

APPENDIX 8: MEETING PLAN OBJECTIVES: PIONEER/VOLCANO PLANNING UNIT FIRE SAFE ACTION PLAN

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The objectives of this plan are to:

1. Protect human life
2. Protect homes and businesses from wildfires
3. Reestablish pre-European Settlement conditions
4. Minimize ignitions
5. Decrease wildfire intensity and damage
6. Protect important public and private infrastructure
7. Reduce epidemics of forest pests and disease due to drought and overstocking
8. Improve forest health
9. Increase wildfire permeability and resiliency.
10. Maintain scenic vistas throughout the planning unit

The Pioneer/Volcano Community Conservation and Wildfire Protection Plan compliments three existing plans adopted by the Amador County Board of Supervisors. These plans are the Amador County General Plan, the Amador County Multi-Hazard Mitigation Plan (2006), and the Amador County Generic Community Wildfire Protection Plan (2005).

AMADOR COUNTY GENERAL PLAN

Amador County General Plan Safety Element includes the following goals:

“c. Progressive improvements in fire protection services, facilities and equipment per the Board of Fire Underwriters and Fire Marshall standards; increased water pressure, additional equipment and personnel, etc,

d. Present and planned systems of evacuation routes, fire access trails and fire breaks, and of regulatory measures pertaining to seismic and fire safe construction, location and clearance around structures, etc.”

AMADOR COUNTY MULTI-HAZARD MITIGATION PLAN

The goals defined for the purpose of the Multi-Hazard Mitigation Plan as broad based public policy statements are:

- *“Represent basic desires of the community,*
- *Encompass all aspects of community, public and private,*
- *Are nonspecific, in that they refer to the quality (not the quantity) of the outcome,*
- *Are future-oriented, in that they are achievable in the future; and*
- *Are time-independent, in that they are not scheduled events.”*

Action item #6 of the county’s Multi-Hazard Mitigation Plan includes the following project that is addressed in the Pioneer/Volcano Community Conservation and Wildfire Protection Plan:

“Issue/Background: *The Amador County Generic Wildfire Protection Plan divides the county into nine distinct areas. Each of these areas is rated as to its relative risk from wildfire. The next step in the planning process is to develop CWPP’s for each of these nine areas. These plans will contain area specific mitigation measures to protect life and property from wildfire.”*

AMADOR COUNTY GENERIC COMMUNITY WILDFIRE PROTECTION PLAN

The Amador County Generic Community Wildfire Protection Plan and the Amador County Multi-Hazard Mitigation Plan (action Item # 9) include a list of critical fuel management projects within the Pioneer/Volcano Planning Unit that are also included in this plan. These projects are the:

1. Rams Horn/Shake Ridge Fuelbreak
2. Antelope South Fuelbreak
3. Canzatii Springs Fuelbreak
4. Pioneer Trail West Fuelbreak
5. Pioneer Trail East Fuelbreak

Additionally, the generic plan includes fuelbreaks designed to protect the Pioneer/Volcano Planning Unit from foehn wind driven wildfires. This type of wildfire historically is the most destructive and largest wildfires occurring east of Highway 49 in Amador County. These fuelbreaks are in various stages of construction and maintenance. These fuelbreaks are:

1. Antelope Fuelbreak
2. Antelope South Fuelbreak
3. Cooks Fuelbreak
4. Panther Ridge Fuelbreak
5. Doaks Fuelbreak
6. Omo Ranch fuelbreak
7. Beaver Ridge

VOLCANO CWPP

In 2005, the Amador Fire safe Council prepared a Community Wildfire Protection Plan for the town of Volcano. This plan contains five shaded fuelbreaks projects that have yet to be completed. A seventh project was completed along with a demonstration project designed to compare costs and effectiveness of treating blackberries along the banks of Sutter Creek. These projects are included in this revision of the 2005 Amador County Wildfire Protection Plan.

8.1 COMMUNITY IDENTIFIED PROJECTS

Figure 1. Community-Identified Priority Projects¹

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 Fuel-break	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	Install County standard street signs	Purchase signs. Amador Fire Safe	High

the Pioneer/Volcano Planning Unit without street signs that meet the current Amador County street sign standard	at all intersections (public and private) which lack standard street signs	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.	
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 Units 1, 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 Units 1, 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

8.3 EXISTING PROJECTS AND ACTION PLANS

8.3.1 FIRE SAFE COUNCIL, HOMEOWNERS ASSOCIATIONS, AND COMMUNITY ORGANIZATIONS

The following projects were identified by the Amador Fire Safe Council as being undertaken to further the goals of this plan.

Figure 2. Amador Fire Safe Council Existing Projects²

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 harvest-	\$113,000 initial construction	113	ongoing

		ing, plantations, etc. These fuelbreak are a cooperative effort between Sierra Pacific Industries, Cal Fire, the Amador Fire Safe Council and private landowners	\$56,500 every five years for maintenance		
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 Community Wildfire Protection Plan	Not applicable	\$50,000 for each plan for a total of \$350,000. The Pioneer/Volcano and the Up-country CCWPPs are currently in development	Not applicable	Ongoing

8.3.2 PUBLIC LANDS

The following projects were identified by Amador Fire Safe Council as being undertaken to further the goals of this plan.

