

Nevada-Yuba-Placer

Fire Management Plan 2006



Managing Nevada, Yuba, and Placer Counties fire problem through engineering, education, and law enforcement.

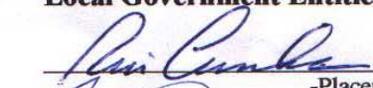
Community Wildfire Protection Plan Agreement - 2005

The Community Wildfire Protection Plan developed for/by the Nevada/Yuba/Placer Unit:

- Was collaboratively developed. Interested parties and federal land management agencies managing land in the vicinity of the Nevada/Yuba/Placer Unit have been consulted.
- This plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect communities in the Nevada/Yuba/Placer Unit.
- This plan recommends measures to reduce the ignitability of structures throughout the area addressed by the plan.

The following entities attest that the standards listed above have been met and mutually agree with the contents of this Community Wildfire Protection Plan:

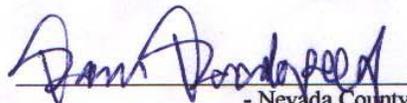
Local Government Entities:



- Placer County

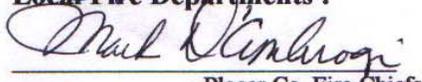


- Yuba County

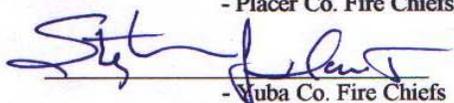


- Nevada County
Fire Chiefs

Local Fire Departments :



- Placer Co. Fire Chiefs



- Yuba Co. Fire Chiefs



- Nevada County Fire Chiefs OES

R. Reader

CDF Unit Chief:



Tony Clabaut, Unit Chief -
CA Dept. of Forestry and Fire Protection

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Unit Chief Summary

Overview

This Fire Management Plan is a product of the implementation of the State Fire Plan. The State Fire Plan provides an analysis procedure utilizing, in part, computer based geographical information data that is validated by experienced fire managers to assess fire fuel hazards and risks in order to design and implement mitigating activities. The Nevada-Yuba-Placer Unit (NYP) Fire Management Plan provides background information, fuels and fire data, proposed projects, and individual Battalion reports outlining mitigating activities commonly carried out each year.

The State of CA did not require a Fire Plan update for 2006. However, due to the number of projects in our local unit and the amount of Grant dollars processed through those projects, NYP is providing this update to the 2005 plan as a means of documentation of our successes.

The 2005 Fire Plan is compliant with the requirements of the Healthy Forests Restoration Act (HFRA), signed into law in December of 2003, as a Community Wildfire Protection Plan (CWPP). Those agencies represented on the signature page agreed to the contents of this plan as part of a collaborative effort to identify projects and possibly influence how additional federal funds may be distributed for projects on non federal lands.

NYP is one of 21 administrative Units within the California Department of Forestry and Fire Protection. NYP faces many challenges, not the least of which is two of its counties, Placer and Nevada, are two of the fastest growing counties within the state. According to the 2000 National Census, Placer County is the 20th fastest growing county within the nation. Many of the people moving to these mid Sierra Nevada rural counties are coming from urban areas such as the San Francisco Bay, Los Angeles, and Sacramento. This has directly led to the urbanization of fire adapted vegetation types and ecosystems.

The biggest challenge facing NYP is one of education. Most of the new residents, and many of the existing ones, do not realize what building houses in the middle of fire adapted ecosystems means. The fire adapted forest types where most of the population exists within NYP are Mixed Conifer, Ponderosa/Shrub, Montane Chaparral, and California Oak Woodlands. According to research from Barbour and Majors (1977), pre-European settlement fire return intervals in these forest types ranged from 2 to 8 years in California Oak Woodlands and 5 to 16 years in the remaining forest types. This equated to low intensity fires at frequent intervals. As of 1900 to 1920, wildfires have been suppressed in these vegetation types. As a result, over the last 80 - 100 years vegetative fuels have increased significantly in tons per acre. Unnaturally high fuel loads have resulted. But, most of the public does not realize this, nor do they understand what this means in terms of fire intensity and their safety. They have come to believe what they see now is "natural." Wildfires in this unnatural fuel load condition are very intense and more difficult to suppress. Overlay the mix of homes and personal property in these areas and suppression is even more difficult. The task at hand is to educate the citizens within these areas as to the dangers of living in these fuels and to induce the public into taking an active role in becoming an informed

and appropriate land steward and taking it upon themselves to manage the fuels around their structures. Creating “defensible space” around these structures is the single best thing a resident can accomplish to protect their property. Secondary to the effort of creating the defensible space around their homes is a landowner’s responsibility to apply his or her stewardship responsibility across their entire ownership. The overall effect of each property owner properly managing wildland fuels results in a landscape level fuel reduction and a commensurate reduction in fire intensity. Once this is achieved, the goal of reducing costs and losses to human lives, property and natural resources will be reached.

Pre-fire Management Development

Since the implementation of the State Fire Plan in 1996 and its evolution into the NYP Fire Management Plan, interest by local community based groups (stakeholders) has resulted in a groundswell of grassroots organizations developing in an effort to promote community safety. These groups, including the American River Watershed Group, Tahoe Re-Green, FireSafe Council of Nevada County, Placer County Fire Safe Alliance, and the Yuba County FireSafe and Watershed Council have taken the lead in promoting fire safe activities. Through these groups, and our own NYP CDF personnel, we have a number of fuel reduction projects, either completed or in various levels of completion throughout the Unit. Hopefully we will never have the opportunity to put these projects to the test; however, it is more than likely that one of these projects will help reduce the overall government costs and citizen losses resulting from a costly and damaging fire. We continuously encounter new obstacles in the project implementation stage: agency spending procedures, grant requirements, environmental documentation, etc... However, through the continued effort of our CDF staff and the other stakeholders, fuel reduction and education projects will continue.

Goals and Objectives

The Nevada-Yuba-Placer Unit took the stated goals and objectives of the State Fire Plan and applied them to the Unit. They are:

Goals:

1. To Reduce the Risks to Citizens and Firefighters from Wildland Fire.
2. Develop a “land stewardship” ethic in the residents of the wildland areas within the Unit

Objectives:

1. Implement Specific and Landscape Level Projects and Programs that Increase the Potential for Success on Initial Attack.
2. Raise Citizen and Stakeholder Awareness of Fire Risks and Hazards and enlist their help and participation in the Reduction of Risks and Hazards.
3. Create a Fire Mitigation Framework to assist local government in the development of standards, policies, and plans which will result in community and landscape level fuel modifications.

4. Provide recommendations that individuals and the community can take to reduce the ignitability of homes and other structures in the Wildland Urban Interface.

An undertaking of this sort is more than a single agency can accomplish alone. For this reason, stakeholder involvement was encouraged early on and has become an integral part of the process. We immediately recognized that NYP could develop some very sophisticated and efficient projects; but without the help of other stakeholders the projects would never get past the planning stage. NYP considers the task of meeting these objectives as a collective assignment for all stakeholders within the Unit. The State Fire Plan was designed with the intent of local fire safe problems being solved by local entities. NYP is available for assistance to these local entities by providing data, guidance, technical support, and standards. This year, Unit staff will revisit some of the stakeholder groups in an effort to update and revise the plan where needed.

Recommendations

NYP has found that the most effective method of spreading fire prevention information to educate the public is to make personal “one-on one” contact with the public. It is the Unit’s view that the single most effective method to protect personal and real property from wildland fires is for each individual landowner or resident to meet the mandates of Public Resources Code 4291 (defensible space standards –see [Appendix 4](#)). NYP also encourages the public to extend hazardous fuel reduction beyond the PRC 4291 mandated defensible zone into the adjacent “Defensible Landscape” zone (area beyond the required 100’). This is the area outside the Defensible space zone where a property owner can continue their “Reduced Fuel Zone” treatments and effectively add to the protection of the property. It is the Unit’s recommendation for its cooperating stakeholders that do not own or manage large tracts of wildland direct their efforts as follows:

1. **Direct 85% of their effort to defensible space and defensible landscape:** produce and provide fire safe information to landowners; conduct informational workshops; conduct one-on-one meetings with landowners providing individualized fire safe guidance; reduce structural ignitability where possible, support a citizen or public chipper crew/assistance; outreach to homeowner associations, etc; develop a property addressing program.
2. **Direct 10% of their effort to Ingress/Egress issues:** Identify and prioritize evacuation problem areas; when appropriate, encourage roadside fuel modification and maintenance; as needed, develop signage for exit routes.
3. **Direct 5% of their effort to Strategic Fuel Modification outside the defensible space zone:** construction of new shaded fuel breaks only if continuous maintenance is also funded; maintenance of existing fuel breaks; large scale vegetation management projects. Large scale vegetation management projects will normally only be completed by entities charged with managing large areas of

wildland such as the Bureau of Land Management, US Forest Service, CDF, timber companies, and large ranches.

NYP particularly recommends that the target areas for fuel reduction and education projects be within the High and Very High Fuels Hazard rating areas mapped out in this Fire Management Plan ([see fuels section](#)). The Unit also seeks to treat large amounts of wildland acreage throughout the Unit's intermix and interface (I-Zone) areas in high hazard locations. However, adequate Unit funds and staff are not currently available to attain this. If funds and/or staff were to become available, the Unit would target I-Zone areas and landscape scale wildland areas that threaten the I-Zone for fuel modification.

One other target area for fuel reduction projects not specifically mentioned in previous plans are those areas with High ranked Watersheds at Risk. Due to the recent availability of Proposition 40 funding there has been an overwhelming interest by the public in fuel reduction projects in areas that have both a High Total Asset score and a High Watershed Score. By supporting these projects, not only is the Unit meeting the goals of Proposition 40, but also reducing fuel loads in near proximity to watershed areas that are recreational, residential, or both.

(See [Prop 40/CFIP/CAG summary](#))

Re-evaluation

As project implementation continues, NYP will continue to re-evaluate the Unit using the pre-fire planning process to determine if attention should be refocused to new project areas or continue with those currently identified. Whenever a fire occurs in or around a project area, we will evaluate the success of any completed project work to determine its effectiveness in protecting the assets in the area.

Pre-Fire Management Plan Process Summary

Nevada-Yuba-Placer Unit (NYP) personnel have prepared this document as a plan to implement California's Board of Forestry's 1995 Fire Plan within the unit. NYP was the first unit in the state to draft a plan based on the guidelines set forth in the 1995 Fire Plan. The 1995 Fire Plan was a major departure from the previous Fire Plans as it was founded on a computer based geographical information system to aid in the analysis of the fire hazard within the unit. The acquisition of new data and new computer tools and programs will require re-analysis and changes as time goes on. This plan is limited to the CDF direct protection area within the unit. Subsequent analysis and plan changes may incorporate all of the lands within the Nevada-Yuba-Placer Unit.

The 1995 Fire Plan's goal is to reduce total government costs and citizen losses from wildland fire in California by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. The desired result of implementation of the Fire Plan is increased public safety, both to citizens and firefighters, reduced damage to assets, and reduced costs of suppression. This supports CDF's mission to "...protect the people of California from fires, respond to emergencies, and protect and enhance forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens." The term "wildland" refers to any area that may be affected by an uncontrolled fire. Uncontrolled fire is defined in Public Resources Code 4104 as *"any fire which threatens to destroy life, property, or resources and either: is unattended by any person; is attended by persons unable to prevent its unrestricted spread; or is burning with such velocity or intensity that it could not be readily controlled with those ordinary tools available to private persons at the fire scene."* Public Resources Code 4103 also defines forest fire, commonly referred to as wildfire, wildland fire, or vegetation fire, as *"a fire burning uncontrolled on lands covered with wholly or in part by timber, brush, grass, grain, or other flammable vegetation."*

The basic framework of the Fire Plan is to assess the fire weather severity, assets at risk, fuels hazard, and the level of service that is provided for a given area to aid in considering where pre-fire prescriptions will reduce the potential of a costly and damaging fire. A costly and damaging fire results in unacceptable cost and loss verses those fires that are successfully suppressed during initial attack (see Appendix A). Once the areas that represent high hazard (based on fuel condition, fire weather severity, and level of service) and high value (based on numbers of assets) are targeted, pre-fire prescriptions are designed to reduce the potential of a costly and damaging fire. These pre-fire prescriptions can be any activity, particularly any one within a CDF program. The prescriptions may include fuel management projects, such as prescribed burns, fuel breaks, thinning, etc., to inspection or educational programs.

During the data collection and validation phase, input was solicited and invited from interested parties, called stakeholders, regarding assets ([see Appendix 5](#)). Stakeholders may be other government agencies, private landowners, service groups, or homeowner associations. It is a desire of the Fire Plan that those who benefit from the protection of an asset should also share in

cost for that protection. Thus, asset stakeholders may be expected to provide financial support for the projects that provide significant benefits to their assets at risk. A cost share formula may be developed for multiple benefactors of a particular project. NYP has a number of ongoing projects throughout the Unit. Due to limited CDF resources, we have been utilizing the talents of the various Fire Safe Councils to carry the message to and gather input from the stakeholder groups. Through the efforts of the Fire Safe Councils, project funding has been accomplished without adversely affecting our CDF budget. We have found that our Fire Plan data has been invaluable for presenting the problem to the stakeholders and we continue to make every effort to provide the Fire Safe Councils and others with the latest, validated data.

NYP – Pre-fire Planning Process

The assessment process is completed by the Unit's Pre-fire Planning and Vegetation Management staff. They then provide the results to local Battalion Chiefs who work with the stakeholders in their battalions to develop projects designed to mitigate the hazards and protect the assets in the areas beginning with those rated as having the highest potential to experience a costly and damaging fire. The group then works cooperatively to establish funding sources to implement the project. Projects are designed to tie into and enhance existing programs where possible.

On March 5th, 2002, voters passed the "California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002". With the passage of "Proposition 40", CDF saw an opportunity to utilize the funding available to implement more of these projects than ever before. Strategic fuel reduction projects can serve the dual purpose of potentially mitigating the occurrence of large and damaging fires while protecting the watershed from catastrophic post fire erosion. Additional State Foresters are now available to support the planning and evaluation of these projects on the ground. (See [Prop 40/CFIP/CAG summary](#))

1 Stakeholders

Following is a list of stakeholders that were contacted.

1.1 PLACER COUNTY LOCAL GOVERNMENT:

- Board of Supervisors
 - Agriculture Commissioner
 - County Executive Officer
 - Placer County Air Quality Management District
 - Office of Emergency Services
 - Planning Department
 - Placer County Water Agency
 - Placer County RCD
 - Tahoe RCD
 - Placer County Fire Chiefs Association
 - Northstar CSD (CSA21)
 - Eastern Placer Co. Joint Powers Authority
-

1.2 NEVADA COUNTY LOCAL GOVERNMENT

- Agriculture Commissioner
 - Nevada Irrigation District
 - Northern Sierra Air Quality Management District
 - Nevada County RCD
 - Planning Department
 - Board of Supervisors
 - UC Cooperative Extension
 - Nevada County Fire Chiefs Association
-

1.3 YUBA COUNTY LOCAL GOVERNMENT:

- Planning & Building Services
 - Yuba County Water Agency
 - Feather River Air Quality Management District
 - Agricultural Commissioner
 - UC Cooperative Extension
 - Yuba County RCD
 - Yuba County Fire Chiefs Association
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1.4 LOCAL INTEREST GROUPS:

- Sierra Economics Development District
- A.R. Associates
- American River Watershed Group
- Sierra Pacific Industries
- Ca. Cattlemen's Association
- Nevada County Farm Bureau
- Placer County Museum
- Ca. Oak Foundation
- PG&E Land Services
- Protect American River Canyon (P.A.R.C.)
- Fiber Board
- Sierra Front Wildfire Cooperators
- Lake Tahoe Regional Fire Chiefs Association
- Fire Safe Council of Nevada County
- Yuba Watershed and Fire Safe Council
- Placer County Fire Alliance

1.5 STATE OF CALIFORNIA:

- Caltrans
- Ca. Dept. of Fish & Game
- Ca. Office of Historic Preservation
- State Water Resources Control Board
- Resources Agency
- Lahontan RWQCB
- State Fire Marshall
- Ca. Department of Parks & Recreation
- UC Cooperative Extension (Specialist, Valley Oaks & Burning)

1.6 UNITED STATES GOVERNMENT:

- Tahoe National Forest
- Lake Tahoe Basin Management Unit
- El Dorado National Forest
- Nevada County Conservation District
- Placer County Conservation District
- Yuba County Conservation District
- Fish & Wildlife Habitat Conservation

1.7 Stakeholders Comments

The stakeholder meetings were initially conducted for focused groups of stakeholders. The reasoning was that the meetings would be more productive without having to deal with a wide range of conflicting interests. As the meetings progressed it became evident that everybody's primary concern was how to protect the Assets at Risk from a costly and damaging fire. Most stakeholders were interested in the development and application of the assessment system. Relatively few suggested any changes to the system; however, quite a few did have information on data missing from asset data ([see Appendix 5](#)). Their input was included in later versions of the assessment.

Stakeholders generally agreed with the assessment system outlined in the Fire Plan. They all supported CDF's effort to identify those areas with high fire hazards that were most at risk to a costly damaging and fire. Individually, though, they were particularly interested in the protection of their specific asset(s) of concern. They supported the concept of pre-fire projects to reduce the potential of a costly and damaging fire but not at the expense of their asset(s) of concern.

Assets at Risk

The various assets were each mapped for their potential to risk as the result of a costly and damaging fire. The criteria for setting the breakpoints can be found in [Appendix 1](#) and the individual maps are available in [Appendix 2](#).

2 NEVADA-YUBA-PLACER 2006 PRE-FIRE MANAGEMENT PLAN

2.1 Introduction

In 1995, the State Board of Forestry and the California Department of Forestry and Fire Protection drafted a comprehensive update of the fire plan for wildland fire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis. The final version was approved June 3, 1996, and implemented in the Nevada-Yuba-Placer Unit. This unit was the first in the state to utilize the new Fire Plan.

The overall goal of the Fire Plan is to reduce total government costs and citizen's losses from wildland fire in California by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. The 1995 Fire Plan has five strategic objectives:

1. To create wildfire protection zones that reduces the risks to citizens and fire fighters.
2. To assess all wildland, not just the state responsibility areas. Analyses will include all wildland fire service providers – federal, state, local government, and private. The analysis will identify high risk, high value areas, and develop information on and determine who is responsible, who is responding, and who is paying for wildland fire emergencies.
3. To identify and analyze key policy issues and develop recommendations for changes in public policy. Analysis will include alternatives to reduce total costs and/or increase fire protection system effectiveness.
4. To have a strong fiscal policy focus and describe the wildland fire protection system in fiscal terms. This will include all public and private expenditures and economic losses.
5. To translate the analysis into public policy.

