of 20 feet from traffic lane.	$30,000 per annum until completed	Grant funding	2011 -2014	Yes

Amador Pines Unit 1	Turnouts	Construct turnouts every 200 – 400 feet along Inspiration Drive West from Highway 88 to Ashland Creek	Unknown	Homeowners' road association		Yes
Amador Pines Unit 1	Defensible space	Defensible space inspections of the entire development	Existing Cal Fire program	Agency budget	Annually in selected high risk areas	Yes
Entire County	Senior/Low income Defensible Space	Provides private contractors to bring qualifying low income seniors' homes into compliance with defensible space requirements	$100,000 - $200,000 annually	Grant funding	Existing Amador Fire Safe Council Program.	Yes

Summary of Firefighter Assistance/Life Safety Projects						
Community, structure, or area at risk	**Project**	**Project Detail**	**Funding Need**	**Funding Source**	**Time Table**	**Community Recommendations**
Silver Lake Pines and Sierra Highlands	Vegetation reduction around fire hydrant	Eliminate vegetation obscuring fire hydrants, wharf valves, and standpipes.	Unknown	Water Agencies and/or grant	Currently ongoing in some areas. Work provided by homeowners. Amador Fire Protection District currently in discussions with AWA regarding a hydrant maintenance policy.	Yes

Silver Lake Pines and Sierra Highlands	Color coded hydrants	Flow test and paint hydrants following NFPA color code standard.	Unknown	Water agencies and/or grant	Amador Fire Protection District currently in discussions with AWA regarding a hydrant maintenance policy.	Yes
Entire Pioneer/Volcano Planning Unit	Emergency water tank signs	Install signs meeting county ordinance 15.30.15 that identify locations of emergency water tanks.	$22 - $48/sign. Price reduction when purchased in bulk	Individual homeowners/ homeowners association/road associations/grant funding	Within five years	yes
Woodland Hills HOA and Wondering Hills	Community Water Tank	10,000+ gallon centrally located fire protection water tank meeting county ordinance 15.30.15. (will require a site to place the tank)	$5000 – $10,000	Grant funding and/or community association	Within five years	Yes
Amador Pines Unit 1	Community Water Tank	2500+ gallon centrally located fire protection water tank meeting county ordinance 15.30.15. (will require a site to place the tank)	$5000 – $10,000	Grant funding and/or community association	Within five years	yes

Entire County	Fire Atlas	Create a road atlas containing current roads (private and public) that includes information regarding hydrants and other information relating to emergency services	Funded	Existing FEMA Grant	Completed by the Amador County Technology Department. Currently available on the office of Emergency Services Website	N/A
Entire County	Reverse 911 Field Guide	Create an indexed map for fire service and law enforcement based on logical neighborhood evacuation groupings	Funded	Existing FEMA Grant	Completed as part of this CWPP	N/A
Entire County	Reverse 911 Controlled Intersection Field Guide	Listing of key intersections needing traffic control during order evacuations. For use by fire and law enforcement agencies.	Funded	Existing FEMA Grant	Completed as part of this CWPP	N/A
Volcano/Pioneer Planning Unit	Neighborhood Evacuation Plans	Revised evacuation manual and neighborhood evacuation maps	Funded	Existing FEMA Grant	Completed as part of this CWPP	N/A
Entire County	Animal Evacuation	Create a system to help evacuate pets , equine and livestock during wildfires and other emergencies	Funded	Amador Fire Safe County Operating Budget	Completed as part of this CWPP	N/A

Volcano/Pioneer Planning Unit						

For more information on the fire-safe action plan, please see Appendix 8.

III. FACILITATING UNIT FIRE SAFETY IN THE LONG TERM

III.A. MONITORING AND MAINTENANCE

The Amador Fire Safe Council hosts an annual meeting of all public and private entities that manage fuels to improve forest health and reduce damage from wildfire. This meeting is intended to coordinate efforts of all agencies and private industrial land managers. While this meeting has a countywide focus, projects relating to this plan are also discussed.

With regard to landscape scale projects designed to reduce damage from wildfires that are not within the planning unit but have a direct affect on wildfires threatening values within the planning unit, these projects are ongoing as part of an overarching fuel modification scheme (referred to in this document as the Cooperative Fire Defense System).

The Amador Fire Safe Council is in the process of designing a Geographical Information System (GIS) database that will catalog all existing and proposed fuel reduction projects. This database will include projects regardless of location or responsible agency.

The design and function of this database is currently being developed. The minimum criteria for this database are:

1. The ability to retrieve maps of projects on demand by type, agency, year, treatment, etc
2. Identified safety islands along with size and potential capacity
3. Color coded maps that estimate fuels projects current effectiveness against wildfire
4. Polygons representing identified fire defense systems
5. Projects within fire defense systems. Fire defense systems are differentiated from projects in that projects are used to create a system (i.e. Antelope Fuelbreak is a fire defense system while projects are the building blocks of a system.) This can be used to determine the completeness of a fire defense system and to identify key parcels needed to complete the system.
6. Recent wildfire polygons (wildfires are fuel reduction projects albeit not of the planned or desired kind).

III.B. UPDATING THIS PLAN

No plan is ever permanent. This plan was written in 2010 based on current conditions and best available information. The field of fire safety is rapidly changing. It is likely that new developments will occur in the coming years. Therefore, it will be important to review this plan at least every five years and update it as needed. Copies of this plan will be available for public review at Amador County libraries, Amador County Office of Emergency Services website *www/co.amador.ca.us* and on the Amador County Fire Safe Council's website *www/amadorfiresafe.org*.