Figure 3. USFS Existing Projects

Community, Structure, or Area at Risk	Project Name	Method of Treatment	Funding Needs	Acres to be Treated and Maintained	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.	Cooks Fuelbreak (This project is intended to reduce the potential damage from wildfire during foehn wind events and other wildfires.)	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, PG&E, BLM, and the USFS	\$100,000 initial construction \$50,000 every five years for maintenance	100	Ongoing
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Doaks Ridge Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, PG&E, and the USFS	\$88,000 initial construction \$44,000 every five years for maintenance	88	Ongoing
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Panther Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, the USFS	\$81,000 initial construction. \$40,500 every five years for maintenance	81	Ongoing

Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Beaver Ridge Fuel-break	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, the USFS	\$81,000 initial construction. \$40,500 every five years for maintenance	81	Ongoing
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor	Oskibear	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc.	Agency budget		Completed
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor	View 88	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc.	Agency budget		Completed
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor	Tiger Creek Co-op Prescribed Fire project	Prescribed Fire	Agency budget		Scheduled
Entire Planning Unit	Strategically Placed Area treatments (SPLATS) in multiple locations	Multiple treatments	Agency budget	unknown	Ongoing
Entire Planning Unit	Vegetation Management following harvesting and other land management activities	Multiple treatments	Agency budget	Varies annually	Ongoing

8.3.3 INDUSTRIAL LANDS

The following projects were identified by Sierra Pacific Industries as being undertaken to further the goals of this plan.

Figure 4. Seirra Pacific Industires Existing Projects

Community, Structure, or Area at Risk	Project Name	Method of Treatment	Funding Needs	Acres to be Treated and Maintained	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
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Cooks Fuelbreak (This project is intended to reduce the potential damage from wildfire during foehn wind events and other wildfires.)	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, PG&E, BLM, and the USFS	\$100,000 initial construction \$50,000 every five years for maintenance	100	Ongoing
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Doaks Ridge Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, PG&E, and the USFS	\$88,000 initial construction \$44,000 every five years for maintenance	88	Ongoing

Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Panther Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, the USFS	\$81,000 initial construction. \$40,500 every five years for maintenance	81	Ongoing
Pioneer, Buckhorn, Amador Pines Units, Mace Meadows, Rabb Park, Sierra Highlands, Silver Lake Pines, Woodland Hills, Sugar Pine, and the Highway 88 Corridor.	Beaver Ridge Fuelbreak	Multiple treatments including mastication, tractor pile and burn, prescribed fire, timber harvesting, plantations, etc. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, the USFS	\$81,000 initial construction. \$40,500 every five years for maintenance	81	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. This fuelbreak is a cooperative effort between Sierra Pacific Industries, Cal Fire, the Amador Fire Safe Council	\$113,000 initial construction. \$56,500 every five years for maintenance	113	Ongoing

8.4 PROPOSED ACTIONS

➤ *Action items are identified with this arrow throughout this chapter.*

8.4.1 DESIGNATION OF WILDLAND URBAN INTERFACE

The wildland-urban interface (WUI) is a general term describing the area where homes and wildland meet. It also has a federal definition as the “line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel as defined in the Federal Register.”³ It is within the WUI that specific federal management actions take place in order to reduce fuel risks. These actions are based on guidelines established by the Healthy Forest Restoration Act (HFRA). According to HFRA, “the HFRA provides administrative procedures for hazardous-fuel-reduction projects on USFS and BLM lands in the WUIs of at-risk communities. The act encourages the development of Community Wildfire Protection Plans under which communities will designate their WUIs, where

HFRA projects may take place.”⁴ At the same time, federal agencies are charged with developing WUI designations for the properties they manage.

In 2001, the Sierra Nevada Forest Plan Amendment (also known as the Framework for Conservation and Collaboration) identified two specific zones of treatment near communities, or WUI areas. The “Defense Zone” consists of a ¼-mile buffer around a community. The “Threat Zone” consists of a 1¼ mile buffer beyond the Defense Zone. These buffers apply to areas adjacent to federal lands that are settled to a minimum density of one home per five acres. Plate 21 shows the Threat and Defense Zone designation for the Pioneer/Volcano Planning Unit.

This plan uses the WUI designations created CAL FIRE, which include all of the Pioneer/Volcano Planning Unit. This designation is consistent with the National Fire Plan ideals, but is more refined in terms of mapping extent and in terms of quantification of risk. Projects in these designated areas should be prioritized for funding and implementation under the National Fire Plan.

- *Federal agencies accept WUI designations previously identified by CAL FIRE*
- *Federal agencies work with Amador Fire Safe Council and other interested community members to reach agreement on projects proposed within WUI areas in Pioneer/Volcano Planning Unit*

8.4.2 DESIGNATION OF COMMUNITIES AT RISK

Most eligible communities have already been designated as a Community at Risk, either by federal or state designation. The California Fire Alliance has a process to add new communities to this list.

- *All communities within the Volcano/Pioneer Planning Unit are currently designated as Communities at Risk.*

8.4.3 DEFENSIBLE SPACE

Through this process, several areas in Pioneer/Volcano Planning Unit have been identified as being either especially hazardous, with high fire risk, or both. It makes sense to focus enforcement of existing regulations in these Target Areas (*see below*) as well as to place stricter regulations on any new developments there.