Five major components form the basis of an ongoing fire planning process to monitor and assess California's wildland fire environment. These components are:

1. **Wildfire Protection Zones.** A key product of this Fire Plan is the development of wildfire safety zones to reduce citizen and firefighter risks from costly and damaging fires.
2. **Initial Attack Success.** The fire plan defines an assessment process for measuring the level of service provided by the fire protection system for wildland fire. This measure can be used to assess the department's ability to provide an equal level of protection to lands of similar type, as required by Public Resources Code 4130. This measurement is the percentage of fires that are successfully controlled before unacceptable costs are incurred. Knowledge of the level of service will help define the risk to wildfire damage faced by public and private assets in the wildlands.
3. **Assets Protected.** The plan has established a methodology for defining assets protected and their degree of risk from wildfire. The assets addressed in the plan are citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality. Stakeholders – national, state, local, and private agencies, interest groups, etc.—were identified for each asset at risk. The assessment defined the areas where assets are at risk from wildfire, enabling fire service managers and stakeholders to set priorities for pre-fire management project work.
4. **Pre-fire Management.** This aspect focuses on system analysis methods that assess alternatives to protect assets from unacceptable risk of wildland fire damage. Projects include a combination of fuels reduction, ignition management, fire-safe engineering activities, reduction of structural ignitability and forest health to protect public and private assets. The priority of projects is based on asset owners and other stakeholder's input and support. Pre-fire management prescriptions designed to protect these assets also identify who benefits and who shares in project costs.
5. **Fiscal Framework.** The Board of Forestry and CDF are developing a fiscal framework for assessing and monitoring annual and long-term changes in California's wildland fire protection systems. State, local, and federal wildland fire protection agencies, along with the private sector, have evolved into an interdependent system of pre-fire management and suppression forces. As a result, changes to budgeted levels of service of any of the entities directly affect the others and the services delivered to the public. Monitoring system changes through this fiscal framework will allow the board and CDF to address public policy issues that maximize the efficiency of local, state, and federal firefighting resources.

These are Fire Plan applications:

- ◆ Identify for state, federal, and local officials and for the public those areas of concentrated assets and high risk.
- ◆ Allow CDF to create a more efficient fire protection system focused on meaningful solutions for identified problem areas.
- ◆ Give citizens an opportunity to identify public and private assets and designing and carrying out projects to protect those assets.
- ◆ Identify, before fires start, where cost-effective pre-fire management investments can be made to reduce taxpayer costs and citizens losses from wildfire.
- ◆ Encourage an integrated intergovernmental approach to reducing costs and losses.
- ◆ Enable policy makers and the public to focus on what can be done to reduce future costs and losses from wildfires.

The Fire Plan includes a new framework for a systematic assessment of the existing levels of wildland protection services. It identifies high-risk and high-value areas that are potential locations for costly and damaging fires, ranks the areas in terms of priority needs, and prescribes what can be done to reduce the future costs and losses. This assessment system has four major components:

1. [Level of Service](#)
2. [Assets at Risk](#)
3. [Fuels](#)
4. [Fire Weather](#)

Each of these components is described later in this document.

3 General Description of Planning Area

3.1 Geographic Location

The Nevada-Yuba-Placer Unit (NYP) is located in mid California, along the east side of the state. The Unit encompasses all of Nevada, Yuba, Placer, Sierra, and Sutter counties. California Department of Forestry and Fire Protection (CDF) direct protection areas (DPA) lie only within Nevada, Yuba, and Placer counties. The area under direct protection by CDF within the unit is approximately 875,000 acres. Total state responsibility area (SRA) acreage within the unit is approximately 1,200,000 acres.

3.2 Social Setting

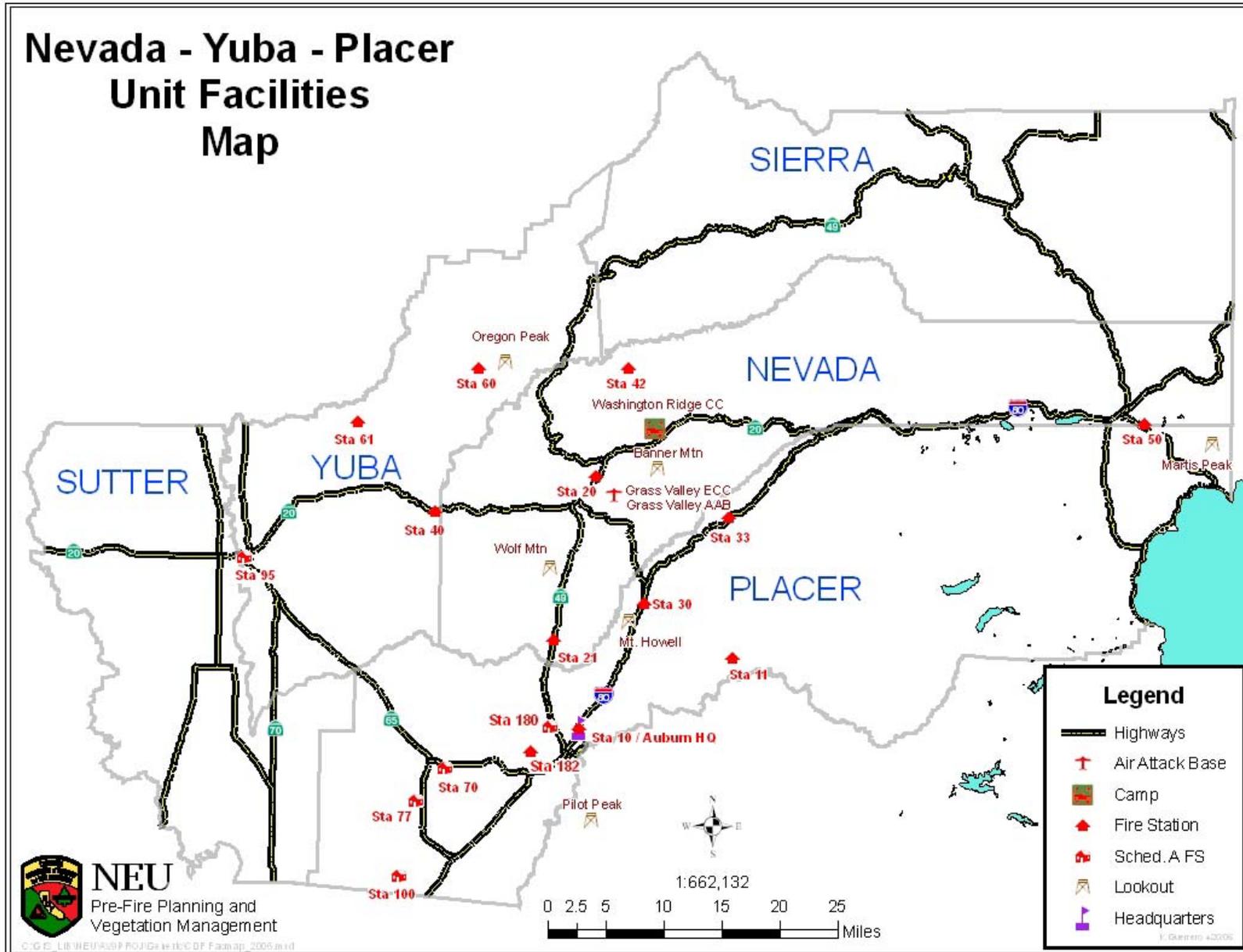
The population within the CDF direct protection area of NYP is approximately 166,000. The Nevada County population within that area is 74,000, Yuba County is 26,000, and Placer County is 66,000. Due to the desire of citizens to move from urbanized areas to rural type locations within the Unit, population growth trends have increased in the past and will continue upward. Placer County remains the fastest growing county in California. Even though rural development continues, parcel sizes remain large enough to leave a significant wild fire threat. The major population centers within the Unit are the towns of Auburn, Roseville, Rocklin, Colfax, Lincoln, Nevada City, Grass Valley, Truckee, Marysville, Yuba City, Lake Wildwood, Lake of the Pines, and Alta Sierra.

3.3 General Description of the Current Fire Problem

Physical Description of Environmental Conditions

NYP encompasses a diverse set of environmental settings. The west side of the Unit starts within the agricultural grasslands of the Sacramento Valley. Moving eastward, the terrain changes to foothills covered with gray pine, brush, and oak. Next, moving up the Sierra Nevada, mixed conifer and black oak stands with a heavy brush understory exists in the mid elevations. True fir stands dominate the upper elevations to the Sierra summit. East of the summit, Jeffrey pine and sage brush are prevalent along with true fir and lodgepole pine.

The major drainages within the unit are the American, Bear, Yuba, and Truckee Rivers. The Lake Tahoe Basin lies within the eastern boundary of NYP. Many lakes are within the unit along with a varied age of vegetation. A mix of young growth and mature timber stands exist throughout the unit. The various mature stands primarily exist along the drainage bottoms and in inaccessible locations. Brush stands dominate numerous locations, mainly along the lower elevations of the major drainages and in areas previously burned by wildfire.



4 Ignition Workload Assessment (Level of Service)

The legislature has charged the Board of Forestry and California Department of Forestry with delivering a fire protection system that provides an equal level of protection to lands of similar type (PRC 4130). To do this, the department has developed an analysis process that defines a level of service rating that can be applied to the wildland areas in California to compare the level of fire protection being provided. The rating is expressed as the percentage of fires that are successfully extinguished during initial attack. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred.

Successful initial attack is defined in terms of the amount of resources needed to suppress the fire and of fire intensity. It is that effort which contains the fire within an acceptable level of resource commitment, acceptable suppression cost and acceptable damage to assets at risk. The **FIRE PLAN** uses a Geographic Information System (GIS) that overlay a 10-year history of wildfires onto a vegetation type map and derives the average annual number of fires by size, severity of burning and assets lost. This data allows a **LEVEL OF SERVICE** Success (and failure) Rate calculation.

$$\text{SUCCESS RATE} = \frac{\text{annual number of fires that were small and extinguished by initial attack}}{\text{total number of fires}}$$

SUCCESS RATE = X PERCENT

This results in an initial attack success rate in percentage of fires by vegetation type and by area. Similar areas can be compared locally, regionally or statewide using the GIS database.

Using the GIS database, each wildland area of a community, CDF Unit, region or statewide, can be ranked by age and type of vegetation to identify high-volume fuel areas that have accumulations of dead fuel with the potential for costly and damaging fires. Areas are ranked by high, medium or low risk of potential as sites of costly and damaging fires.

4.1 STATEMENT OF SUCCESS RATE BY PLANNING BELT

The following is the success rate per planning belt within the Nevada-Yuba-Placer Unit over the ten year period ending 2005:

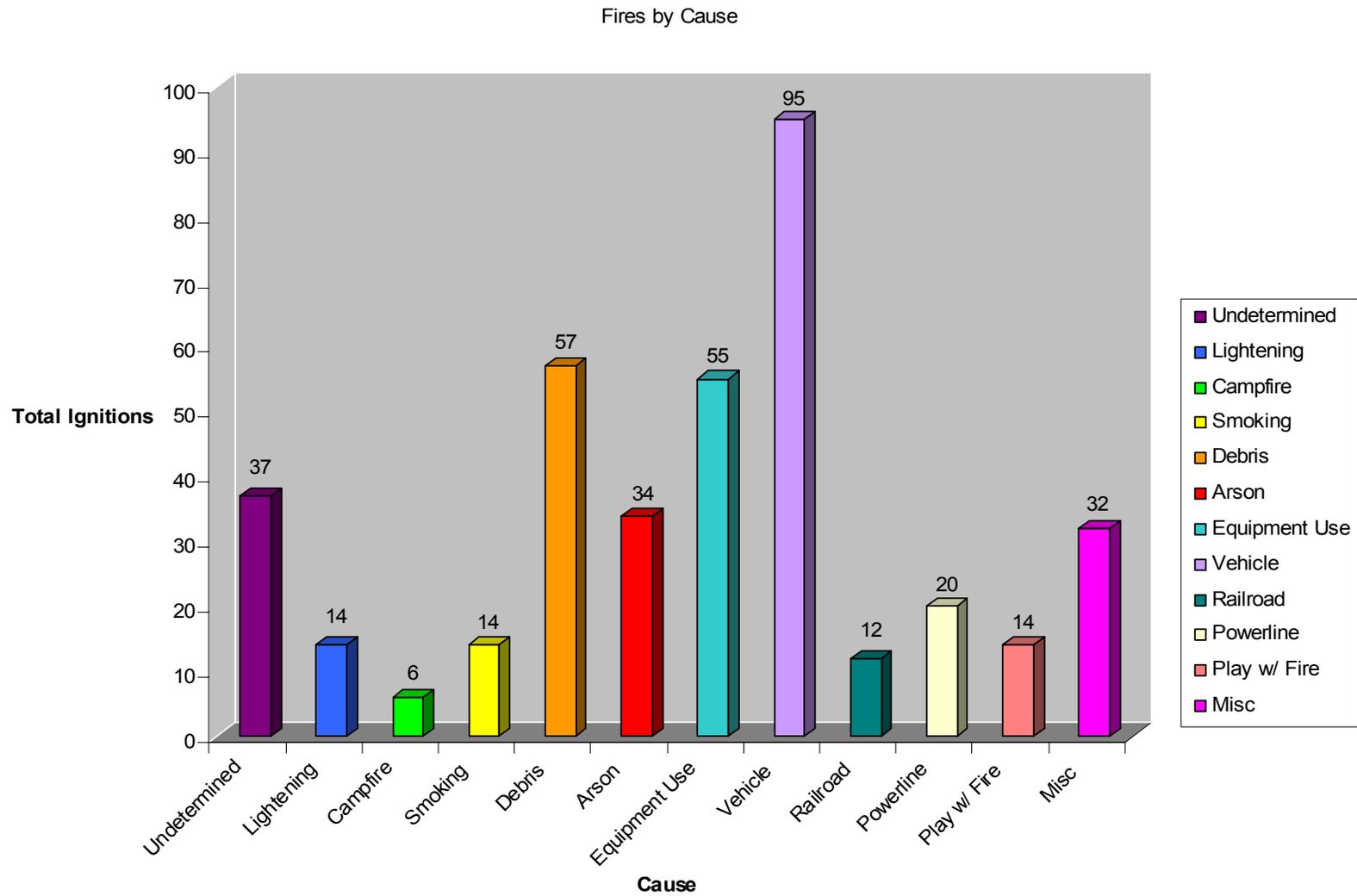
Grass	=	97%
Brush	=	99%
Woodland	=	99%
Interior Conifer	=	98%

While these success rates are high for the unit, it still should not overshadow that the 1 fire in 100 that becomes an unacceptable fire may be a costly and damaging fire (49'er Fire, 1988, for example) and may cause extreme loss in terms of safety, assets and costs. In addition, the percentages above reflect the LOS success inclusive of all agency resources also. This includes all 45 local government fire districts, US Forest Service, and 5 state agencies. The percentages DO NOT show the LOS success rate of NYP CDF resources only.

The following matrix shows the number of fires NYP responded to in 2005, and the resultant success per planning belt and *statistically*, the number of “unacceptable” fires per planning belt:

Planning Belt	LOS	Number of Fires	Unacceptable Fires
Grass	97%	83	3
Brush	99%	80	1
Woodland	100%	107	0
Interior Conifer	99%	44	1
Not Classified	94%	64	4
<u>Totals</u>	<u>98.4%</u>	<u>378</u>	<u>9</u>

2005 Unit-wide number of Fires by cause type.



(Statistical information provided by NYP Fire Prevention Bureau and may not correlate with EARS data.)

This map graphically shows the historic Level of Service for the unit within the CDF DPA.