Progress on the plan's implementation and other projects affecting the planning unit will be reviewed at least annually at the Upcountry Community Council or similar meeting hosted by the Amador Fire Safe Council. Since not all projects are public agency projects, community associations and citizens can provide input on progress towards meeting fire safety goals in local neighborhoods at this meeting.

The Amador Fire Safe Council will continue it outreach efforts to community and neighborhood groups. Concerns and community desires expressed at these meeting will be considered for inclusion in the next update.

III.C. NEEDED RESOURCES

The agencies (CAL FIRE, USFS, PG&E, and BLM) along with the Amador Fire Safe Council and Sierra Pacific Industries are the primary developers of large fuel reduction projects. The agencies have ongoing programs to create and maintain these projects.

The Amador Fire Safe Council is a non-profit corporation that is funded through grants and the 15% administrative fees charged to specific grant projects. Originally funded by Federal Title III grants to the County of Amador, this funding source is no longer available for general operating expenses. Currently the council is solely dependent on administrative fees and specific projects such as this plan. The annual operating expenses of the council are $50,000.

If the council is unable to obtain enough grants on an annual basis to generate its operating expenses, it will go out of business. To remain in business, the council needs to generate between $300,000 and $500,000 in new grant awards annually. Ideally, these projects need to be spread over eighteen months to allow for two burning seasons and to level out operational income over multiple fiscal years.

IV. ACKNOWLEDGMENTS

An extensive collaborative project such as this requires contribution, dedication, and commitment from a number of people. We would like to give a special thank you to the following people, without whom this project would have never succeeded.

The following people contributed to the successful creation of this Conservation Community Wildfire Protection Plan. We thank them for their participation.

Core Planning Team

- Chris Waters, California Department of Forestry and Fire Protection
- Cathy Koos Breazeal, Amador Fire Safe Council, Executive Director
- Charlie Blankenheim, Californai Department of Forestry, Battalion Chief
- Jim Simmons, Amador Fire Safe Council, Staff
- Ray Blankenheim, Amador Fire Protection District, Battalion Chief

Steering Committee Members

The planning committee was all members of the Amador Fire Safe Council Board of Directors. This board is comprised of a diverse group of citizens representing all walks of life. During the development of this CCWPP, several members left and were replaced. Others moved out of the area or left for personal reasons. The council tries to maintain diversity in its membership.

Other Partners

- Craig Ostergaard, Sierra Pacific Industries, Forester
- Joan McNamara, United States Forest Service, Division Chief
- Lynne Olson, Amador County OES Coordinator
- Amy Rocha, USDA-NRCS District Conservationist (provided support for printing final copies of plan through the Jackson Local Partnership Office – USDA-NRCS).

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[1] EIP was recognized for its reputation as a leading provider of environmental, urban planning, water resources planning, and natural resources services throughout California. Now, as PBS&J,

[2] Two grants were provided, one from Homeland Security and the other from Title III funds.

[3] Fire-Adapted Ecosystem: A local mix of mature natural vegetation (ideally native species but often found in combination with exotic species) that maintains its ability to survive and regenerate, and perhaps even to thrive, with regular disturbance from wildfire. Some species may actually require fire to trigger seed maturation, such as the giant sequoia. Opportunistic species benefit from fire and the openings it can create in a woodland; this is part of their adaptation.

[4] Permeability: In this case, a condition in which fire can spread through a community with minimal negative impact.

[5] Resiliency: The inherent ability of organisms and/or ecosystems to deal with disturbances such as fire in a way that permits or enhances healthy survival.

[6] Foehn wind driven wildfires

[7] Fires occurring during normal summer weather. Does not include foehn wind driven fires.

[8] Public resources Code 4291

[9] R1 Single family residential district; R1A Single family residential and agricultural district; R2 Low density multiple family residential district; R2A Single family (2 acre minimum) residential district; R3 High density multiple family residential district; RE residential estates district

[10] Currently used for the upcountry emergency heliport

[11] California Fire Alliance. "Communities At Risk History." cafirealliance.org/communities_at_risk/communities_at_risk_history.

[12] The Threat Level Code designates a community's fire threat level, with 1 indicating the least threat, 3 indicating the highest threat.

[13] Lands adjacent to federal lands are indicated as such with a mark in this column.

[14] Fuel: All burnable materials including but not limited to living or dead vegetation, structures, and chemicals that feed a fire.

[15] Ethan Foote, "Wildland-Urban Interface Ignition-Resistant Building Construction Recommendations from the 2004 Community Wildfire Protection Plan Workshops, the California Fire Alliance and the California Fire Safe Council," August 2004.

[16] Surface Fuels: Materials on the ground like needles or low-growing shrubs that provide the fuel for fires to spread on the ground. Surface fuels are generally considered all fuels within six feet of the ground.

[17] Ladder Fuels: Materials such as shrubs or small trees connecting the ground to the tree canopy or uppermost vegetation layer. In forests, this allows fire to climb upward into trees.

[18] The Eldorado National Forest and the Cal Fire Amador Eldorado Unit include these two counties.

[19] Appendix 3 contains a detailed description of foehn winds and their unique impact on large wildfires in Amador County