The following statement from the California Attorney General’s office provides the legal framework for local governments to take action to ensure local fire safety:

*The Legislature of the State of California hereby finds and declares that the unrestricted use of grass-, grain-, brush-, or forest-covered land within the State is a potential menace to life and property from fire and resulting erosion.... Counties, cities and counties, cities, and districts may adopt ordinances, rules, or regulations to provide fire prevention hazard conditions.*⁵

Target Areas in Pioneer/Volcano Planning Unit for Defensible Space, Fire Safe Construction, and Alternate Access Programs:

- Rabb Park (defensible space)
 - Silver Lake Pines (defensible space)
 - Amador Pines Unit 1 (defensible space and alternate access)
 - West end of Sugar Pine Road (defensible space and alternate access)
 - Sherwood Forest (alternate access)
 - Van De Hei (defensible space and alternate access)
 - Sierra Pines (defensible space)
 - Woodland Hills (defensible space)
 - Pioneer Creek Mobile Home Park (defensible space)
- *Focus fire safety efforts in the Target Areas listed above, including defensible space, fire-resistant building, and providing for alternate access routes.*

8.4.4 DEFENSIBLE SPACE IN NEW DEVELOPMENTS

Development pressures are increasing in Pioneer/Volcano Planning Unit. This can be seen especially in the interface between wildlands and residential areas. The Van De Hei area is an example of development that does not meet adequate fire safety standards.

As more lands are being developed, the risk to existing homes generally increases. The County of Amador has a responsibility to current residents to minimize the impact on them from future development. One way to do this is to ensure that all new development adheres to accepted fire safety standards.

- *The County of Amador explores options to mandate and enforce fire safe standards for new developments.*

8.4.5 FUEL REDUCTION

Reducing hazardous fuel is a challenge for most communities in the western United States. The amount of accumulated fuel is far greater than most communities can afford to handle, hence the need to prioritize projects. The research is still unclear regarding the most effective and efficient way to reduce fuel without compromising ecosystem health. Research by Mark Finney at the Fire Science Lab⁶ challenges current theories in landscape-level fuel treatments and models strategic locations for fuel reduction treatments. That said, it is generally agreed that such treatments should be focused first around communities in the wildland-urban interface. Many residential areas in the planning unit qualify for such treatments, and thus were identified at the community meetings and are listed in this document.

Fuel reduction treatments need to begin within the Wildland Fuel Reduction Zone (see Background C). Beyond this, strategic locations around neighborhoods and communities should be identified and prioritized for creating shaded fuelbreaks. “Fuelbreaks are never designed to stop fires but to allow suppression forces a higher probability of successfully attacking a wildfire.”⁷ The combination of home construction modifications with effective defensible space and shaded fuelbreaks around communities is one of the best-known strategies to protect communities from wildfire.

There is no “one size fits all” prescription for shaded fuelbreaks. For example, the width can vary widely, ranging from 50 to 300 feet. “A shaded fuelbreak is created by altering surface fuel, increasing the height to the base of the live crown, and opening the canopy by remov-

ing trees.”⁸ Sample prescriptions are described in Background C. In addition to initial implementation, maintenance of fuelbreaks is often costly. Maintaining the shade helps to reduce these costs by slowing regeneration.

“Manual treatment is very expensive, and mechanical treatment is only feasible on gentle terrain. Prescribed fire can be effective (Schimke and Green, 1970) but there is potential for fire escape along the edges. Late winter burns, where the previous year’s production is cured, the perennials have not yet greened up, and the adjacent forest is not very flammable, may be a possible cost-effective treatment to avoid risk of escape from maintenance burns and achieve effective maintenance at low cost.”⁹

A program should be developed in conjunction with CAL FIRE and cooperators to regularly burn shaded fuelbreaks where they are not in immediate proximity to residential development. To most effectively maintain fuelbreaks throughout the Pioneer/Volcano Planning Unit, an “Adopt a Fuelbreak” program could be developed by the Amador Fire Safe Council, CALFIRE, the United States Forest Service, the Bureau of Land Management, and Sierra Pacific Industries in cooperation with community or neighborhood groups, homeowner’s associations, and others whereby each group would be responsible for ongoing maintenance of their adopted fuelbreak. This should be done in cooperation with experienced fire professionals to ensure participant safety and fuelbreak effectiveness.

- *The Amador Fire Safe Council develops an “Adopt a Fuelbreak” program for maintenance of fuelbreaks. Work with CAL FIRE, tribes, and other fire professionals to employ prescribed fire techniques where appropriate.*

The following list includes the shaded fuelbreaks and other fuel-reduction projects that were prioritized for implementation in Pioneer/Volcano Planning Unit. These projects were generally identified at a community meeting, or otherwise resulted from this planning process. Projects were prioritized based on CDF fire threat level and assets at risk, with an emphasis on human population centers.