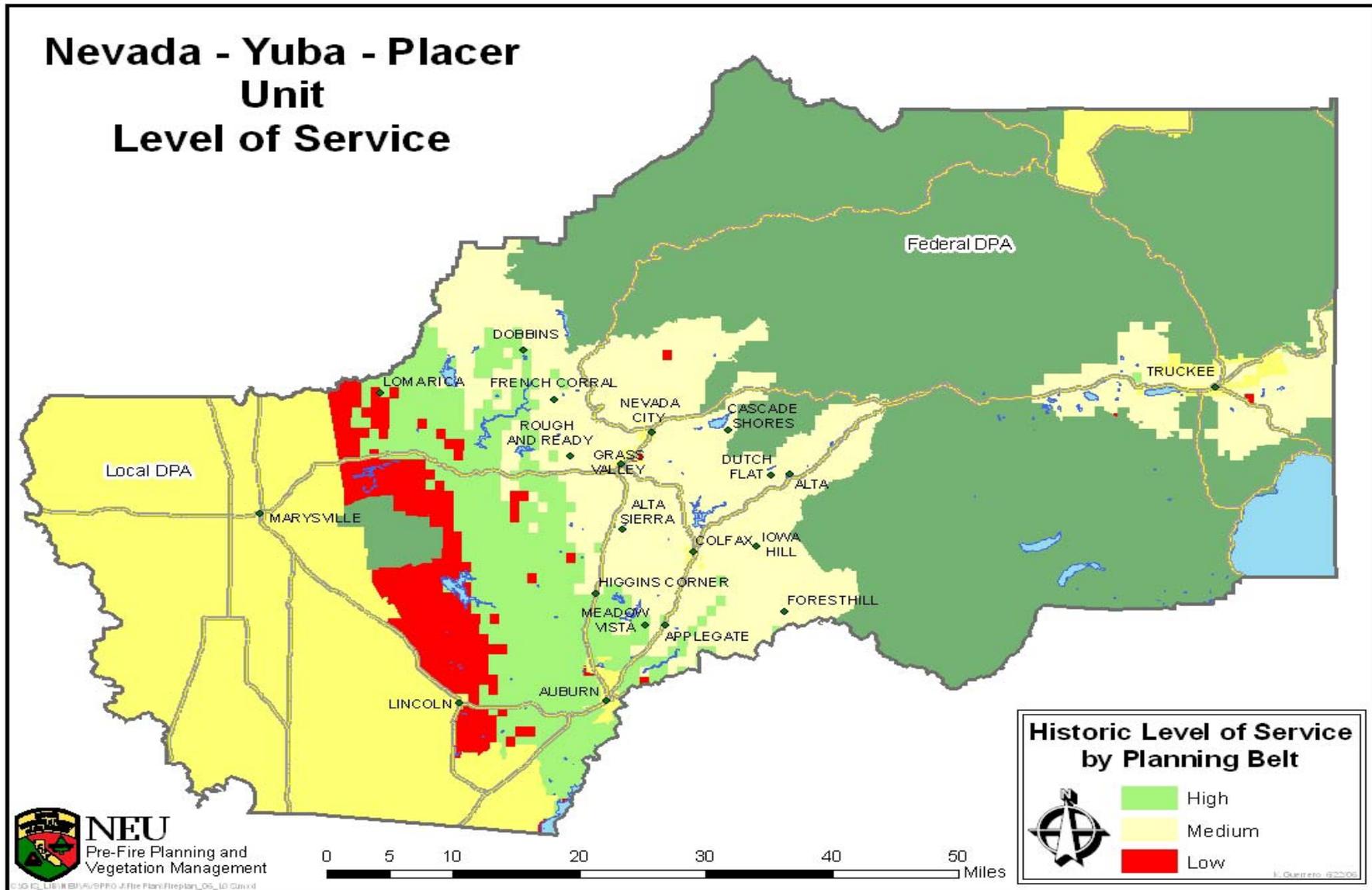


Fig.
4-1

5 ASSETS AT RISK

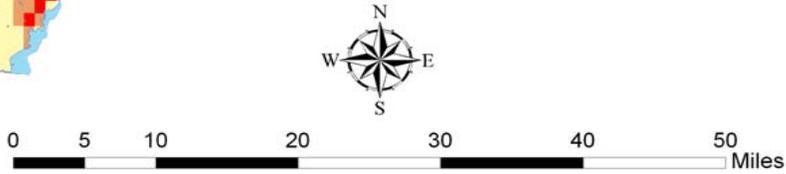
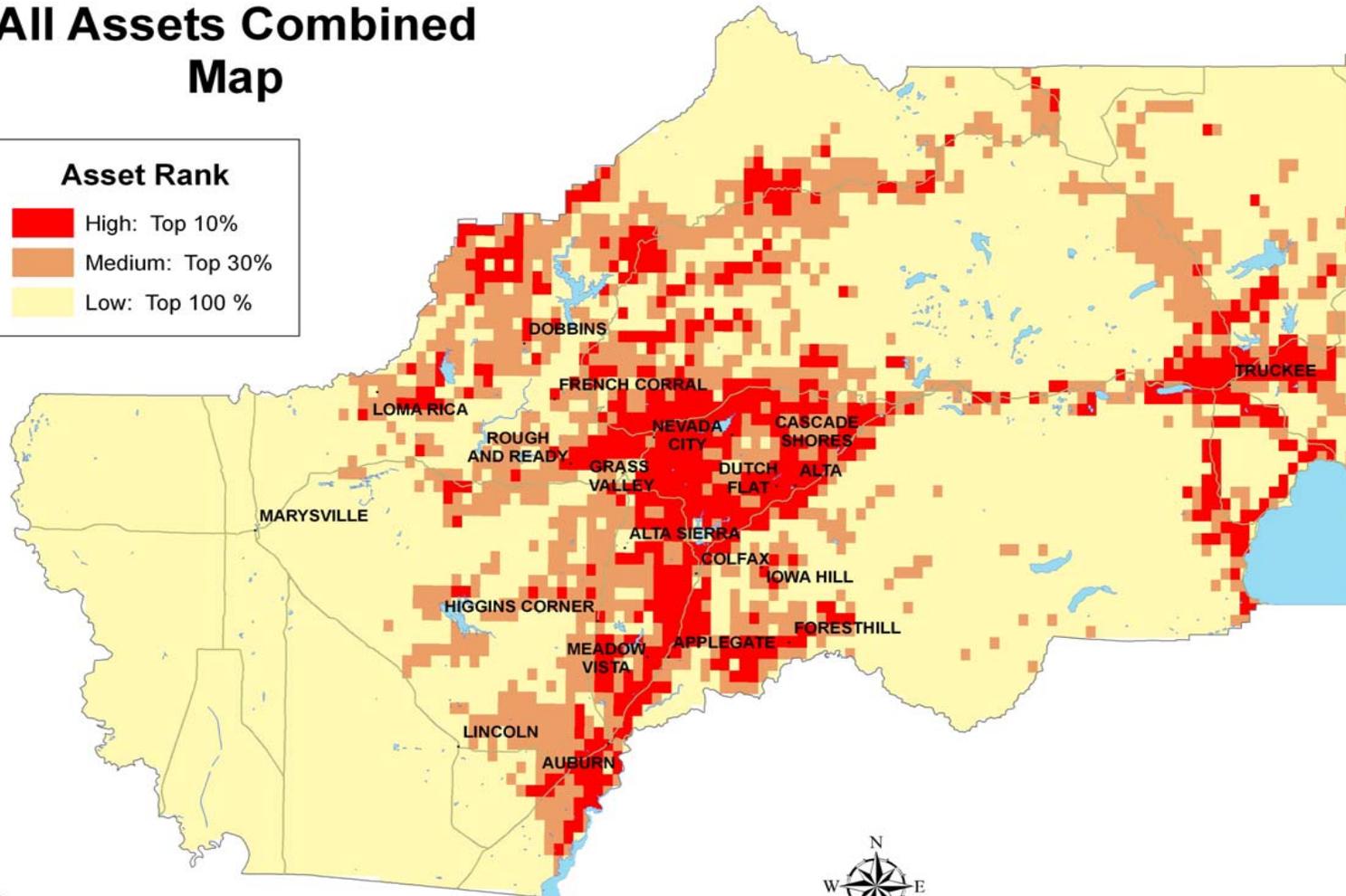
The primary goal of fire protection in California is to safeguard the wide range of assets found across wildland areas. These assets include life and safety, structures, range, recreation, hydroelectric power, fire-flood watersheds, soil erosion, water storage, water supply, scenic, timber, air quality, historic buildings, non-game wildlife, game wildlife and infrastructure.

Knowledge of the types and magnitudes of assets at risk to wildfire, as well as their locations, is critical to fire protection planning. Given the limits on fire protection resources, these resources should be allocated, at least in part, based on the value of the assets at risk. Knowledge of assets at risk is also necessary to choose those pre-fire management projects, which will provide the greatest benefit for a given amount of investment. For the department, the primary concerns regarding pre-fire projects is the reduction of suppression costs and reducing the fire risk faced by the various assets described here.

Thus, as part of the overall fire plan process, assets were addressed at two levels. First, generalized assets at risk were estimated within the Nevada-Yuba-Placer Unit to indicate what areas contain highly valued assets. Including the participation of stakeholders in the various assets refined these assessments. The areas with the highest combined asset values and fire risk were considered for pre-fire management projects, particularly where those projects would protect assets and reduce suppression costs should a fire start in the project area during high fire hazard weather. Second, as potential projects were identified in these areas, they were subjected to an analysis of the degree to which the projects will reduce damage to assets and potential suppression costs.

The process of quantifying the assets at risk also helps to identify who benefits from those assets. It is a desire of the fire plan that those who benefit from the protection of an asset should share in cost for that protection. Thus, asset stakeholders may be expected to provide some financial support for the projects that provide significant benefits to their assets at risk. Many projects may have several stakeholders that will benefit and a cost share formula will be part of the development of such projects. The various assets were mapped for their potential to risk as a result of a costly and damaging fire. Each of these maps is available in [Appendix 2](#).

Nevada - Yuba - Placer All Assets Combined Map



6 FUELS

As described earlier in this document, the vegetation within the Nevada-Yuba-Placer Unit is quite varied. The general vegetation types include grassland, oak woodland, mixed conifer, true fir, and brush. The Fire Plan assessment process includes fuels as a major component. The hazardous condition of these fuels was determined by examining the detailed fuels and fire history data layers using GIS and field validation. The hazardous fuels rank was developed using the following methodology.

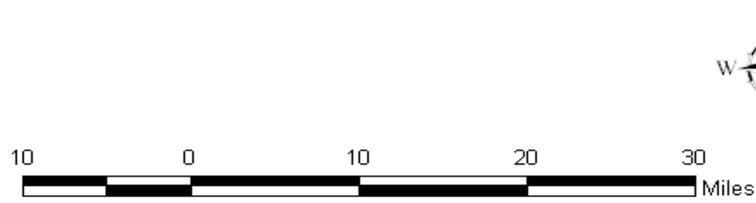
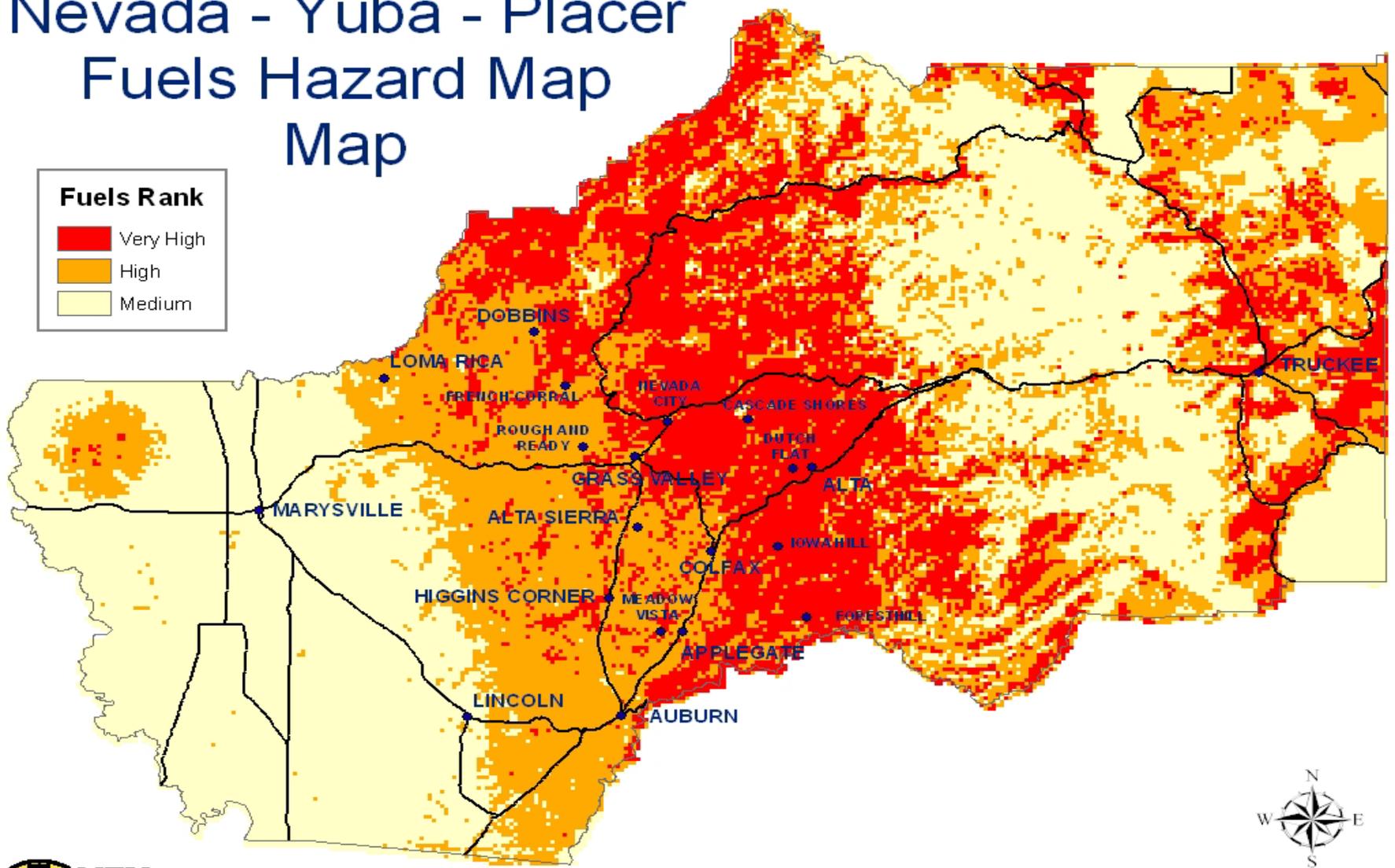
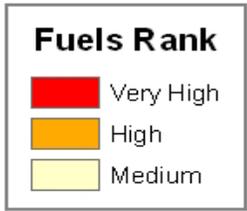
The hazardous fuels ranking system is based on estimates of potential fire behavior associated with the particular fuel type; and as such, have a direct relationship to the characteristic fire supported by these fuels. The fuel rank is an integrated index of fire behavior characteristics – rate of spread, fireline intensity, heat per unit area, etc. – that are a result of that fuel complex burning under a particular set of weather conditions. The intent is to provide a basic means of stratifying the landscape into areas of moderate, high, and very high hazard as it is related to fire behavior potential. The rankings were determined by using the underlying fuel models in conjunction with the BEHAVE fire behavior prediction system. The various fuel models were then plotted on the fire characteristics chart commonly used to evaluate resistance to control (Rothermel, 1983), where a fuel model's rate of spread is plotted against its heat per unit area. This plot represents fire behavior calculations conducted under severe fire weather conditions, where fires are more likely to escape. The farther the flaming front is from the origin, the greater the fire behavior potential, and hence, the greater the resistance to control. As these fuel models only reflect surface fire behavior, additional information regarding crown fire potential and slope was also included in the development of the ranking scheme.

In general terms, only those fuel complexes where there is a large volume of available fuels (yielding high heat per unit area) and at least a moderate expected rate of spread under severe environmental conditions, were given a hazard rank of "Very High". "High" and "Moderate" ranks were assigned to lesser fuel volume types where either heat per unit area or spread rate was expected to be lower. Heavy brush and heavy forest fuel types received "Very High" ranks. Moderate brush, pine/grass, intermediate load conifer, and light logging slash received "High" ranks. Grass and low volume forest types received "Moderate" ranks.

This year (2006) the Fuels Data has not been updated as the above methodology is being revised at the Statewide level. It is anticipated that new and more accurate fuels data will be available for the 2007 Fireplan.

The following map exhibits the Hazardous Fuels Rank for the Unit As of 2005.

Nevada - Yuba - Placer Fuels Hazard Map Map



7 FIRE WEATHER

The Fire Plan assessment process includes fire weather as a major component. The method to be utilized to rank the geographic areas as to fire weather severity is the following:

1. The fire weather history, in terms of average number of days of severe fire weather, is plotted and mapped by geographic area.
2. Geographic areas are ranked by the average number of days of severe fire weather during peak fire season. This allows the identification of the higher risk areas in terms of probability of fires occurring during periods of severe fire weather.

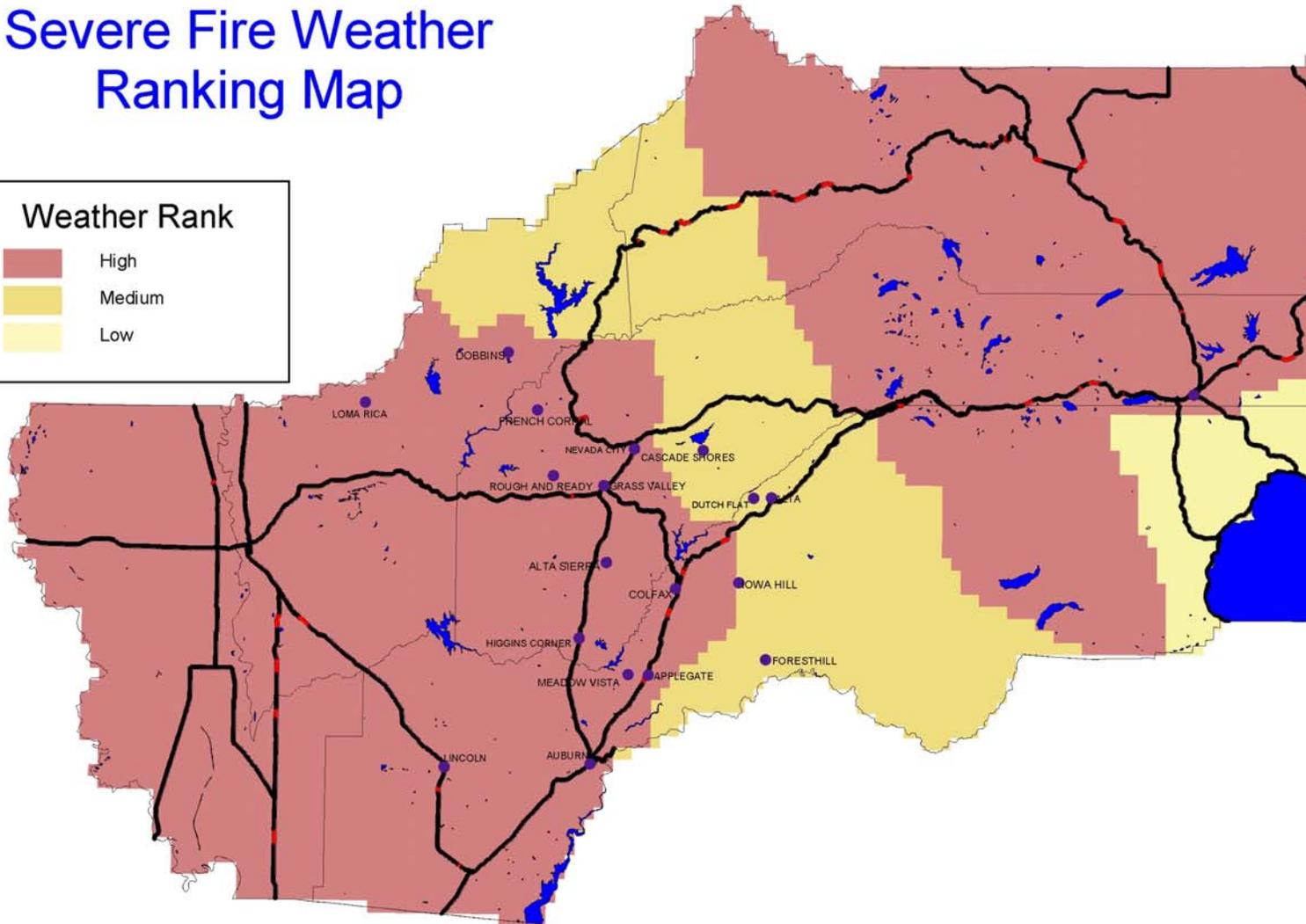
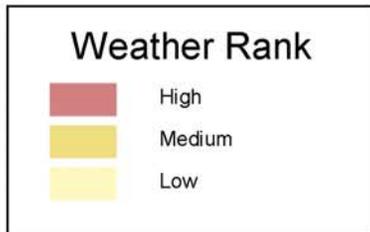
This methodology requires a special computer program to analyze tens of thousands of fire weather station reports. At the time of the implementation of the Fire Plan in the Nevada-Yuba-Placer Unit, this computer program was in development but not available for use. In lieu of this process, NYP used the following method:

1. Geographic areas within the unit were assigned to a WIMS fire weather station that was representative of the fire weather for that area.
2. Chris Fontana, a fire weather meteorologist with the US Weather Service, was contacted for input as to the fire weather severity of the geographic areas represented by the WIMS fire weather stations.
3. Local CDF Battalion Chiefs gave input as to the fire weather severity of these geographic areas.
4. Each geographic area was assigned a Fire Weather Severity Rank, low, medium, or high, based on the above input.

The unit will revise the fire weather severity ranking once the aforementioned program becomes available and the results it generates are determined to be reasonable.

The following map shows the Fire Weather Severity Rankings for the unit.

Nevada - Yuba - Placer Severe Fire Weather Ranking Map



8 Priority Areas

Utilizing the Fire Plan analysis methodology, a number of priority areas were identified. To further prioritize those areas, areas with the highest number of ignitions were then also identified. Unit personnel then contacted stakeholders in the priority areas to determine their level of interest in developing and implementing programs to reduce the areas potential to damage by a costly and damaging fire. The areas identified as the highest priority by county are:

Unit Wide

1. Fire Planners in each of the County's Building Departments.
(Moved to [Completed Projects](#))
2. [Unit Wide Chipper Programs](#).
3. RAWS relocation and addition

Placer County

1. [Auburn Area Fuel Break](#)
2. [Foresthill Pre-fire Project](#) (Portions Moved to [Completed Projects](#))
3. [Meadow/Vista Applegate](#) (Portions Moved to [Completed Projects](#))
4. [Stakeholder Projects](#)

Nevada County

1. [Nevada County Fire Mitigation Framework](#)
2. [Nevada County Fire Marshal's Office](#)
3. [Lake Vera/Purdon/Cement Hill](#) (Portions Moved to [Completed Projects](#))
4. [Alta Sierra](#) (Portions Moved to [Completed Projects](#))
5. [Columbia Hill Shaded Fuel Break](#) (Portions Moved to [Completed Projects](#))
6. [Graniteville Townsite Project](#)
7. [Snowtent Springs Project](#)
8. [Senior Assistance Program](#)
9. [Defensible Space Dropoff Program](#)
10. [Owl Creek Neighborhood Fuels Reduction](#) (Maintenance – Moved to [Completed Projects](#))
11. [Red Dog – You Bet Neighborhood Fuels Reduction Project](#)

Yuba County

1. [Yuba County Foothills Water Storage Project](#)
2. [Oregon Ridge Fuel Break](#). (Maintenance – Moved to [Completed Projects](#))
3. [Yuba County Public Works Roadside Clearance Project](#)
4. [Ure Mountain Roadside Fuel Modification](#) (Maintenance – Moved to [Completed Projects](#))

Currently, the project areas are focused around communities that primarily consist of single-family residences on one to five acre parcels. There are also a number of homes on parcels over ten acres scattered throughout each community. This combination of homes scattered across the landscape and the desire for privacy, results in a classic Rural-Urban Interface/Intermix. Each of these areas has a group of stakeholders that have demonstrated a strong interest in working towards reducing the threat of a costly and damaging fire within their area of concern. There are many other areas identified throughout the unit for pre-fire management projects ([Overall Ranking \(WAFL\) Map](#)). These areas were selected in part because there is already work underway in the area, but also due to their potential for a major fire based primarily on fuels and topography. Many of these areas were not immediately identified by the fire plan assessment system due to the low accumulation of assets; however, the fire risk remains very high and response times can be extended.