- *Amador Fire Safe Council and Cal Fire work with appropriate agency and community partners to fund and implement the following identified strategic fuelbreaks and fuel reduction efforts throughout Pioneer/Volcano Planning Unit.*

Figure 5. Proposed Fuel Reduction Projects

Proposed Fuel Reduction Projects					
Community, Structure, or Area at Risk	Project	Treatment	Acres	Agency/Landowner	Time Table
Amador Pines Unit 1	Amador Pines Unit 1 roadside chipping	Hand crew and chipper of roadsides to provide safe egress and ingress during wildfire	50	Multiple	2011-2016
Amador Pines Unit 1	Amador Pines Unit 1 safe evacuation	400' fuel reduction either sides of Inspiration West from Ashland Creek east until the slope and fuel volumes are conducive to evacuation	50	Multiple	2011-2016
Carson Pass Pines, et al	Carson Pass Pines area safe evacuation	Hand crew and chipper of roadsides to provide safe egress and ingress during wildfire	20	Multiple	2011-2016
Carson Pass Pines, et al	Carson Pass Pines area community fuel reduction	Reduce ladder fuels and create >70% crown clearance on unimproved and improved lots	20	Multiple	2011-2016
Pioneer/Volcano Planning Unit	<p>Omo Ranch Fuel Break is a defensible fuel zone/shaded fuel break along Omo Ranch Road in Amador and El Dorado Counties. The project begins at Highway</p> <p>88 and progresses west to Road E16 near Mt. Aukum. This project also includes the Barney Ridge and Farnham fuelbreaks. The primary purpose of the project is to establish a defensible fuel break for firefighting operations and to protect the interface</p>	Multiple treatment methods depending on slope, fuels, and other factors.		multiple	In progress

	<p>communities of the area.</p> <p>CAL FIRE, Sierra Pacific Industries, and the USFS have completed approximately one third of the project. Work on the middle third of the zone started in 2004.</p>				
Pioneer/Volcano Planning Unit	Upcountry Planning Unit fuelbreak complex (Antelope, Antelope South, Tiger Creek, Doaks, Cooks, Panther, etc.)	Multiple treatments including prescribed fire, tractor pile and burn, herbicide, timber harvest,	Unknown	Multiple	Ongoing
Rabb Park	Rabb Park Community Fuelbreak	Mastication and hand crew to provide separation from unmanaged wildlands and adjacent development.	200	Multiple	2011-2016
Rabb Park	Rabb Park roadside chipping	Hand crew and chipper of roadsides to provide safe egress and ingress during wildfire	30	Multiple	2011-2016
Sherwood Forest	Sherwood Forest roadside chipping	Hand crew and chipper of roadsides to provide safe egress and ingress during wildfire	30	Multiple	2011-2016
Sherwood Forest	Sherwood Forest safe evacuation	400' 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.	200	Multiple	2011-2016
Silver Lake Pines	Silver Lake Pines Community Fuelbreak	Mastication and hand crew to provide separation from unmanaged wildlands and adjacent development.	200	Multiple	2011-2016

8.4.6 WUI BUILDING STANDARDS

The County of Amador has adopted the latest revisions to the California Building Code Chapter 7a (2007).

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on the WUI standards.*

8.4.6.1 ROOFING (WUI)

Efforts should be made to eliminate all untreated wood shake roofs. Shake roofs are a leading cause of home loss in wildfires. Research shows that homes with a non-combustible roof and clearance of at least 30 to 60 feet have an 85-95% chance of survival in a wildfire.¹⁰

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on the importance of replacing wood shake roofs.*
- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council explore incentives for homeowners to replace wood shake roofs.*

8.4.6.2 VENT OPENINGS (WUI)

Provided that adequate defensible space is maintained, screening of vent openings with ¼” mesh corrosion-resistant steel screens will minimize the entry of embers (during the ember blizzard that comes with a wildfire) into attics (most important) and crawl spaces.

In 2007, the California State Fire Marshall promulgated regulations affecting buildings constructed in any Fire Hazard Severity Zone. These regulations require:

704A.2 Attic Ventilation.

704A.2.1 General. *When required by Chapter 15, roof and attic vents shall resist the intrusion of flame and embers into the attic area of the structure, or shall be protected by corrosion resistant, non-combustible wire mesh with ¼ inch (6 mm) openings or its equivalent.*

704A.2.2 Eave or Cornice Vents. *Vents shall not be installed in eaves and cornices.*

Exception: *Eave and cornice vents may be used provided they resist the intrusion of flame and burning embers into the attic area of the structure.*

These requirements became effective January 1, 2008. However, the rationale for these new requirements applies to all structures located in areas prone to wildfire. Homeowners and businesses owners of structures constructed before 2008 are encouraged to update their vent openings to this new standard.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on importance of steel vent screening.*
- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council] explore incentives for homeowners to encourage steel screening of vent openings.*

8.4.6.3 WINDOWS (WUI)

Double-pane windows are far more effective in their ability to survive a wildfire, as well as being smart for energy conservation within your home.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on need to have double-paned windows throughout their homes.*
- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council explore existing incentive programs to upgrade windows to double pane, such as through local energy companies.*

8.4.6.4 DECKS (WUI)

If adequate defensible space is maintained, most solid wood decking is fire-resistant enough to withstand short-term heat load. The next greatest threat from decks is firefighter safety. Many new materials (synthetics) ignite more easily than wood and have a rapid structural collapse when subjected to high heat loads, creating a situation where firefighters could fall through.¹¹

In 2007, the California State Fire Marshall promulgated regulations affecting buildings constructed in any Fire Hazard Severity Zone. These regulations require:

704A.4 DECKING, FLOORS AND UNDERFLOOR PROTECTION

704A.4.1 Decking.

704A.4.1.1 Decking Surfaces. *Decking, surfaces, stair treads, risers, and landings of decks, porches, & balconies where any portion of such surface is within 10 feet (3048 mm) of the primary structure shall comply with one of the following methods:*

- 1. Shall be constructed of Ignition Resistant Materials and pass the performance requirements of SFM 12-7A-4, Parts A and B.*
- 2. Shall be constructed with heavy timber, exterior fire retardant treated wood or approved non-combustible materials.*
- 3. Shall pass the performance requirements of SFM 12-7A-4, Part A, 12-7A-4.7.5.1 only with a net peak heat release rate of 25kW/sq-ft for a 40 minute observation period and: a. Decking surface material shall pass the accelerated weathering test and be identified as Exterior type, in accordance with ASTM D2898 and ASTM D3201 and; b. The exterior wall covering to which it the deck is attached and within 10 (3048 mm) feet of the deck shall be constructed of approved noncombustible or ignition resistant material.*

Exception: *Walls are not required to comply with this sub-section if the decking surface material conforms to ASTM E-84 Class B, flame spread. The use of paints, coatings, stains, or other surface treatments are not an approved method of protection as required in this Chapter.*

704A.4.2 Underfloor and Appendages Protection

704A.4.2.1 Underside of Appendages and Floor Projections. *The underside of cantilevered and overhanging appendages and floor projections shall maintain the ignition-resistant integrity of exterior walls, or the projection shall be enclosed to the grade.*

704A.4.2. Unenclosed Underfloor Protection. *Buildings shall have all underfloor areas enclosed to the grade with exterior walls in accordance with section 704A.3.*

Exception: *The complete enclosure of under floor areas may be omitted where the underside of all exposed floors, exposed structural columns, beams, and supporting walls are protected as required with exterior ignition-resistant material construction or be heavy timber.*

These requirements became effective January 1, 2008. However, the rationale for these new requirements applies to all structures located in areas prone to wildfire. Homeowners and businesses owners of structures constructed before 2008 are encouraged to update their decks to this new standard.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on importance of fire-safe decking.*

8.4.6.5 OUTBUILDINGS

Outbuildings (e.g. storage, wood, and tool sheds) with less than thirty feet of separation from main structures place homes at a high risk of loss, because if they catch fire, they can more easily catch the house on fire.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on need for separation of heat loads from their residence.*
- *Lockwood Fire Protection District, Amador Fire Protection District, and CAL FIRE enforce clearing 30-100 feet around structures, as per State law.*

8.4.6.6 WOODPILES

Woodpiles with less than thirty feet of separation from structures often place homes at a high risk for loss.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on need to have a minimum of thirty feet separation of firewood piles and woodsheds from their residence.*

8.4.6.7 PROPANE TANKS

Tanks with less than ten feet of clearance around them and thirty feet of separation from houses may place homes at a risk of loss.

- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on need to have vegetative and flammable material clearance around propane tanks near their residence.*
- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council educate residents on need to keep propane tanks and other flammable materials at least thirty feet from homes and outbuildings.*

8.4.7 UTILIZATION

8.4.7.1 SMALL DIAMETER WOOD PRODUCTS

- *Amador Fire Safe Council, CAL FIRE, USFS, timber industry, the Amador Calaveras Consensus Group, and economic development community work with local wood processing and manufacturing businesses to develop markets for small-diameter wood products.*

8.4.7.2 BIOMASS

As of this writing, Buena Vista Biomass Power (BVBP) has applied for a use permit that includes repowering and conversion of an existing 18.5-megawatt electric generating facility to a renewable wood waste biomass energy facility. BVBP has contracted with the Sacramento Municipal Utilities District (SMUD) to provide SMUD with 100% of the facility's output, which will assist SMUD in achieving their Renewable Portfolio Standard goal of 33 percent renewable energy usage by 2020. The proposed fuel supply for the project is solely renewable wooded biomass, derived from a variety of sources including clean urban wood waste, agricultural byproducts from orchard operations, and forest residuals from forest clearing for wildfire fuel reduction. The proposed project is expected to consume 110,000 bone dry tons (BDT) of woody biomass annually and has been certified as a renewable energy facility by the California Energy Commission based on the proposed use of solely woody biomass as its fuel source.

- *Plan partners research methods for supplying woody biomass from forest fuel reduction projects to this facility. For example:*
 - *Consider including collection and transportation as a budget item in future grant application*
 - *Consider grants for neighborhood central collection points for woody biomass.*

8.4.8 FIRE PROTECTION

Local fire agencies need to prepare for paid staffing available from Measure M funding. To qualify for staffing there must be living quarters for the firefighters.

- *Replace (or expand and remodel) Lockwood Fire Protection District's main fire station with a new facility having living quarters for firefighters*
- *Replace Lockwood Fire Protection District's oldest water tender*
- *Replace Amador Fire Protection District's Pine Grove station with a new facility having living quarters for firefighters.*
- *Mark all firefighting water sources (hydrants, tanks, swimming pools, etc.) with a standard metal sign and reflector that is visible from the road and from both directions of travel*
- *Maintain a database and GIS map of all water sources, type of source, and location*

8.4.9 SIGNAGE OF ROADS AND STRUCTURES (ADDRESSING)

Throughout Pioneer Volcano Planning Unit, firefighters and other emergency personnel are faced with the challenge of finding homes quickly and safely during an emergency. At a minimum, existing Amador County standards that require streets and homes to be visibly addressed must be enforced. This enforcement action needs to be explored creatively.