Proposition 40, CFIP, Community Assistance Grants :

Using the assessments in this plan, the Nevada/Yuba/Placer Unit has also processed **\$3,961,962.62** over **97** additional projects from 2004 to present.

The response to the Prop. 40/ CFIP program has been so overwhelming, that even with the dollars available, quality projects that meet our funding criteria have gone *unfunded*.

These numbers include:

Placer Co: 9 projects for 286 acres (**\$290,000**)

Nevada Co: 52 projects for 1,681 acres (**\$1,589,722**)

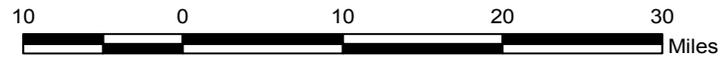
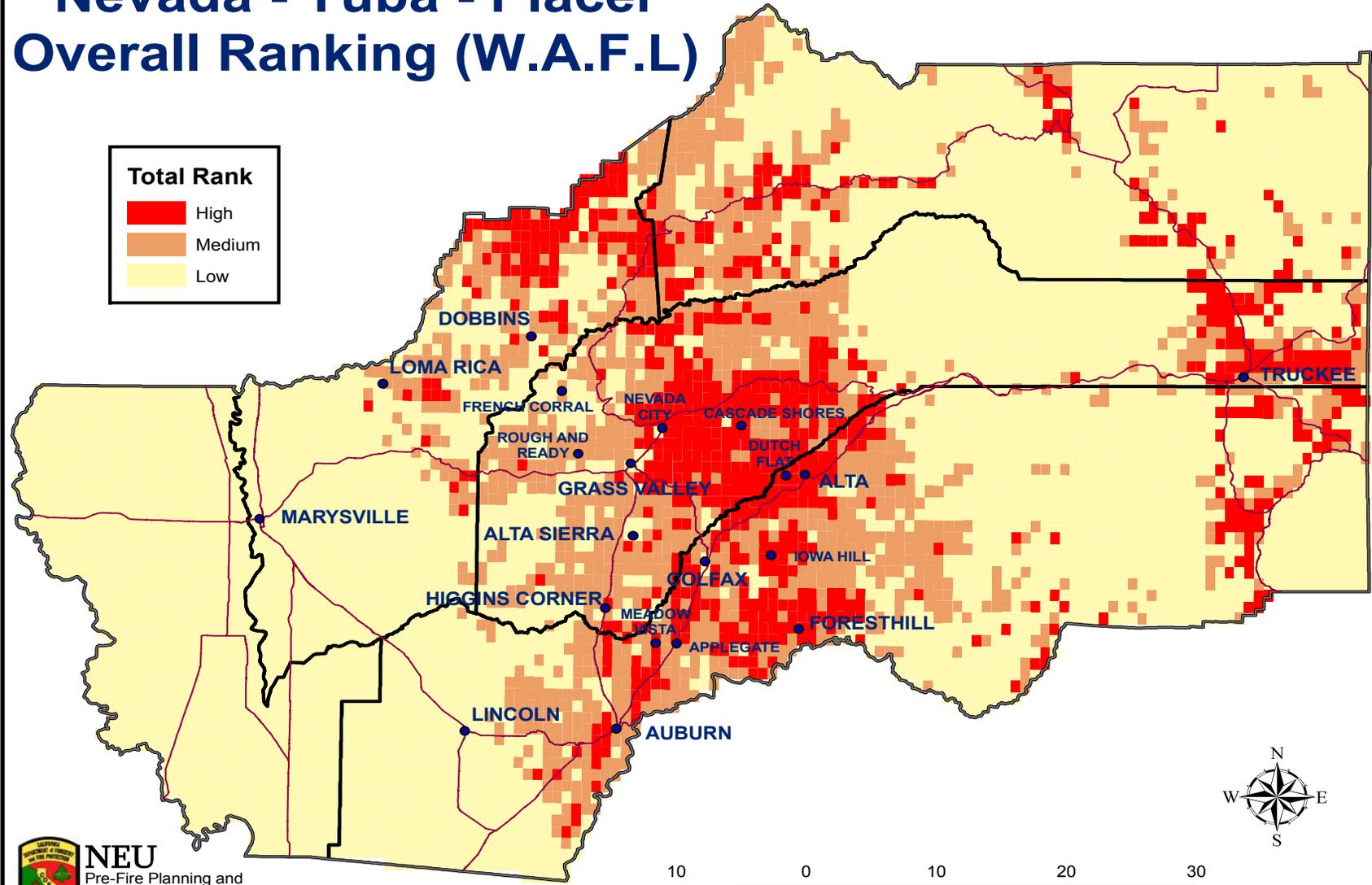
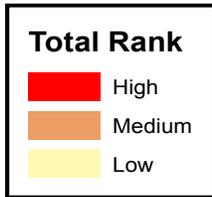
Yuba Co: 7 projects for 189 acres (**\$204,095**)

Sierra Co: 1 project for 35 acres (**\$22,598**)

This amounts to **69** projects over **2191 acres**. (**\$2,106,415**)

As one of the major goals in our unit is to “Develop a ‘land stewardship’ ethic in the residents of the wildland areas within the Unit”, we believe the interest shown in these projects by the public can be considered one of our most significant successes.

Nevada - Yuba - Placer Overall Ranking (W.A.F.L)



K. Guerrero
6/29/2005

9) NEVADA YUBA PLACER UNIT PRE-FIRE PROTECTION PLANNER PROJECT PROPOSAL (# 1 Priority Project)

Pre-Fire Planner Rationale - Along with the areas identified as high priority, the Unit also identified the need for personnel to work directly with the county Planning Departments to ensure that all new development meets fire safe standards. Due to the rate of growth in each of the counties, this was determined to be the most important proposal in the NYP Pre-Fire Management Plan to implement. Whereas the other projects would affect specific areas of the counties, a Pre-Fire Planner could affect change on a countywide basis and result in the greatest overall benefit to the public. As of 2006 the Unit has been successful in establishing a Pre-Fire Planner in each of the counties (see [Completed Projects](#)).

***** Moved to Completed Projects *****

10) NEVADA – YUBA - PLACER FUELS REDUCTION PROJECT PROPOSAL (# 1 Priority Project)

PROJECT DESCRIPTION: All of the field projects identified in the Nevada-Yuba-Placer *Pre-fire Management Plan* identify the need for a chipper. In the NYP CDF Unit, the chipper will provide support to the homeowners that do the clearing around their structures as required by the Public Resources Code (PRC 4291) and be utilized to reduce the material removed from the shaded fuel breaks to a manageable size.

Once the homeowners accomplish their necessary 4291 clearance, they need a way to dispose of the vegetative waste that is created. The current options are: burn it, haul it to a disposal site, pile it and allow it to turn to mulch, or hire a contractor to dispose of it. Additionally, studies have shown that defensible space and construction materials have the greatest effect on a structure's survival of a wildland fire. This project directly affects defensible space and will have the most effect in reducing structure damage or loss in wildfires.

The Fire Plan assessment process has identified debris escapes as the leading cause of ignitions throughout the Unit. This debris burning results in an increased fire risk and diminishes the air quality, both of which are potentially hazardous to the public. As the rural population continues to grow throughout the Unit, both air quality and fire risk are going to become bigger issues. The Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District, and the Feather River AQMD all strongly support the use of a chipper program to accomplish the required fuels reduction.

Another problem inherent to an increasing population is that of waste disposal. Currently our landfills are becoming overburdened with waste. The addition of vegetative waste only compounds the problem. One advantage of the chipper program is that it reduces the volume of the vegetative material and also expedites the process of natural breakdown. The Nevada-Yuba-Placer *Pre-fire Management Plan* designates that the chips created in this process will be distributed back onto the property of origin allowing the landowners to utilize the material as they see fit. Dispersion of the chipped material back onto the site also reduces the germination of annual grasses and the sprouting of brush.

Many landowners have constructed piles from the material they removed. However, due to the restriction of burn days and the cost and labor requirements to haul it away they just allow the piles to sit and decompose naturally. This system is beneficial in that it does not reduce air quality; however, it does create many heavy pockets of dead fuel available to an encroaching fire. These pockets of fuel can have an adverse effect on fire behavior. A slow moving ground fire burning into one of these piles will increase the potential for spotting and hamper control efforts. Depending on the placement of the piles, there is an increased chance for torching nearby trees and other vegetation.

The final option for the landowners is for them to hire a private contractor to dispose of the vegetation. The contractor would, most likely, use one of the methods mentioned above, so the

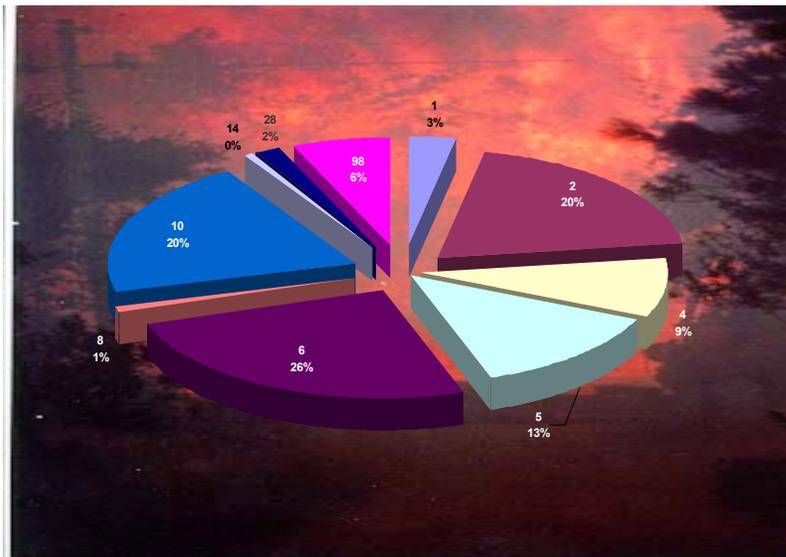
ultimate effects are unchanged. Of the options mentioned above, chipping the material is the most preferable in relation to the fire hazard and air quality. Currently, the costs of chipping make it unfeasible for many small landowners. Each landowner has to pay a “Haul-in” or “Setup” fee and are generally required to pay for a minimum of one hour when using a private contractor.

Coordinators are currently overseeing chipping programs throughout Nevada and Placer Counties. These programs are a result of many funding sources working together to accomplish fuels reduction work where it is most beneficial and manageable. The Coordinators group landowners that are in close proximity to each other and make the arrangements for a chipper crew to respond. The initial work provided through these programs allow for the removal of the old, decadent material that has become established over the last 100 years of fire suppression. Once this build-up of fuels is eliminated the landowners will be better able to deal with the fuels on an annual basis. It is the Unit’s expectation that once it is shown how beneficial this project is to individual neighborhoods, those areas will utilize the process on their own as a method of maintaining the required clearance around structures. In addition, this program would encourage people to do their PRC 4291 required clearing that would not have done it voluntarily as now there is a method of disposing of the cut material.

The fuel models in the area are displayed in figure 1 below. As is evident from the chart, nearly fifty percent of the fuels are in brush models. The fuel model 10 in this area also has a heavy brush component in the understory. So far the fuels around more than 9,500 homes have been modified from the brush models to a fuel model 8. A wildland fire that now encroaches on these homes will experience a significant reduction in fire behavior. It is estimated that there are still over 140,000 properties in the Unit requiring inspections. Of those approximately 130,000 will require brush disposal. By encouraging those property owners to meet PRC 4291, we will effectively treat a minimum of 20,000 acres within the Unit. This treatment will affect the fuels immediately adjacent to homes. Many studies have shown this combined with building construction measures to be the most effective treatments for protecting structures during a wildfire.

10.1 Estimated Project Cost
\$2,750,000

Chipping programs have been successfully operating in each of the three counties for three or more years. Even though these programs are separate and operated in various fashions, the overall results remain the same.



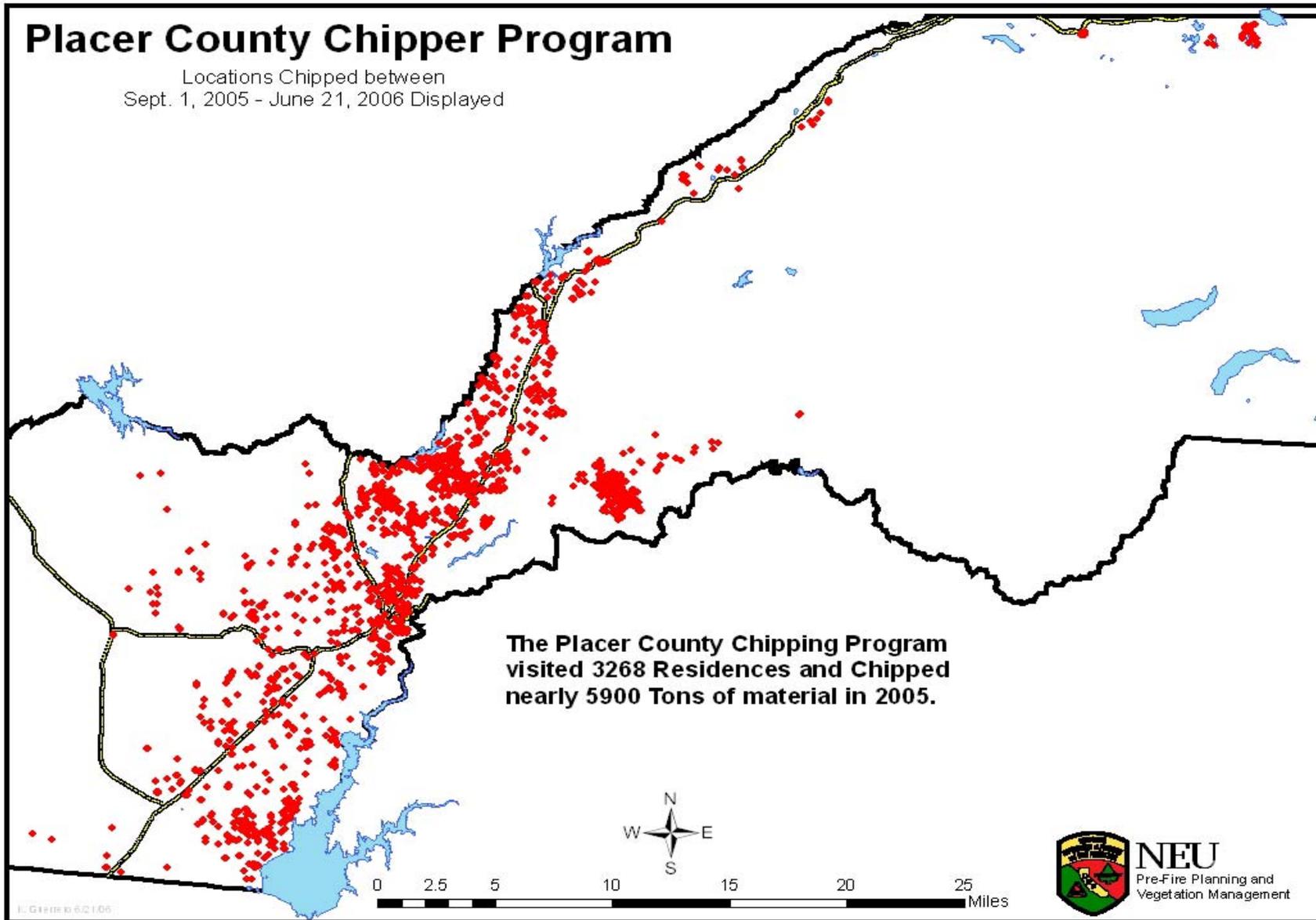
Nevada County – The fuels reduction program within Nevada got its start through the FEMA Hazard Mitigation Program (HGMP). We initially received approval for approximately \$600,000 to create fuel breaks and provide chipping services to specific areas within the County. This program sparked the interest of many of the residents that lived outside of the identified project areas and they immediately began requesting that the same service become available throughout the County. The following year we were able to accomplish that through \$22,000 of Fuels Reduction funds provided by CDF through the Fuels Reduction Program. Those funds introduced many residents to the Chipping Program and resulted in a demand that was greater than we could have hoped for. To date the Chipper Program has resulted in the treatment of over 2,917 residences by processing in excess of 208,000 cubic yds of fuels at those residences. We have also treated over 80 acres along more than eight miles of roads by removing more than 1,200 tons of vegetative fuels to create roadside fuels reduction areas. We have continued the program over the years through funds from a variety of sources including but not limited to: WUI Grants (\$216,000), Forest Stewardship Grant (\$165,000), BLM (\$228,000), USFS (\$220,000), Northern Sierra AQMD (\$75,000), Nevada County (\$129,000), Allstate Insurance (\$33,000), Proposition 40 Funds (\$235,000) in 05-06 FY, and a number of home-owner associations (\$45,000). Through Prop 204 (\$125,000) over 300 acres were treated by our cooperators. Options are now being considered to allow the program to continue if Grant funding becomes unavailable in the future.

Placer County – Initial fuels reduction efforts in Placer County were undertaken as an outcome of the settlement between Placer County and Pacific Gas & Electric. Approximately \$271,000 was set aside to reduce the fuel loading within the County. We utilized that as start up money to initiate the Residential Chipper Program within the County. To date the Chipper Program has resulted in the treatment of over 13,086 residences by processing in excess of 25,568 tons of fuels at those residences. Operation of the Placer County Chipper has also significantly reduced the volume of air pollutant emissions within Placer County. The following table contains the pollutant emission estimates prevented thru operation of the Placer County Chipper Program 1998-2006:

<u>Particulate Matter 10 (PM10)</u>	<u>276 tons</u>
<u>Particulate Matter 2.5 (PM2.5)</u>	<u>237 tons</u>
<u>Oxides of Nitrogen (NOx)</u>	<u>48 tons</u>
<u>Oxides of Sulfur (Sox)</u>	<u>1.4 tons</u>
<u>Volatile Organic Compounds (VOC)</u>	<u>197 tons</u>
<u>Carbon Monoxide (CO)</u>	<u>2,102 tons</u>

We have also treated over 150 acres along more than 40 miles of roads removing over 5,367 tons of vegetative fuels to create roadside fuels reduction areas. These areas will allow for reduced fire behavior along the roadways in times of fire emergencies. The program has been able to continue with the application of funds provided through Proposition 204 (\$252,000), Wildland Urban Interface (WUI) Grants (\$506,000), Placer County Air Quality Management District (AQMD) (\$65,000). Options are now being considered to allow the program to continue if Grant funding becomes unavailable in the future.
([see Map following](#))

Yuba County - The fuel reduction efforts in Yuba County have been directed primarily at large landowners. Approximately \$966,000 has been spent treating parcels ten acres and larger. These funds were obtained by the Yuba Watershed Protection & Fire Safe Council through Prop 204 monies. NYP has established a contract with the Dobbins-Oregon House Fire Department to provide chipping services throughout the foothill communities of Yuba County. By July 1, 2005 residential chipping services should be in place. These additional services will be dependent on Proposition 40 funding.