- *Amador Fire Safe Council and the Amador County Office of Emergency Services explore grant opportunities for purchase of street and address signs.*
- *Fire Departments, Law Enforcement, CAL FIRE, Amador Fire Safe Council and Amador County explore incentives for private signage conformance, including public education*

8.4.10 WATER

Water is critical for successful fire suppression. Minimum fire-fighting water requirements for developments not on a hydrant system are 2,500 gallons. Areas served by hydrants should meet National Fire Protection Association (NSPA) standards.

- *Encourage RAC¹²-funded program to place water storage tanks on lands adjacent to federal lands.*
- *Cal Fire, Amador Fire Protection District, Lockwood Fire Protection District, and Amador Fire Safe Council explore funding for a water storage tank program on private lands not adjacent to federal lands.*
- *County Assessor does not increase property values and taxes when water storage is added to private properties for fire protection.*
- *Amador Fire Safe Council, County of Amador, Fire Chiefs, and CAL FIRE explore incentives for increasing water storage on private properties.*
- *The Amador Water Agency continue to work with the Amador Fire Protection District and other interested community groups to develop a fire hydrant maintenance policy that insures all hydrants are painted in accordance to the National Fire Protection Association's (NFPA) standards; are tested periodically to insure they are in working order; are free of obscuring vegetation; and whose locations are marked with a standard reflective device visible at night for no less than 100 feet in both directions.*
- *All water purveyors develop a plan to provide adequate fire flow for their service areas and associated costs of implementing the plan¹³.*

8.4.11 FIRE ATLAS

A firefighter's map book or Fire Atlas is being developed separately from this Fire Plan by the Amador County Geographical Information Systems Department. The Atlas will provide both local and out-of-area firefighters and other emergency responders detailed maps of all residential areas in the entire county, as well as information on water sources, and other fire-fighting resources.

- *The Amador County Technology Department has completed the first edition of the Fire Atlas in the summer of 2010.*

Evacuation routes for each community in the plan area are posted on the Amador Fire Safe Council's Website (amadorfiresafe@volcano.net). However, a more detailed evacuation plan is needed for all emergencies.

- *The County of Amador work with Law Enforcement, Amador Fire Safe Council CAL FIRE, USFS, and Fire Chiefs to update (where necessary) and educate residents on evacuation options for their neighborhood.*
 - *As part of this CCWPP, a reverse 911 system based on expected wildfire behavior and logical evacuation groupings was developed and implemented. By necessity, the system is county-wide. The system consists of several hundred geographical areas designed by Cal Fire and the Amador District of the Eldorado National Forest. Each geographical area was converted to a digitized format compatible with Amador County's Reverse 911 software. This system allows early notification of impending evacuations due to wildfire or other emergencies.*

- *The reverse 911 areas created for this system were printed in an indexed map book that was distributed to key members of the fire service and law enforcement.*
- *As a companion to the indexed map book, all key intersections that need traffic control support during evacuations were identified. These intersections are indexed to each discreet reverse 911 area and were provided to key members of the fire service and law enforcement.*
- *Evacuation route maps for each reverse 911 area within the geographical area covered by this CWPP have been create and are available for the public.*
- *A large animal rescue service has been created and is available to assist owners of equine and livestock as well as pet owners with the evacuation of animals during wildfires and other emergencies.*
- *Cal Fire and Amador County Sheriff continue cooperative efforts such as the “Ready, Set, Go” public service announcements and websites.*
- *The County of Amador, Law Enforcement, Fire Chiefs, CAL FIRE, and the Amador Fire Safe Council explore development of alternate evacuation routes.*
- *Residents in remote areas must be prepared for evacuation. To this end, they should create a Family Disaster and Evacuation Plan (See evacuation plan outline in the appendix)*

In terms of evacuation, gates can pose a serious obstacle. Automatic gates that do not open during power outages are especially dangerous.

- *Law Enforcement, Fire Chiefs, CAL FIRE, and the Amador Fire Safe Council initiate informational programs to educate residents about the importance of easily passable gates during emergencies.*
- *The Count of Amador, Law Enforcement, Fire Chiefs, CAL FIRE, and the Amador Fire Safe Council explore incentives for fire-safe gates.*

Finally, are pet and livestock owners in the plan area prepared for emergencies and evacuation?

- *The Amador Fire Safe Council and the Amador Office of Emergency Services identify existing options for local pet and livestock emergency evacuation. Work through local feed stores, veterinarians, boarding facilities, and animal associations to educate residents on options.*

8.4.12 EDUCATION

Many people are happy to create a fire-safe home if they understand why it is to their advantage. To this end, educational programs targeted at local residents are very successful.

- *Amador Fire Safe Council work with CAL FIRE, United States Forest Service, Bureau of land Management, Amador County, insurance industry, and others to implement a countywide community fire safety education program, including Public Service Announcements in all local media.*

Educational programs in the local schools are a great way to get the word out about fire safety and emergency preparedness. Several curricula exist and likely would only need minimal adjustments to be used in Pioneer/Volcano Planning Unit. Community projects such as fire safety education signs created by schoolchildren can be very effective. Informative

signs could be created by local children and placed in high fire risk and hazard areas throughout the community.