11. AUBURN FUEL BREAK

This project is within the Auburn State Recreation Area (ASRA) Fire Management Plan developed as part of the contract between CDF, Bureau of Reclamation (BOR) and State Parks (CSP&R). A complete copy of the 2005 ASRA Fire Management Plan can be found near the back of this document ([see Appendix 6](#)). The Auburn Fuel Break is designed to reduce the threat of a canyon fire moving into the residential area of Auburn along the rim of the North Fork of the American River. It will also help protect the ASRA from a fire moving from residential area. The residential properties are immediately adjacent to large tracts of federal land, which extend all the way to the river and up the other side. The federal lands were originally established to occupy the river canyon up to, and including, the predicted high water mark for the proposed Auburn Dam Project. Since the dam is yet to be constructed the lands are open to the public for recreational purposes. Due to its proximity to the river, the use of these lands by recreationists dramatically increases during the summer months when the fire danger is at its highest.

Project Proposal

Work with the BOR and CSP&R to develop a fuel break on the public lands along the ridgeline and below the private property. Assist Auburn City in encouraging the private landowners immediately adjacent to the public land to commit to fuel reduction projects on their own land. The goal is to establish a 300 foot modified shaded fuel break along the ridge that utilizes both public and private lands in an effort to protect the interests of all those involved.

Event 1: Using GIS and other means identify the properties that will require fuel modification in order to establish an effective fuel break. Notify those landowners in an effort to educate them on the necessities of the fuel break and attempt to get their “buy-in” to the project.

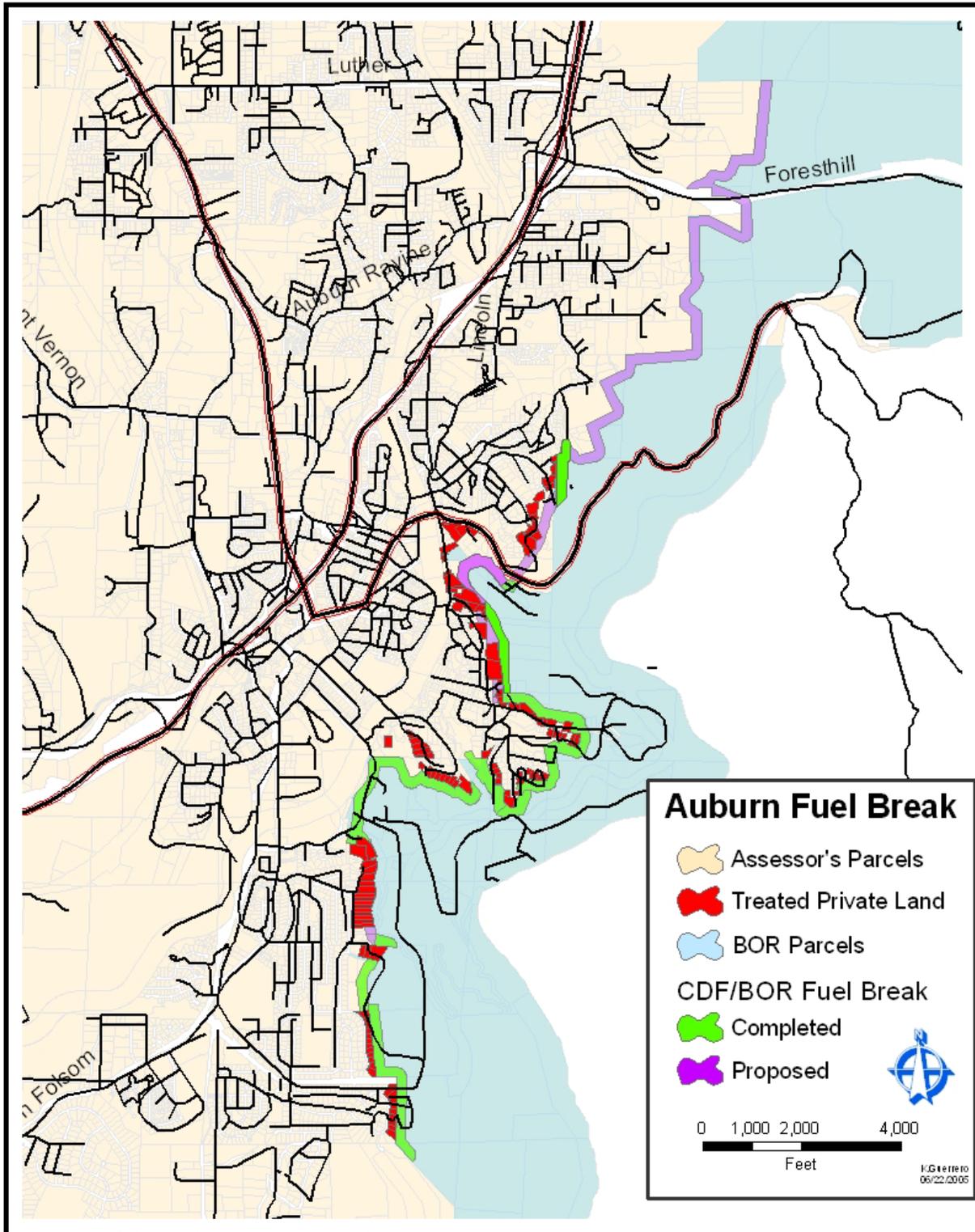
Event 2: Assist Auburn City with developing a use agreement with the private land owners that will allow the City to act as a contract agent on their lands to assist in the fuels modification work.

Event 3: Identify the BOR parcels that will require fuels modification work and work with them to complete the fuels modification work in whatever means are available.

Event 4: A second fuel break is proposed for the rim of the canyon on the other side of the river and will be addressed in the Amador – El Dorado Fire Management Plan and the ASRA Fire Management Plan.

The proposed fuel break is approximately nine miles long and will occupy over 325 acres.

Estimated Project Cost \$300,000 Primarily funded by the BOR with some assistance to the home owners via the Placer County chipping program.



12. FORESTHILL FUEL MODIFICATION PROJECT

The Foresthill pre-fire project was designed to tie in with and increase the effectiveness of current projects that the Placer County Resource Conservation District (RCD) has implemented in the area as a result of grant funding from CDF and fuel break projects the Tahoe National Forest has started to the east of Foresthill. The RCD projects include a demonstration of a shaded fuel break for forest lots, education of the local population of fire safe standards, and fuel break planning for the Foresthill Divide.

Foresthill Pre-fire Project:

Event 1: An inspection program of the Foresthill Divide area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Placer County Planning Department estimates that there are approximately 2,400 housing units on the Divide. Over 700 of these homes have been inspected so far. Inspection of these housing units will serve two purposes:

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2001, that 33% of the residences require a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 2: Second LE 38 inspection of approximately 800 housing units.

Event 3: Third LE 38 inspection of approximately 24 housing units.

*Includes General Services vehicle rental for inspectors.

Event 4: A series a roadside fuel modification projects located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire.

This portion of the project has been completed.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to notify the residents that have been inspected as to a time frame when a chipper and crew will be by their street. The homeowner can then clear vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property. Multiple residents within the project area have made use of the

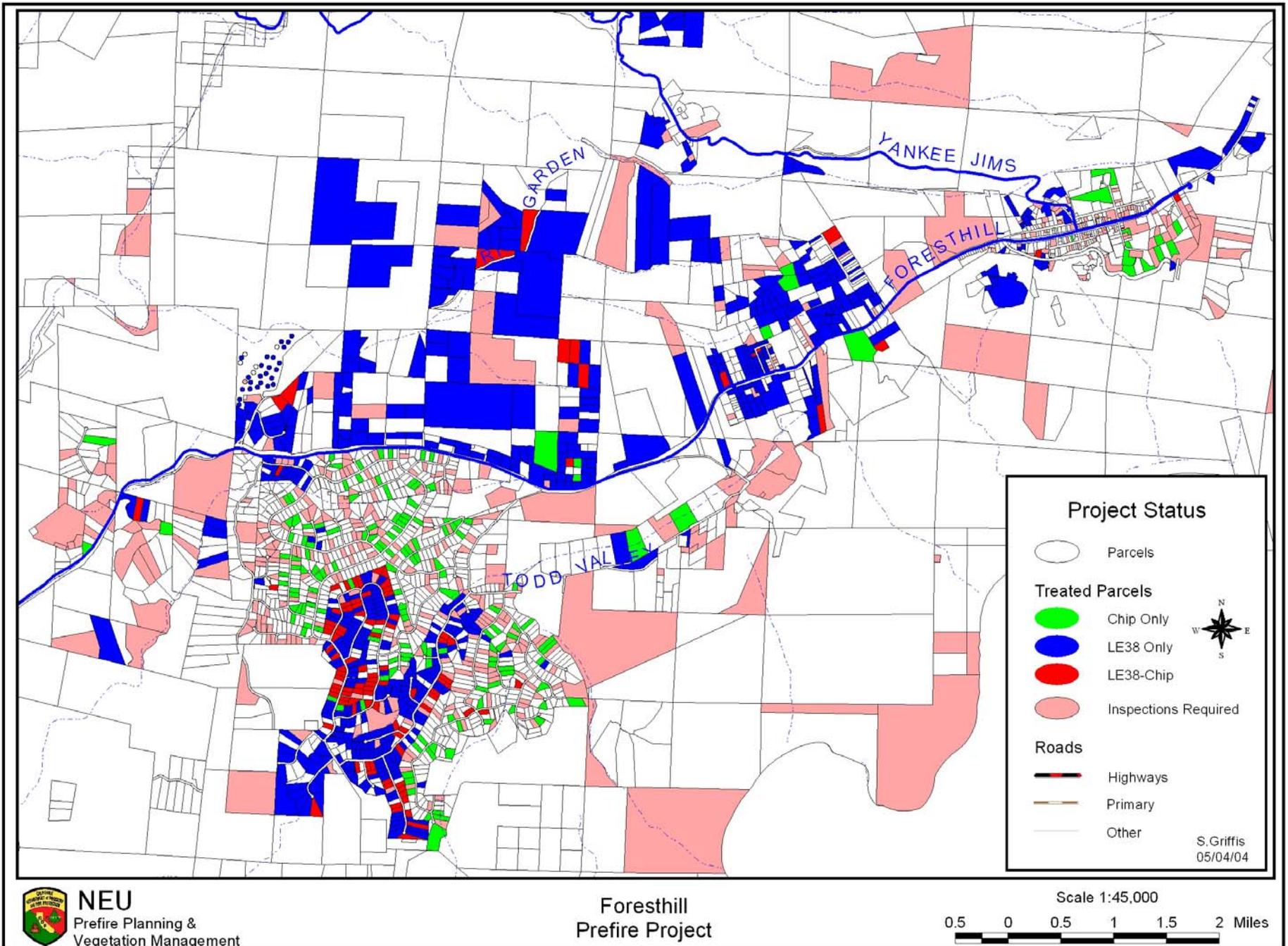
chipper program and many others have cleared around their homes in an effort to reduce their fire hazard. Inspectors are not concentrating in the Foresthill area this year (2006) as the community has begun to self police and make use of the chipper program in record numbers.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Placer County
- Todd Valley Homeowners Association
- Local Service Groups
- Placer County Resource Conservation District
- Placer County Air Pollution
- Natural Resources Conservation Service
- California Energy Commission
- Tahoe National Forest
- Bureau of Land Management
- Bureau of Reclamation
- American River Watershed CRMP
- Foresthill Fire Protection District
- Pacific Gas & Electric

Estimated Cost of Proposed Project: \$153,910.14

To date over \$75,000 has been expended towards this program. The funding has come from a variety of programs including Pacific Gas & Electric settlement funds, Prop 204, and National Fire Plan monies.



13. MEADOW VISTA / APPLGATE PRE-FIRE PROJECT PROPOSAL

The Meadow Vista / Applegate pre-fire project was also designed to augment current pre-fire projects that have been implemented by the Placer County Resource Conservation District, in conjunction with Placer Hills Consolidated Fire District, Natural Resources Conservation Service, and the Black Oak Waldorf School, through grants funded by way of CDF and other sources. These projects include demonstrations of a CDF Vegetation Management Program prescribed burn, shaded fuel break, defensible space, and hand versus mechanical methods of fuel reduction, and a handbook for home-owners about defensible space. There is strong support of these pre-fire projects by the local community as evidenced by heavy attendance of public workshops and landowner participation.

Meadow Vista / Applegate Pre-Fire Project

Event 1: A series of roadside fuel modifications, located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. Using existing roads for the location of the fuel modification takes advantage of the area occupied by the road surface, which is devoid of all vegetation. Modifying the fuels for a distance of 25 feet on both sides of the existing road will give an effective fuel break width of approximately 70 to 80 feet for secondary roads. The location of these fuel modifications will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks.

Proposed Roadside Fuel Modifications:

1. Canyon River Fuel Break separating Applegate from the North Fork of the American River. The fuel break will follow primarily along portions of Cerro Vista Drive, and Boole Road.
 - Approximately 7 miles (**This portion has been completed**)
2. Placer Hills Road Fuel Break from I 80 to and including Weimar Cross Roads to I 80 again.
 - Approximately 8 miles

The total area encompassed by the shaded fuel breaks is about 90 acres over a distance of approximately 15 miles.

Event 2: An inspection program of the Meadow Vista and Applegate area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Placer County Planning Department estimates that there are approximately 3,400 housing units in this general area. Inspection of these housing units will serve two purposes: To date over 2,600 of the homes in the area have been inspected for compliance with PRC 4291. Of those inspected, less than twenty percent received a warning notice and more than 280 have made use of the chipping program. There were an additional seventy-one residents that utilized the chipper without having an inspection to encourage them.

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its LE 38 Inspection program in 2003, that less than 1% of the residences required a third inspection.

Event 3: Second LE 38 inspection of approximately 1,122 housing units.

Event 4: Third LE 38 inspection of approximately 34 housing units.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to notify the residents that have been inspected as to a time frame when a chipper and crew will be by their street. The homeowner can then clear vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property.

Event 6: A series of prescribed burn units along the north side of the North Fork of the American River designed to reduce the fuel load along the slope in a mosaic pattern. Treatment of these units will break the continuity of the mature and dense brush currently occupying the slope. The advance of wildfire at this location would slow as it moved into a treated unit allowing fire suppression resources more time and a better location for fire fighting operations.

- Prescribed Fire size is approximately 320 acres over 8 units

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

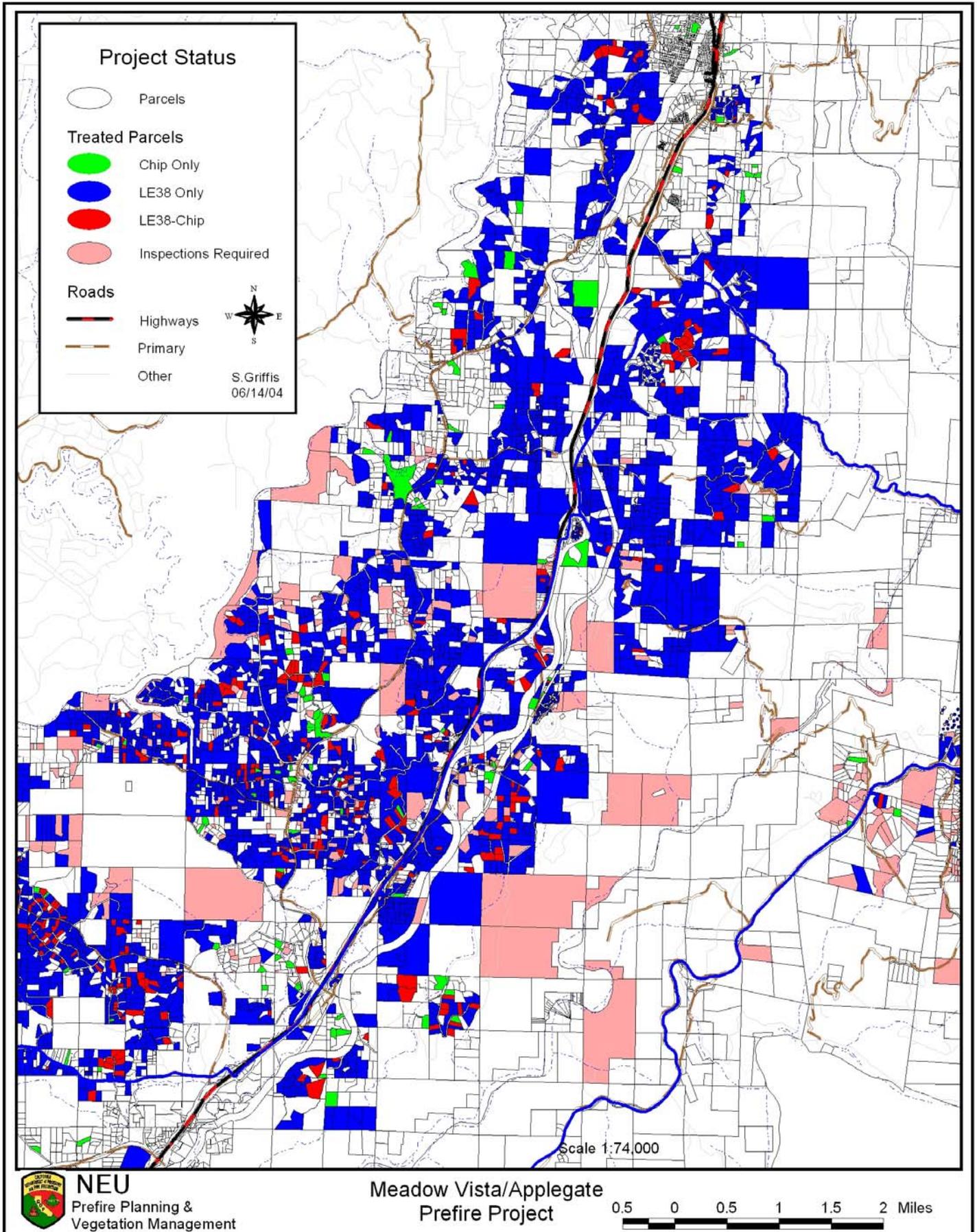
- Placer County
- Local Service Groups
- Placer County Resource Conservation District
- Natural Resources Conservation Service
- Placer County Air Pollution
- Placer Hills Fire District
- American River Watershed CRMP
- Homeowners Associations

Estimated Cost of Proposed Project

Total = \$259,355.70

To date over \$98,000 has been expended towards this program. The funding has come from variety of programs including Pacific Gas & Electric settlement funds, Prop 204, and National Fire Plan monies.

Nevada-Yuba-Placer
Fire Management Plan



14) STAKEHOLDER PROJECTS

The **Placer County Office of Emergency Services** has identified, in coordination with other Stakeholders in the County, a number of projects in their Disaster Mitigation Action Plan (DMA) that deal with the Wildland Urban Interface. Following are the Project Summaries as provided in their plan.

Project #1: DEVELOP A COMMUNITY WILDFIRE PREVENTION PLAN (CWPP) FOR THE WESTERN SLOPE OF PLACER COUNTY

Issue/Background: Fuels/vegetation management is ongoing. The HMPC agreed that ongoing vegetation management is THE most important factor in reducing the wildfire hazard in Placer County.

The Placer County Fire Safe Alliance (“the Alliance”), with its open partnership, including the various fire safe councils and major landowners and managers, is uniquely situated to assist with the coordination for and prioritization of scarce resources.

Because of the difference in needs between the Tahoe Basin and the Western Slope of the County, and because the Tahoe Basin already has a Community Wildfire Protection Plan under development, this Action applies to the development of a CWPP for the Western Slope only. The projects defined as a result of this effort will result in Fuels Management efforts coordinated among the Alliance stakeholders, as well as the general public, on the Western Slope of the County.

Vegetation management projects will result in ongoing fuels/vegetation reduction and management on public and private lands; implementation and enforcement of defensible space requirements on private land for both existing properties and new development; and development of criteria for on-going maintenance of the fuels management and defensible space program.

The plan will be consistent with the document “Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities” at <http://www.stateforesters.org/pubs/cwpphandbook.pdf>. As appropriate, projects defined in the CWFP will be included in the update of this Multi-Hazard Mitigation Plan, due in 2009.

Given how closely inter-related the communities are on the Western Slope, defining a CWPP at the individual Fire Safe Council level is not the most effective methodology. Instead, the Alliance partners plan to develop the CWPP for the Western Slope in phases. Phase 1, already in process, focuses on the foothills communities which are represented by the following Fire Safe Councils:

- Iowa Hill/Foresthill FSC
- Placer-Sierra FSC (City of Colfax, Weimar-Applegate-Colfax Area Municipal Advisory Council and Meadow Vista Municipal Advisory Council)

- Greater Auburn (City of Auburn, North Auburn/Placer Consolidated Fire Protection District, Bowman, and Christian Valley)

Subsequent phases will be developed once Phase 1 is completed.

Other Alternatives: Continue to implement programs at the local level, without an overall system of risk assessment and resource prioritization.

Responsible Office: Placer County Fire Safe Alliance partners, including the various Fire Safe Councils, fire agencies, Placer County Office of Emergency Services

Priority (H, M, L): High

Cost Estimate: The plan is being developed as part of existing agency workloads. Funding for public meetings and review copies of the plan may be needed, but the cost will be minimal.

Benefit: Coordinated projects with a broader impact than individual efforts by the County, agencies, groups, businesses, and individual landowners.

Potential Funding: National Fire Plan, Healthy Forest Initiative; WUI Grant; local financing, private foundations, grants from state bond acts, Sierra Conservancy, and Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA “HR 2389 Timber Tax”) payments to Placer County, PILT (Payment in Lieu of Taxes).

Schedule: Phase 1: Steps 1, 2, and 3, as defined in the Handbook, are already completed and Phases 4, 5, and 6 are in process, with a target completion of Fall 2005.

The above target was not met, however on May 10, 2006 multiple stakeholders met with a Consultant to begin the GIS mapping and assessment process. The new target date for completion will be sometime this calendar year.

Stakeholder Projects (cont)

Project #2: MAINTENANCE ON SHADED FUEL BREAKS AND DEMONSTRATION FUEL BREAKS.

Issue/Background: Several roadside shaded fuel breaks and demonstration fuel breaks were created from 1998 to 2002 using a grant from Proposition 204 funds and other sources. In order for these fuel breaks to continue to be effective, maintenance must be done on a periodic basis.

The fuel breaks are on primarily private property, and the property owners are expected to perform the maintenance with some cost-share assistance. The fuel break locations, size, and resources protected are listed in the following table:

Location	# Acres	# Homes Protected	Value*
Aeolia Heights demo SFB	20		Educational
Alta demo SFB	20		Educational
Foresthill School demo SFB	25		Educational
Maidu demo SFB	20		Educational
Foresthill Divide Rd. (Todd Valley)	36	1,500	391,500,000
Michigan Bluff	43	14	3,654,000
Boole Road	11	100	26,100,000
Cerro Vista	16	100	26,100,000
Ponderosa Road	21	100	26,100,000
Spring Garden Road	25	100	26,100,000
Yankee Jims Road	55	50	13,050,000
TOTALS	312	1,964	512,604,000

*The value is based on the average home value for the unincorporated County from the Assessor's Roll Values. The number of homes is approximate.

Other Alternatives: Taking no action will result in the continued re-growth of vegetation and the disappearance of the fuel breaks.

Responsible Office: Rich Gresham, Manager, Placer County Resource Conservation District

Priority (H, M, L): Medium

Cost Estimate: Estimated cost is \$500 per Acre for a total of \$156,000.

Benefit: The roadside fuel breaks protect homes valued at approximately \$512,604,000, and also shield evacuation routes and firefighter access. The demonstration fuel breaks educate and encourage homeowners to create and maintain defensible space. The cost of \$156,000 is 0.03 percent of the values protected.

Potential Funding: The roadside fuel breaks are on private property. This project would offer staff to provide follow up recommendations. Costs could be reduced by sharing costs with private property owners.

In general, the cost of maintenance is about \$500 per acre, depending on the method used. The cost share for the project is estimated to be \$78,000, with the property owners contributing an equal amount of their own funds and/or labor. The County Chipper Program will be used to help reduce the overall cost. The costs include funds for staff time and project management.

The responsibility for maintenance of the demonstration fuel breaks varies. The Aeloia Heights fuel break is on public and private lands; Alta's is managed by the Alta Fire Safe Council; the one at Foresthill School is maintained by the school; and the Maidu project is on private property within the Auburn Fuel Break and will be maintained as part of that project (described separately). This project would offer staff to provide follow-up recommendations plus cost-share funds for the private lands portions of the Aeloia Heights and Alta fuel breaks.

Possible source of funding are National Fire Plan, the Healthy Forests Initiative, CalFed grants, and EQIP.

Schedule: Every 3-5 years, if funding is available, starting in the spring of 2005 or 2006.

Stakeholder Projects (cont)

Project #3: ANNUAL DEFENSIBLE SPACE INSPECTIONS PROGRAM IN THE UNINCORPORATED COUNTY

Issue/Background: Defensible space is recognized by CDF as the single most important action that a homeowner can take to increase the chances that homes and other structures will survive a wildfire. Defensible space also helps to protect the wildland from a structure fire. Another benefit of defensible space is that it provides firefighters with a safe place to work while defending a home from fire.

When SB 1369 took effect on January 1, 2005, the minimum defensible space requirement increased from 30 feet to 100 feet.

Many homeowners are not aware of the requirements of defensible space, especially new residents who move to the County from highly urban areas where it is normal to expect a fire engine, or even multiple engines, to be dedicated to fighting a structure fire. However, during a wildfire, this is not feasible. Homes and other structures must be able to withstand an approaching wildfire with no assistance from firefighters. Also, fire fighters will not defend a home unless they can do so safely.

Regular inspections, based on the requirements of California Law as specified in Public Resources Code 4291, can help ensure that homeowners create and maintain adequate defensible space. The inspection process is also an opportunity to educate and motivate the homeowners to take action to improve their wildfire safety.

While CDF has the legislative mandate to perform these inspections, in reality budgets do not provide for sufficient staffing to do this beyond the occasional inspection requested by a homeowner. Since 1998, PRC 4291 inspections in the Placer County Foothills have been funded by grants from Prop 204, the Community-Based Wildfire Protection Program through the California Fire Safe Council and BLM, and Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA “HR 2389 Timber Tax”) payments to Placer County.

Future programs need to expand to include the south County, especially the South Placer Fire Protection District and the Loomis Fire Protection District.

Other Alternatives: Taking no action will result in less compliance with defensible space requirements.

Responsible Office: Placer County Fire Safe Alliance partners, including fire agencies

Priority (H, M, L): High

Cost Estimate: Inspections cost approximately \$10.50 for the inspector’s time and insurance, mileage, and a manager. Adding administrative overhead brings the cost to about \$11.50.

(These are 2001 dollars.) An additional cost is for literature to handout. The most important handout is the Homeowner's Checklist, which can be downloaded at http://www.fire.ca.gov/php/education_checklist.php.

The most recent grant for Defensible Space Inspections was for \$79,746.67 with an in-kind match for literature and other support by CDF for \$13,236.50. These inspections focused on the foothills communities of Foresthill, Iowa Hill, Weimar, Meadow Vista, Applegate, the Colfax area, etc. There are approximately 7,000 homes in this area. Inspections cost approximately \$10.50 for the inspector's time and insurance, mileage, and a manager. Adding administrative overhead brings the cost to about \$11.50. An additional cost is for literature to handout. The most important handout is the Homeowner's Checklist, available at http://www.fire.ca.gov/php/education_checklist.php or from CDF. Color copies of this document cost from \$1.50 to \$2.00 depending on the number of copies.

Benefit: Life Safety; Reduce property Loss. A cost of \$13.00 per home inspected (\$11.50 + \$1.50) is about 0.005 percent of the average Assessor's Roll Value of about \$260,000 per home (which is far below actual replacement value).

Potential Funding: Potential sources of funding include: National Fire Plan, Healthy Forests Initiative, and Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA "HR 2389 Timber Tax") payments to Placer County.

Schedule: Annually, as funding permits. Since not every property needs to be inspected every year, doing inspections on a rolling basis would allow smaller annual grant amounts to be needed.

**** A total of 5393 inspections were completed in 2005 ****

Stakeholder Projects (cont)

Project #4: ONGOING COUNTY CHIPPER PROGRAM OPERATION FUNDS

Issue/Background: Since 1998, the Placer County Chipper Program has provided a free service to residents of the County. This helps to lower the costs of creating and maintaining defensible space and also reduces the amount of outdoor burning and the associated air pollution as well as escaped fires.

The County owns four chippers and tow vehicles, purchased from a PG&E settlement and supplemented by a Prop 204 grant. Maintenance is performed by CDF. Therefore the annual cost is for the four crew managers, one for each chipper, and the crews. In order to keep costs down, trustees from the County Jail are used as crews.

Response to the program has been excellent. As of June 2004, an estimated total of 17,486 tons of vegetation had been processed through the Chipper Program since its inception. The number of parcels chipped has steadily increased every year.

Other Alternatives: No Action - If the Chipper Program is not continued, there is a risk of lower compliance with defensible space requirements as well as increased burning.

Responsible Office: Rich Gresham, Manager, Placer County Resource Conservation District; CDF NYP, Placer County

Priority (H, M, L): High

Cost Estimate: The cost of operation is about \$191,000 annually, or an average of \$76 per parcel chipped.

Benefit: Life Safety; Reduce property Loss. A cost of \$76 per parcel is about 0.03 percent of the average Assessor's Roll Value of about \$260,000 per home (which is far below actual replacement value).

Potential Funding: Current funding is through a WUI grant. However this funding is not guaranteed for future years and options are now being considered to continue this service when Grant funding is no longer available.

Schedule: Ongoing annually.

Stakeholder Projects (cont)

Project #5: ESTABLISH ADDITIONAL FIRE SAFE COUNCILS ON THE WESTERN SLOPE

Issue/Background:

Many residents of this area are not aware of the wildfire hazard. This hazard was illustrated by the 2001 Sierra Fire in the Loomis/Rocklin area, which destroyed six homes, numerous outbuildings, and several vehicles. A couple of years ago, a home was lost to a grass fire in Loomis!

Establishing Fire Safe Council(s) in this area of the County is a first step towards educating local residents about the fact that they live in an urban forest and there is a wildfire hazard, and motivating them to take appropriate action to reduce their risk.

Other Alternatives: Taking no action will continue to leave these homes at risk.

Responsible Office: Placer County Fire Safe Alliance partners, including local fire agencies

Priority (H, M, L): High

Cost Estimate: The major cost involved is fire agency manpower, especially on the part of the Prevention Officer/Fire Marshal. There may also be some administrative cost for mailings, etc. However, most of these costs can probably be included in normal operating expenses.

The “Core Group” models used by the Greater Auburn Area Fire Safe Council and the Ponderosa Fire Safe Council in their Partnership Agreements could be replicated to create a local base of involved citizens to work with their local fire agencies.

Benefit: Fire Safe Councils have been demonstrated across the state as being effective in informing and motivating local residents to take action to create and maintain defensible space. It costs almost nothing to start and operate a fire safe council and to create local education programs. Grant funding for larger projects will be worked through the Placer County Fire Safe Alliance partners and the developing Community Wildfire Protection Plan.

Potential Funding: Existing Budgets

Schedule: Start up at least one additional Fire Safe Council in 2005. Sub-chapters could be implemented via homeowner associations, neighborhood watch groups, and other existing community-based organizations.

**** *The Colfax, Meadow Vista, Alta, and Ponderosa proposed Fire Safe Councils were all combined into the “Placer Sierra FSC” this year. There are now a total of 4 FSC’s in the County – Greater Auburn, Foresthill, Iowa Hill and Placer-Sierra.***

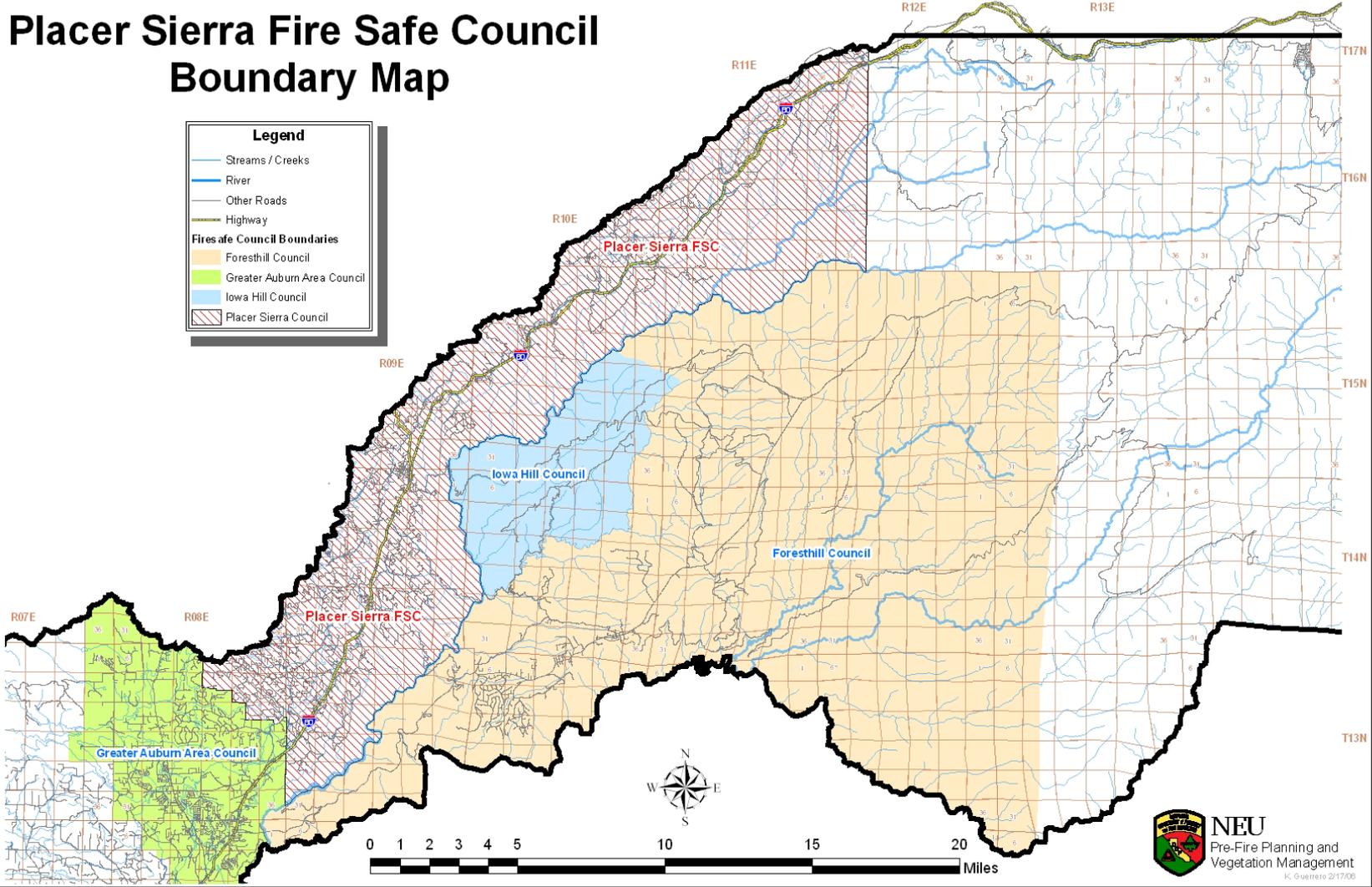
Placer Sierra Fire Safe Council Boundary Map

Legend

- Streams / Creeks
- River
- Other Roads
- Highway

Fire Safe Council Boundaries

- Foresthill Council
- Greater Auburn Area Council
- Iowa Hill Council
- Placer Sierra Council



Stakeholder Projects (cont)

Project #6: ENHANCE ENFORCEMENT OF COUNTY BUILDING CODES TO INCREASE COMPLIANCE WITH SB 1369 DEFENSIBLE SPACE AND OTHER FIRE SAFE REQUIREMENTS IN THE UNINCORPORATED COUNTY

Issue/Background: When SB 1369 took effect on January 1, 2005, the minimum defensible space distance increased from 30 feet to 100 feet (or to the property line). Further, for new or replacement construction, SB 1369 requires that the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards, as well as upon completion of the construction or rebuilding, the owner shall obtain from the local building official, a copy of the final inspection report that demonstrates that the dwelling or structure was constructed in compliance with all applicable state and local building standards.

The building inspection process is an excellent time to initiate compliance with SB 1369. For example, if the creation of the minimum 100 feet (or to the property line) defensible space area was required before the building is started to be built, it is a lot more likely to be maintained after construction. This would also be a good time to enforce the PRC 4290 requirements for house and road signage installation.

Specific details of the process would be worked out among the responsible parties listed below.

Other Alternatives: No action continues to leave defensible space creation up to the good will of the homeowner.

Responsible Office: Placer County Building Department, Placer County Fire Safe Alliance partners, including CDF and local Fire Agencies

Priority (H, M, L): Medium

Cost Estimate: There is no cost involved to the responsible parties since the existing building inspection process would be used. (The cost for implementing the certification process required by the legislation is outside the scope of this project since it has to be done anyway.)

Benefit: Life Safety; Reduce property loss - with a zero cost project...

Potential Funding: Existing Budgets

Schedule: Early 2005

Stakeholder Projects (cont)

Project #7: ENSURE THAT ALL HOMES IN THE PLACER COUNTY FOOTHILLS HAVE PRC 4290 COMPLIANT ADDRESS SIGNS

Issue/Background: Many homes in the Placer County Foothills do not have adequate house signage, which makes it difficult for emergency responders to quickly locate addresses requesting assistance.