- *Amador Fire Safe Council work with agencies and School District to implement fire safety curricula in all grade levels throughout the Pioneer/Volcano in conjunction with community educational projects.*
- *Amador Fire Safe Council work with insurance industry to fund and develop a service-learning program in local high schools focused on fire safety and defensible space.*

As stated elsewhere, development and real estate are healthy industries in Pioneer/Volcano Planning Unit. Through those ventures, new people are moving to the planning unit many of them from urban areas. These new residents often do not have experience with fire in a wildland-urban interface. Educational programs are needed targeting both the development and real estate industries, as well as their clients.

- *The Amador Fire Safe Council CAL FIRE, USFS, BLM, Fire Chiefs, and Amador County Office of Emergency Services target fire safety educational efforts to real estate and development industries.*
- *The Amador Fire Safe Council, CAL FIRE, USFS, BLM Fire Chiefs, and Amador County Office of Emergency Service target fire safety educational efforts to new planning unit residents, especially those coming from urban areas and others with little experience with fire in the wildland-urban interface.*
- *The Amador Fire Safe Council develops a welcome-neighbor program where a welcome basket with fire safety information is given to new residents. These baskets can be distributed by realtors, insurance agencies, and the Chamber of Commerce.*

8.4.13 POLICY

There are several policies the Amador County Board of Supervisors can implement that will assist fire agencies. These are

- *Establish a process wherein the Building Department notifies the Information Technology Department of any swimming pools or water tanks constructed in the unincorporated area.*
- *Establish a process wherein the Building Department notifies the Information Technology Department of new hydrants.*
- *Require the Information Technology Department to maintain a GIS based database of all water sources (tanks, hydrants, ponds, and swimming pools) in the unincorporated area and post that data on the County's website. The data to be downloadable in a map and table format. The map to indicate locations of water sources along with streets and other information needed to locate the water sources. The table will include at a minimum the volume of water, physical location, and type of water source. Where type of water source is a hydrant include type of hydrant and fire flow (if available).*
- *The County create additional signage standards to augment existing signage standards that include:*
 - *Water Tanks*
 - *Shelter-in place locations*
 - *Evacuation routes (See Amador County General Plan)*

8.4.14.1 SUMMARY OF FUEL REDUCTION PROJECTS

Summary of Fuel Reduction Projects						
Community, structure, or area at risk	Project	Project Detail	Funding Need	Funding Source	Time Table	Community Recommendations
Pioneer/Volcano Planning Unit Upcountry Planning Unit	Panther Fuelbreak	Partially completed fuel-break located east of the planning unit. It is part of a series of fuel-breaks running along ridge tops from Highway 88 to the Mokelumne River. These fuel-breaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, PG&E, and the Amador Fire Safe Council		USFS, SPI, Cal Fire, PG&E	In progress	This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires
Pioneer/Volcano Planning Unit Upcountry Planning Unit	Doaks Ridge Fuel-break	Partially completed fuel-break located east of the planning unit. It is part of a series of fuel-breaks running along ridge tops from Highway 88 to the Mokelumne River. These fuel-breaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, PG&E, and the Amador Fire Safe Council		USFS, SPI, Cal Fire, PG&E Cal Fire Vegetation Management Program funds and a Disaster Supplement grant	In progress	This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires

<p>Pioneer/Volcano Planning Unit</p> <p>Upcountry Planning Unit</p>	<p>Cooks Fuelbreak</p>	<p>Partially completed fuelbreak located east of the planning unit. It is part of a series of fuelbreaks running along ridge tops from Highway 88 to the Mokelumne River. These fuelbreaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, PG&E, BLM, and the Amador Fire Safe Council</p>		<p>USFS, SPI, Cal Fire, PG&E</p> <p>Cal Fire Vegetation Management Program funds and a Disaster Supplement grant</p>	<p>In progress</p>	<p>This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires</p>
<p>Pioneer/Volcano Planning Unit</p> <p>Upcountry Planning Unit</p>	<p>Antelope Fuelbreak</p>	<p>Partially completed fuelbreak located east of the planning unit. It is part of a series of fuelbreaks running along ridge tops from Highway 88 to the Mokelumne River. These fuelbreaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, PG&E, BLM, and the Amador Fire Safe Council</p>			<p>In progress</p>	<p>This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires</p>

<p>Pioneer/Volcano Planning Unit</p> <p>Upcountry Planning Unit</p>	<p>Antelope South Fuel-break</p>	<p>Partially completed fuel-break located east of the planning unit. It is part of a series of fuel-breaks running along ridge tops from Highway 88 to the Mokelumne River. These fuel-breaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, BLM, and the Amador Fire Safe Council</p>			<p>In progress</p>	<p>This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires</p>
<p>Pioneer/Volcano Planning Unit</p>	<p>Shake – Fiddle VMP</p>	<p>Partially completed fuel-break located east of the planning unit. It is part of a series of fuel-breaks running along ridge tops from Highway 88 to the Mokelumne River. These fuel-breaks are being constructed and maintained through a cooperative effort of the USFS, Cal Fire, SPI, PG&E, and the Amador Fire Safe Council</p>		<p>Cal Fire Vegetation Management Program funds and a Disaster Supplement grant</p>	<p>In progress</p>	<p>This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires</p>