Homeowners either are unaware that their house signs are not adequate, and/or do not know where to go to purchase PRC 4290 compliant signs, and/or balk at spending what it costs to obtain such a sign.

Other Alternatives: The only other alternative is no action.

Responsible Office: Assistant Chief Loren Snell, CDF Nevada-Yuba-Placer Unit

Priority (H, M, L): High

Cost Estimate: Existing Homes:

- Cost of single PRC 4290 compliant signs is about \$30 plus \$5 for a stake (from The Sign), with a second sign costing \$20 plus stake. The proposed project would provide cost-share funds. Homeowners would pay \$5 to \$10 per sign, plus stake. Low-income homeowners would pay no more than \$5 for both sign and stake. The cost-share funds would provide the rest of the cost.
- There are approximately 7,000 homes in the Weimar, Applegate, Meadow Vista, Foresthill, and unincorporated county around Colfax. Of these, an estimated 50 percent do not have adequate address signage.
- Total estimated number of homes needing signage in the Placer County Foothills: 3,500.
- Cost for the project: \$122,500 total; \$105,000 is needed in cost-share funds if homeowners provide a \$10 match; \$87,500 needed if homeowners provided a \$5 match. (The grant amount would need to include funds for administration of the grant as well as project management, so the actual grant request would be higher. The homeowner co-pays would provide the required matching funds.)
- Some ways to reach the homeowners: (1) during future PRC 4291 Inspections; (2) use local Boy Scout or similar organizations; (3) booths at fairs; (4) newspaper articles; (5) school newsletters; (6) hand out order blanks at supermarkets and home improvement centers.

New Homes:

County building inspector to require installation of PRC 4290 compliant address signs prior to issuing final use permit. These signs are already required by County Code, but enforcement is needed. No additional cost to the County.

Benefit: Homeowners have no easy access to a source for PRC 4290-compliant signage. They have to do research to find a place to buy them. Then they have to be willing to pay \$35 per sign and install it once they receive it. This project would remove all of the above obstacles, and thereby facilitate emergency responders in locating addresses quickly.

The longer the response time, the greater the potential damage:

- Structure fires attacked within 10 minutes of ignition have the greatest possibility of rapid extinguishment, and thus a decrease in potential life and property loss as well as reducing the likelihood that a house fire will spread to the wildland.
- Vegetation fire ignitions must be attacked quickly or they can rapidly become quite large, depending on the amount and condition of the vegetation, the relative humidity, and wind.
- Without medical intervention, certain death can occur in persons with heart attack, severe bleeding, and respiratory ailments in as little as four to six minutes

Potential Funding: Possible funding sources are National Fire Plan or Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA “HR 2389 Timber Tax”) payments to Placer County.

Schedule: Applications for HR 2389 Title III Funds are due to the Placer County Executive’s Office in August of each year.

Applications for National Fire Plan Funds can be submitted to the Clearinghouse at any time; however, Federal funding cycles determine when projects will actually be considered for funding. Usually late Fall is the time for submitting concept papers for consideration in the next year’s funding cycle. See http://grants.firesafecouncil.org/resource_center.cfm for more details on the California Fire Alliance Grants Clearinghouse and <http://www.cafirealliance.org/downloads/resourceguide.pdf> for the California Fire Alliance Resource Guide.

Stakeholder Projects (cont)

Project #8: MODIFY COUNTY CODE (UBC) TO REQUIRE CLASS A ROOFING ASSEMBLY ON A COUNTYWIDE BASIS.

Issue/Background: Equally important for effective wildfire mitigation in Placer County, is the type of materials used in the building construction. Currently the UBC Code as adopted by Placer County requires a Class A Roofing Assembly be used in new roof construction or when more than 20 percent of the existing roof is replaced. This is limited to the central and eastern portion of the County. The Code should be modified to be implemented on a countywide basis. As currently written, the code only arbitrarily applies to certain areas with no distinction between fuel loads in these areas. Stricter application of Fire Codes can reduce future risk from fires.

Other Alternatives: Expand the existing boundary for enforcement of Class A Roofing Assembly to the West including all areas of the County that lies East of the line that is created by Freeway 80 at the intersection with the Southern boundary of Placer County to Highway 65 North at the Northern boundary of Placer County.

Responsible Office: Western Placer County Fire Chiefs Association; Placer County Building Department

Priority (H, M, L): Medium

Cost Estimate: Existing budgets and staff time

Benefit: Life Safety; Reduce property losses. More stringent fire codes will mitigate the effects of future fire events.

Potential Funding: None Necessary

Schedule: Initiate within one year

Stakeholder Projects (cont)

Project #9: DEVELOP THE FOLLOWING GIS LAYERS FOR EMERGENCY SERVICES WITHIN PLACER COUNTY: FIRE IGNITIONS LAYER, CRITICAL FACILITIES LAYER, AND FIRE HYDRANTS/WATER SOURCES LAYER

Issue/Background: It is misleading to only consider past large acreage fires when evaluating fire risk, because any ignition can lead to a wildfire with major losses, even if the acreage is small (witness the 2000 Heather Fire, which was only 10 acres but resulted in \$305,000 in damages because a house was lost.)

Over 90 percent of wildfires are human-caused, and therefore suitable for mitigation activities.

Readily accessible information is needed in order to know where to focus efforts to reduce ignitions. CDF identifies over ten causes of fires. While the latitudes & longitudes and causes are available in Excel files for each year, this format is not easy to use.

Mapping ignitions by cause for a 5 or 10 year period would give fast visual access to determine where to focus efforts to reduce ignitions and what type(s) of ignition to target. The base map for this would be the roads, cities, and parcels map for the County. The map could be posted to the County's web site for easy access.

While Placer County has some mapped data on critical facilities, the data is incomplete and was not available for analysis during this project. The County's ability to assess risk at all facilities is important. Critical facility risk and vulnerability assessment can be accomplished manually, but it is extremely time consuming and subject to error. Mapped facilities compared against mapped hazard areas will provide the greatest ability to assess risks and vulnerabilities for mitigation planning.

Placer County should have the ability to assess the status of critical facilities at the time of an incident. This assessment is currently accomplished by taking reports from selected facilities as facilities report in. If an agency or employees at a facility do not report then the data is not available and critical facilities may be missed or may be assumed to be intact. Mapped data would improve this process by allowing the Emergency Operations center to compare a mapped hazard against mapped facilities allowing for a more precise query of affected facilities. Mapped data will significantly improve the direction of damage assessment teams as an example.

Placer County does not currently have a single map with all fire hydrants and water sources. All of the County's fire agencies routinely provide mutual aid into each other's jurisdiction. Mapped fire hydrants and water sources will reduce the time that it takes an engine company to find an adequate water source in the event of a fire. This effort is particularly important in the mountain areas of Placer County, where deep snows bury hydrants every year, causing the affected fire districts to have to dig them out in selected communities either at the time of an emergency or after a heavy snow.

Other Alternatives: Continue to estimate fire mitigation measures based on memory and un-mapped data. Continue to estimate critical facilities risk and vulnerability based on un-mapped data. Continue to use manually mapped fire hydrant data that is seldom shared with agencies who are providing mutual aid to a sister agency.

Responsible Office: Placer County Fire Chiefs Association / Lake Tahoe Regional Fire Chiefs Association

Priority (H, M, L): Medium

Cost Estimate:	Fire Ignitions Layer	\$ 6,000
	Critical Facilities Layer	\$12,000
	Fire Hydrant/Water Sources Layer	<u>\$50,000</u>
	TOTAL	\$68,000

Benefit: The development of GIS based mapped data will significantly improve the quality of the County's risk and vulnerability assessments. Mapped data will improve planning accuracy, will improve precision in operations and will improve response timeliness. It is not possible to quantify cost savings in terms of dollars. It is clear, however, that precisely mapped data will significantly improve our efficiency in future mitigation planning projects and will afford first responders and support staff with critical operational data that is essential to their response functions.

Potential Funding: TBD

Schedule: Completion by no later than the next update of the Placer County Multi-Hazard Mitigation Plan, due in 2009.

Stakeholder Projects (cont)

**Project #10: DEVELOP AND FUND AN ENFORCEABLE WEED ABATEMENT
ORDINANCE**

Issue/Background: Similar to the defensible space issue, weed abatement is an important factor in both reducing ignitions and the potential for fire to spread. An effective, countywide ordinance would further the County's fuel management objectives and would mitigate the risk of wildfires in the County. To be effective, the weed abatement code will need to have language ensuring accountability as well as a strong enforcement component.

Responsible Office: Fire Departments in conjunction with Placer County's Public Works

Priority (H, M, L): Medium

Cost Estimate: Code Development: Existing budget and staff

Cost Benefit: Life Safety; reduce property losses

Potential Funding: TBD

Schedule: Within one year

Stakeholder Projects (cont)

Project #11: ADD AN EXIT FROM EASTBOUND INTERSTATE 80 ONTO CAPE HORN ROAD FOR USE BY EMERGENCY VEHICLES ONLY

Issue/Background: When Caltrans closed the Magra exit from Eastbound Interstate 80 a side effect was to increase the response time from Colfax to Cape Horn Road.

Emergency responders to the Cape Horn area primarily come from the CDF station in Colfax, Colfax City Fire, and the AMR station in Colfax. The main staging area for firefighting resources on the 2004 Stevens Fire, which threatened Cape Horn, was in Colfax.

With the closure of the Eastbound I-80 Magra Road exit, the minimum response time to Cape Horn from Colfax is 16 minutes via Norton Grade.

Infrastructure resources at risk in the Cape Horn area include: Interstate 80 and its link to nationwide commerce, Union Pacific Railroad, PG&E power lines, PCWA Boardman Canal, Kinder-Morgan high pressure gas transmission line, USFS Wild and Scenic River along the North Fork of the American River, tourism and recreation, and the American River Watershed and its water supply to other areas of California. A wildfire in the Cape Horn area would also threaten the City of Colfax and homes along Norton Grade Road.

The minimum response time could be reduced to under 10 minutes if an emergency exit at Cape Horn was available. Response time is critical because:

- Structure fires attacked within 10 minutes of ignition have the greatest chance of rapid extinguishment, and thus a decrease in potential life and property loss as well as reducing the chances that a house fire will spread to the wildland. Also, without medical intervention, certain death can occur in persons with heart attack, severe bleeding, and respiratory ailments in as little as four to six minutes.
- Similar statistics hold for rapid extinguishment of wildland fires.
- Norton Grade is a narrow road, with tight turns, and oncoming traffic. Additionally, Norton Grade can become congested with traffic if evacuations are called for.

Wildfire History:

- 1975 Sawmill fire in Cape Horn
- 1977 Another fire occurred in the same area as the Sawmill Fire
- 2001 Ponderosa Fire – came within less than ½ mile of Cape Horn
- 2004 Stevens Fire – burned 934 acres in the American River Canyon bordering Cape Horn; destroyed 2 residences and 2 outbuildings; high winds would have resulted in much higher losses

Other Alternatives: Plan for, build and staff a fire station at or near the Magra exit. This alternative, while suitable, would cost Placer County over \$3,000,000 initially and another \$800,000 yearly for the life of the station.

Responsible Office: California Department of Forestry and Fire Protection Nevada – Yuba – Placer Unit in conjunction with CalTrans

Priority (H, M, L): Medium

Cost Estimate: In 2004 dollars the off ramp from I-80 is estimated to cost \$5M according to the Placer County 2022 Regional Transportation Plan. Many factors could impact the final cost, such as rising construction costs, any necessity of purchasing property for right-of-way, and perhaps having to realign Cape Horn Road.

Benefit: A structure fire in Cape Horn could readily set the entire area ablaze, or a wildfire from the canyon could enter the area, destroying critical infrastructure that supports the entire County as well as interrupting interstate commerce and travel, not to mention the threatening the lives and property of area residents. The faster the response time for emergency responders, the less chance there is of losing these important resources to wildfire.

It is difficult to put a precise value on the various infrastructure and other resources at risk in the Cape Horn area, but looking just at the approximately 200 homes in the area, the values at risk are \$80,000,000 (using a median value of \$400,000 per home). The cost of the exit is a very small percentage of the total resources at risk.

Potential Funding: Potential sources of funding are: Federal Pre-Disaster Mitigation Grants or SHOPP funds

Schedule: The exit is already included in the Placer County 2022 Regional Transportation Plan.

It would be built during or after the planned Caltrans project to add a truck lane to the Eastbound “Three Mile” (AKA “Colfax Narrows”) area, which is several years in the future. There is no point in doing it sooner, because it would likely have to be redone after the truck lane project.

Engineering specifications will have to be developed (and approved by Caltrans), and funding acquired.

15 NEVADA COUNTY FIRE MITIGATION FRAMEWORK

Background

With its long hot summers, steep terrain, significant accumulations of wildland fire fuels, and significant residential development with lagging infrastructure, Nevada County represents the ideal environment for large, damaging wildfires. Over the years, much has been done to address the problem; from conditioning projects with fire protection measures, to adopting new ordinances in 1992, and most recently the coming together of a wide range of stakeholders to create the Fire Safe Council of Nevada County. Unfortunately, to this point much of the effort towards fire safety has been in response to specific issues or mandates and has not addressed the entire complex problem. The issues of, risk reduction, suppression capability, circulation, public desires, fuels management, affordable housing, evacuation planning, and fire prevention funding all need to be considered as the County addresses the wildland fire problem. A number of similar programs have been developed elsewhere; however, none of them have addressed all of these issues. This document could become a blueprint for other counties to follow. (Actual Plan in [Appendix 9](#))

Proposal

This request proposes that an inclusive effort be put into place to prepare a comprehensive Wildland Fire Mitigation Framework for Nevada County. Currently, within the various stakeholders i.e. fire service, law enforcement, development community, planners, and community groups, there is a wealth of knowledge and high level of awareness that can be captured and utilized to develop a framework for the County. This framework can be used to provide fire hazard mitigation measures; however, currently none of these groups are prepared to compile all of the knowledge, data, or information into a working document. This proposal would provide funds for a field professional to create the framework that would define the process for the County to develop fire hazard mitigation measures relative to the wildland fire problem, the impacts of current and future development, the need for review of existing regulations for adequacy and appropriateness, and improved circulation routes to provide for safe emergency access and evacuation, through the expertise of the local knowledge base. The field professional will be responsible for arranging, facilitating, and recording meetings to gather the necessary information from the local experts and compiling that information into the aforementioned framework.

Event 1

Nevada County Board of Supervisors to appoint a Fire Plan Committee. Task completed September 2004. (CDF Unit Chief – Tony Clarabut, USFS Forest Fuels Management Specialist – Gary Fildes, Nevada County Consolidated Fire Chief – Tim Fike, Nevada County OES – Rich Reader, and Fire Safe Council of Nevada County Representative – Jeff Dunning)

(This portion has been completed)

Event 2

Hire a consultant to arrange, facilitate, and record meetings to gather the necessary information from the local experts and compile that information into the framework.
(This portion has been completed)

Event 3

Hold a series of committee meetings to develop the goals, objectives, and recommendations to present to the Board of Supervisors.
(This portion has been completed)

Event 4

Hold a series of public meetings to develop consensus across the various interests in the County. This will allow the committee to present the Board with a document that should be met with a minimum amount of resistance from the variety of special interest groups present in the County.
(This portion has been completed)

Event 5

Present the document to the Board of Supervisors for adoption.
(This portion has been completed and the plan is being reviewed and considered)

Event 6

Implementation of the Nevada County Fire Plan.

1. Success Measurements

The success of this proposal will be determined when the County decides whether to adopt the framework into the planning process. It has the potential to affect each and every citizen of Nevada County either directly through wildland fire mitigations or indirectly through high governmental costs and citizen losses due to another costly and damaging fire such as the Forty-Niner fire. A number of similar programs have been developed elsewhere; however, none of them have addressed all of these issues or developed a “road map” to help the community plan for the future. This document could become a blueprint for other counties to follow.

There are however, some issues that currently surround the plan that have delayed its adoption by the Nevada Co. Board of Supervisors. These include (but are not limited to) an upcoming Environmental Impact Report to assure the document is CEQA compliant. It is anticipated that these concerns will be addressed with ultimate adoption of the Plan.

Potential Stakeholders to participate in developing the final document

- Nevada County
- FireSafe Council of Nevada County (FSCNC)
- Nevada County Board of Realtors
- California Association of Property Owners
- Sierra Club

- Residents of Nevada County
- Nevada County Resource Conservation District (NCRCD)
- Natural Resources Conservation Service (NRCS)

Estimated Cost of Proposed Project

Total = \$20,500

16. STAFFING OF THE NEVADA COUNTY FIRE MARSHAL'S OFFICE

Nevada County is in the process of attacking the wildland fire problem in a new and innovative manner. Whereas the Defensible Space ordinances have been on the book for several years, their enforcement and effectiveness is somewhat haphazard due to the lack of resources implement the program. To address this Nevada County Board of Supervisors has assigned a committee to make recommendations to the Board in order to reduce the potential of costly and damaging fires in Nevada County. This committee has identified the fuels problem as the main issue and is looking at addressing the fuels problem at a "Defensible Communities" level instead of the standard "Defensible Space".

Nevada County Fire Marshal's Office Pre-Fire Project

Establish positions within the Nevada County Fire Marshal's Office to implement the recommendations identified in the Fire Plan Framework. This proposal will result in a self sustaining program that will allow the County to establish and enforce a hazardous fuels reduction ordinance on improved and the unimproved properties adjacent to or surrounding improved properties within Nevada County. There is currently a chipping program available to residents to encourage defensible space. The chipping program currently serves 1200 - 1500 residences annually (*1262 residences in 2004*). This project will allow us to expand the fuels reduction program to include additional residences and unimproved properties in the area of improved properties, thus extending the defensible space concept beyond structures and into the landscape. We estimate that this program will result in approximately 2000 properties being treated annually, which will provide protection to more than 500 additional homes. The program will provide inspectors to identify properties with a fuels hazard. The inspectors will then provide the landowner with educational information to encourage fuels reduction work by the owner. In the event the landowner chooses not to comply with the fuels reduction requirements, the property will be treated by a local contractor and the cost will be added to the owner's property taxes. Through this system, we anticipate creating a landscape that will result in less severe fire behavior around the residential properties. There are plans to implement a fee structure at the plan approval stage to generate future funds to continue this program once the grant expires. CDF and the Nevada County Fire Marshal's Office want to develop a program that can become a model for other communities. Instead of relying on the individual defensible space around structures we are looking at creating a defensible landscape through an integrated Fire Safe program. This program will build off of the work already being completed by entities such as the Nevada County Department of Transportation, Nevada County Fire Safe Council, and Pacific Gas & Electric.

This year, the Fire Marshal's office was staffed with one CDF Employee as an interim measure to get the project off the ground.

Details can be found in the attached Nevada County Fire Mitigation Framework in [Appendix 9](#).