Pioneer/Volcano Planning Unit Upcountry Planning Unit	Omo Ranch Fuel-break	Partially completed fuel-break located northeast of the planning unit. It is part of a series of fuel-breaks running along ridge tops from Highway 88 to the Mokelumne River. These fuel-breaks are being constructed and maintained through a cooperative effort of the USFS, SPI, and Cal Fire			Some areas completed in maintenance phase Other areas in progress	This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires
Pioneer/Volcano Planning Unit Upcountry Planning Unit	Tiger Creek Fuel-break	This fuel break is proposed to begin approximately 0.2 miles south of McKenzie Road at the start of a BLM parcel and continue for approximately 4 miles. Ultimately, this project will become an anchor point tying in the Doaks fuel-break, Antelope, and Cooks fuel breaks.	\$61,000	Submitted to the Secure Rural Schools Resource Advisory Committee in 2010 for funding from Title II.	2011-2012	This is an agency and large landowner project with multiple objectives one of which is to reduce the occurrence of large wind driven fires
Silver Lake Pines and Rabb Park Upcountry Planning Unit	Silver Lake Pines Fuelbreak	This fuelbreak is proposed to start near Highway 88 and progress south easterly between Rabb Park and Silver Lake Pines toward the Antelope Fuel-break. It is intended to reduce the heavy fuel load between the two developments.		Grant requests have been submitted to the Western States Wildland Urban Interface (WUI) grant program and also for a State and Private Forestry Competitive Resource Allocation 2011 FY Grant	2011-1013	

Sherwood Forest Sugar Pine Area	Sherwood Road fuel reduction/evacuation route	Reduce fuels 200 feet either side of Sherwood Road from intersection of Sherwood and Sugar Pine Drive to approximately ½ mile north of Ashland Creek		Grant funding	2011-2013	Yes
Silver Lake Pines Rabb park	Antelope Fuelbreak Silver Lake Pines Extension	Reduce forest fuels along north edge of Silver Lake Pines		Grant funding	2011-2013	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.		Grant funding	2006	Yes

8.4.14.2 SUMMARY OF INFRASTRUCTURE AND PROPERTY PROTECTION PROJECTS

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	Defensible space	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.		Yes
Silver Lake Pines	Defensible space	Defensible space inspections of the most 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	2011 -2014	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

8.4.14.3 SUMMARY OF FIRE FIGHTER ASSISTANCE/LIFE SAFETY PROJECTS

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	2011 -2014	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	2011 -2014	Yes
All areas served by in-ground water mains and hydrants	Fire flow	Eliminate fire flow deficiencies identified in the 1991 Bartholomew Engineering study	Unknown	Voter approved bond measure and/or grant	2011 -2014	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 associations/grant funding		Yes
Woodland 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		Yes
Amador Pines Unit 1, Sierra Pines, Woodland	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		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
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8.4.14.4 SUMMARY OF POLICY ISSUES

Summary of Policy Issues						
Community, structure, or area at risk	Project	Project Detail	Funding Need	Funding Source	Time Table	Community Recommendations
Entire County	Private water source database	Create a central database accessible by internet cataloging all water sources suitable for firefighting	Unknown	County of Amador	2011 On going after 2011	Yes
Entire County	Amend county Ordinance 15.30	Amend Chapter 15.30 <i>Fire And Life Safety Regulations</i> to include standards for signs indicating evacuation routes and signs for private water sources	Unknown	County of Amador	2011	Yes

¹ The table formats used in this chapter were taken from the California Fire Alliance Simplified CWPP Template to ensure consistency among plans. CFA CWPP Simplified Template, Step 6a, p. 7, cafirealliance.org/cwpp/.

² Adapted from CFA Simplified Template, Step 7 and USFS Six Rivers National Forest project summary table.

³ *Federal Register* (January 4, 2001), Vol. 66, No. 3, pp. 751–754, "Implementation Direction for Identifying and Prioritizing Hazardous Fuel Reduction in Wildland-Urban Interface/Intermix," Region 5.

⁴ Healthy Forests Initiative and Healthy Forests Restoration Act (February 2004). Interim Field Guild, Title I, Wildland-Urban Interfaces Within or Adjacent to At-Risk Communities, FS-799.

⁵ Office of State Fire Marshal, Fire Hazard Zoning Guide, Appendix D, osfm.fire.ca.gov/pdf/fireengineering/zoning/AppendixD.pdf

⁶ www.firelab.org/index.php?option=com_content&task=view&id=43&Itemid=82, outreach.cof.orst.edu/resilientfire/finney.htm

⁷ Agee, J.K. et al. (2000). "The Use of Shaded Fuelbreaks in Landscape Fire Management." *Forest Ecology and Management* 127: pp. 55–66.

⁸ Agee et al. (2000). p. 56.

⁹ Agee et al. (2000). p. 60.

¹⁰ Foote, Ethan. (August 2004). "Wildland-Urban Interface Ignition-Resistant Building Construction Recommendations." Community Wildfire Protection Plan Workshops. California Fire Alliance and the California Fire Safe Council.

¹¹ Further information on this available through the California State Fire Marshal's Building Materials Listing, osfm.fire.ca.gov/bmlisting.html.

¹² RAC is the Resource Advisory Committee. Most National Forests have an appointed RAC. Contact your local Forest Service for more information.

¹³ Refer to 1991 Bartholomew Engineering study