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- Federal Emergency Management Agency (FEMA)
- California Office of Emergency Services (OES)
- Local Service Groups
- Nevada County Resource Conservation District
- Natural Resources Conservation Service
- Northern Sierra Air Quality District
- Nevada County Fire Chiefs

Estimated Cost of Proposed Project

Total = \$3,000,000

17 ALTA SIERRA PRE-FIRE PROJECT

The Alta Sierra area was targeted for a pre-fire project due to its high rate of ignitions and its close location to areas to the north that have high rankings for assets, fuel hazard, and the lower rated level of service. In addition, this area has a past history of enthusiastic support of fire hazard reduction programs by the homeowners, Northern Sierra Air Quality District, and Nevada County Consolidated Fire Protection District (NCCFD). The NCCFD is currently the lead on continuing this project. They have instituted an ordinance that requires the owners of vacant lots to remove the hazardous fuels prior to fire season. If the landowner does not comply the NCCFD contracts to have the work completed and bills the landowner via their property taxes. The personnel from this department have conducted 285 inspections, which, resulted in fuel treatments on over 250 properties totaling more than 350 acres within their fire district.

Alta Sierra Pre-fire Project

Event 1: An inspection program targeting the vacant properties within the local fire district has been ongoing since 1997. They have developed a schedule that inspects each vacant property at least once every five years. This program holds the individual landowner responsible for reducing the hazardous fuels on their own lands.

Event 2: An inspection program of the Alta Sierra area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Nevada County Planning Department estimates that there are approximately 2,900 housing units in this area. Inspection of these housing units will serve two purposes:

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2000, that only about 5% of the residences require a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 3: Second LE 38 inspection of approximately 145 housing units.

Event 4: Third LE 38 inspection of approximately 29 housing units.

*Includes General Services vehicle rental for inspectors.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for

the homeowner is to notify the residents of the Western Nevada County chipping program at the time of the inspections. The homeowner can then clear vegetation around their residence, bring it to the curbside, and notify the FireSafe Council of Nevada County (NCFSC) once completed. The NCFSC will then dispatch a chipping crew to the area once sufficient material has been piled to keep the chipper busy for a minimum of four hours. The crew will then chip the vegetation and deposit the material back onto the property.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

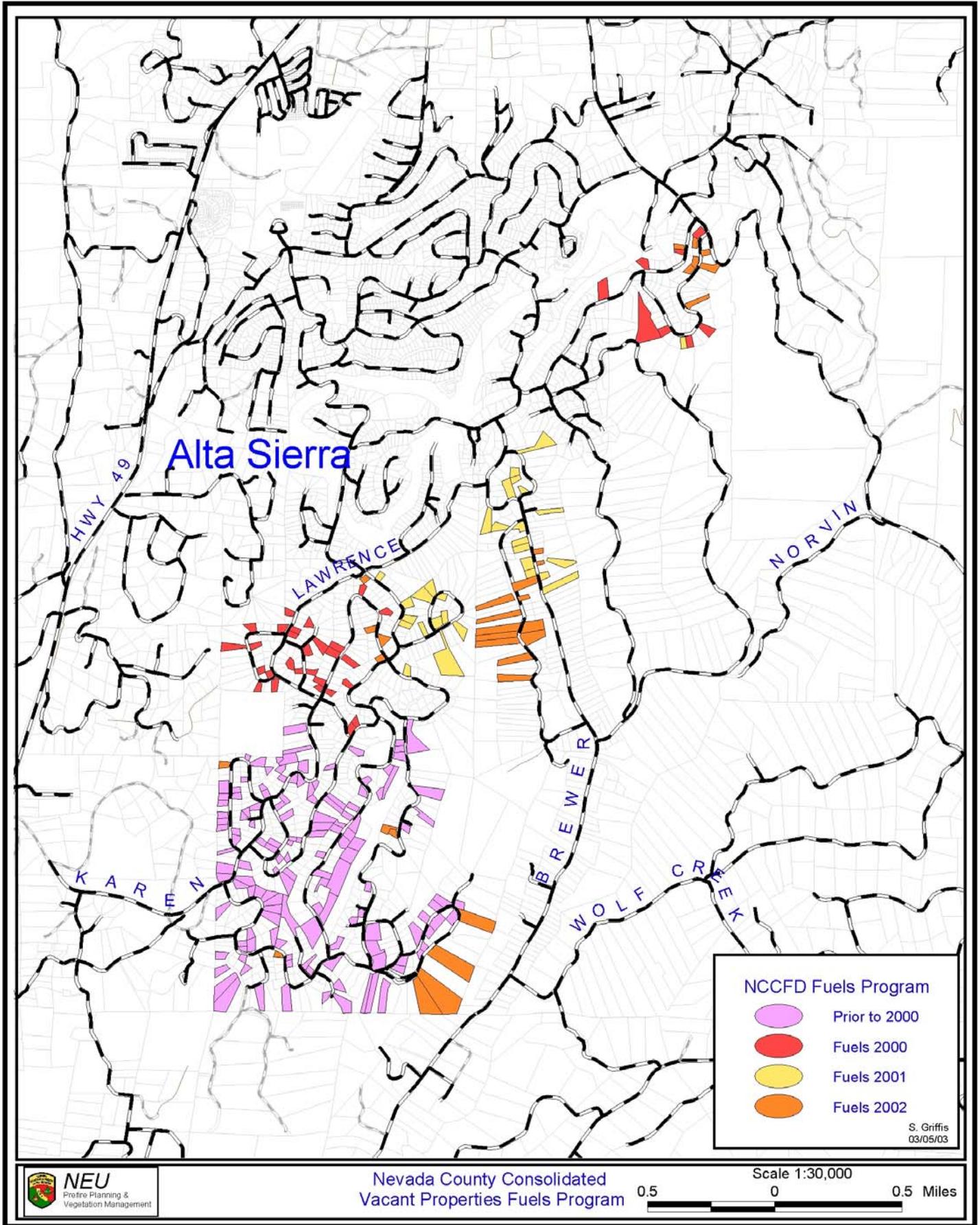
- Nevada County
- Local Service Groups
- Nevada County Resource Conservation District
- Natural Resources Conservation Service
- Northern Sierra Air Quality District
- Nevada County Consolidated Fire Protection District
- Alta Sierra Subdivision Homeowners Association

Estimated Cost of Proposed Project

Total = \$125,652.50

The chipping portion of this program is incorporated in the amounts listed in the totals for the Unit-Wide Chipping described above. The cost of inspecting the vacant lands is being born by the Nevada County Consolidated Fire Department. The landowners fund clearing the properties.

In 2004, approximately 195 total acres on 161 parcels were treated within Nevada County between Cascade shores area and the Alta Sierra project.



18 COLUMBIA HILL SHADED FUEL BREAK PROJECT

With California's wildland-urban interface areas quickly growing, as well as the population of Nevada County, the objective of the Columbia Hill Shaded Fuel Break Project is to create a shaded fuel break in the Columbia Hill area of Nevada County. Strategically, the project will tie in with the earlier established Montezuma Fuel Break to give firefighters a place to make an efficient stand against a wildfire on the San Juan Ridge.

In the 6 mile fuel break area there are approximately 85 separate landowners, 47 of whom chose to participate in the project. Nearly all of these homeowners have insufficient defensible space and combining this with poorly maintained roadside vegetation, the Fire Safe Council of Nevada County was able to work with the California Department of Forestry and Fire Protection to identify the prior mentioned aspects of the area as a recipe for disaster.

The Columbia Hill area is predominately heavy timbered land with thick manzanita understory fuels.

Actions involved in the proposed project

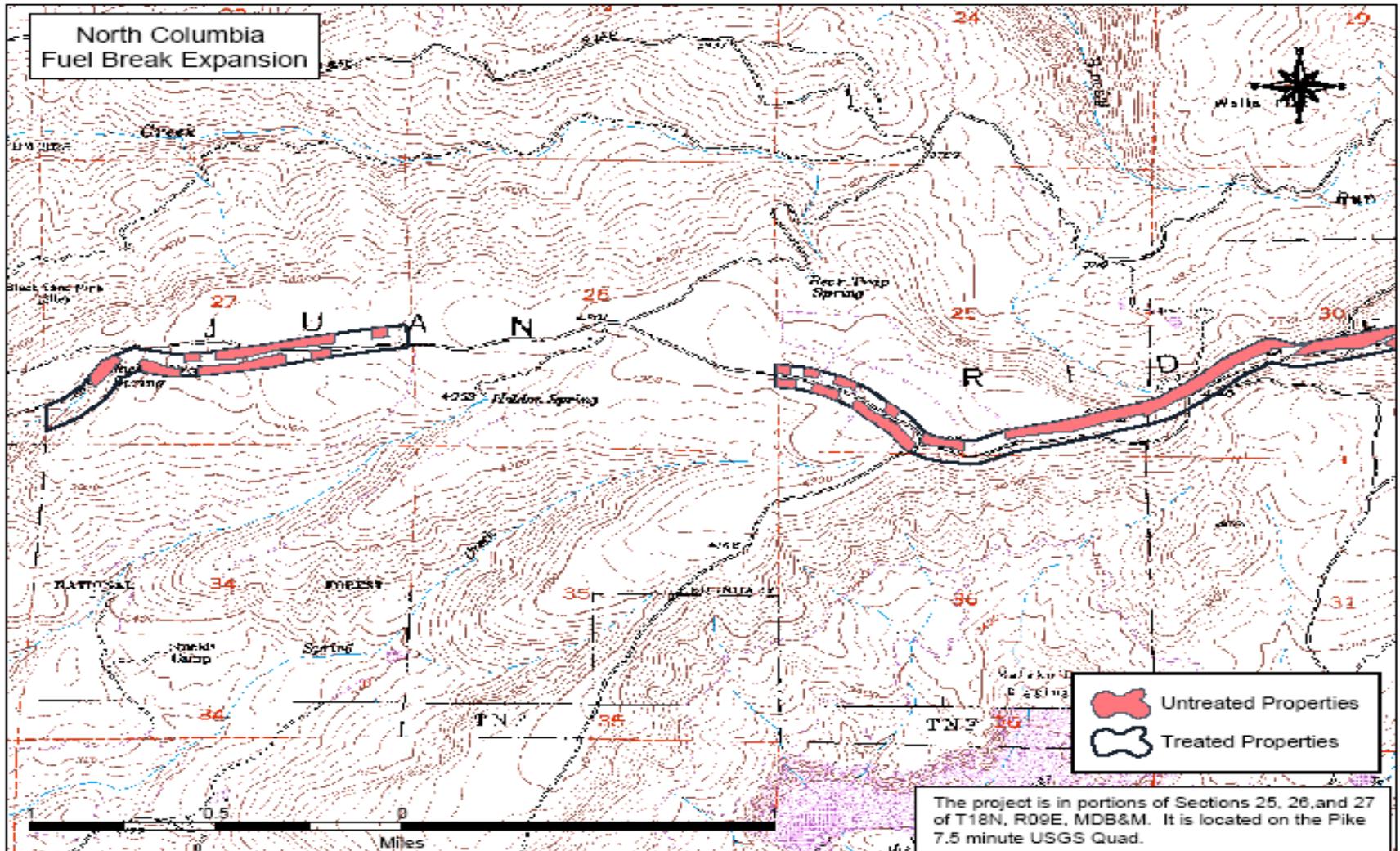
The Columbia Hill Fuel Break Project was designed to tie in with previously established fuels reduction efforts, such as the Montezuma Fuel Break. Specifications written into the project called for the creation of a 400' wide shaded fuel break to run 200' along both sides of Tyler Foote and Cruzon Grade Roads in the project area. There has been strong support and great interest in this project from the involved community.

Event 1: Fuel Break Construction. A community meeting was held in July of 2003 to introduce this project to the community. After a number of other mailings to landowners, the FSCNC began meeting with landowners who chose to participate in the project to mark property boundaries as well as determine what specific work they would like accomplished. Under the grant funding the project the FSCNC was also able to hire a contracted forester who met with each landowner who wished to have timber removed from their land to mark timber and confirm their wishes. Once this was accomplished, a Timber Harvest Plan was submitted to the California Department of Forestry and Fire Protection and the hand clearing and timber work was put out to bid. Pending approval of the Timber Harvest Plan, the FSCNC will select a licensed timber operator to contract with to complete the work at which time a FSCNC representative will be on site at all times to ensure correct operations are taking place on individually owned lands. The end result will be a 400' wide fuel break throughout much of the Columbia Hill area.

With the exception of one small area that has only been cleared to 100' along the roadsides, **this portion of the project has been completed.** The additional portion to be cleared will be funded by a newly acquired Proposition 40 Grant.

Event 2: Fuel Break Maintenance. With the exception of one parcel, all participating landowners have agreed to donate revenue from their harvested timber back to the Fire Safe Council of Nevada County. These funds will be placed in a trust fund and utilized to maintain the fuel break over the next five to ten years.

Nevada-Yuba-Placer
Fire Management Plan



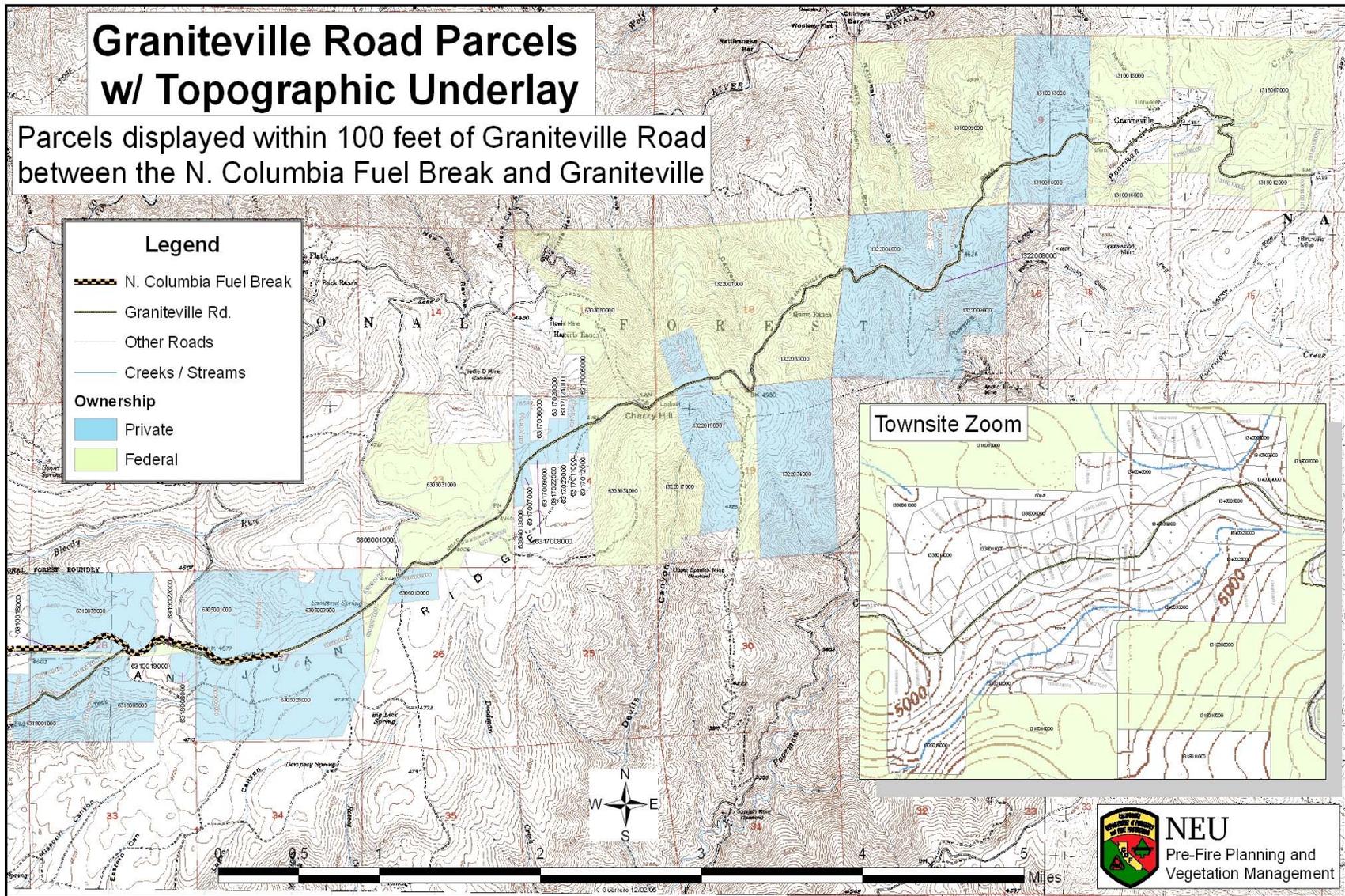
19 GRANITEVILLE TOWNSITE PROJECT

As an addendum to the existing Columbia Hill Fuels Reduction Project, the Fire Safe Council of Nevada County has identified two additional areas for targeted fuels modification / reduction. One of these areas is located in the area immediately surrounding the Graniteville townsite. Graniteville is predominantly heavy timberlands with manzanita under story fuels with approximately 20 year-round residents and a number of seasonal vacation absentee property owners. The community of Graniteville has been very active in fuels reduction activities and wild fire preparedness both independently and in conjunction with the Fire Safe Council of Nevada County.

Event 1: Establish Funding sources – The Fire Safe Council of Nevada County has secured funding for this project from the US Forest Service.

Event 2: Fire Safe Council of Nevada County staff will be working with USFS and CDF staff to complete necessary environmental compliance for the project. Environmental compliance for this project will be completed by July 2006.

Event 3: Treatment of approximately 120 acres of non-Federal lands within and immediately adjacent to the Graniteville Townsite. This step is planned for Summer 2006 on all private lands surrounding the townsite. Project due to be completed prior to the first snowfall of winter.



20 SNOWTENT SHADED FUEL BREAK PROJECT

The second area identified by the Fire Safe Council of Nevada County as an addendum to the Columbia Hill project is the conversion of an additional 4 miles of roadway to shaded fuel break along North Bloomfield – Graniteville Road, tying the Columbia Hill project into the Graniteville Townsite Fuels Reduction. This stretch will complete a part of the North San Juan Coordinated Resources Management Plan with a shaded fuel break running from Bridgeport on the South Fork of the Yuba River to the town of Graniteville. The stretch of planned treatment area under the project is heavy timberlands with thick manzanita and suppressed conifer understory fuels.

Event 1: Establish Funding Sources: The Fire Safe Council of Nevada County has secured funding for this project from the US Forest Service.

Event 2: Environmental Compliance: Fire Safe Council of Nevada County staff will be working with a privately contracted forester and CDF staff to complete environmental compliance for the project, which with the possible removal of timber, may involve the completion of an Emergency Fire Hazard Exemption. Environmental work began in January of 2006 and will be completed by July of 2006.

Event 3: Treatment of non-Federal lands, approximately 4 miles, extending from Snowtent Springs to the town of Graniteville. This step is planned for the Summer of 2006, prior to winter snowfall.

21 SENIOR AND DISABLED ASSISTANCE PROGRAM

The Fire Safe Council of Nevada County has identified a need to continue the Senior and Disabled Assistance Program to provide defensible space clearing for elderly and disabled Nevada County residents unable to physically and financially clear on their own. The program currently utilizes workers from the Nevada County Probation Department's Work Release Program with supervision and direction from FSCNC staff to complete the requested work and bring participants into compliance with current defensible space laws.

Event 1: Secure Funding for Program Continuation – This program is currently funded by a grant from the Allstate Foundation, however the Fire Safe Council of Nevada County is applying for additional grants to expand program operations.

Event 2: Senior Contacts and Clearing – The Fire Safe Council of Nevada County will meet on-site with Seniors to determine what work they would like completed and consequently schedule the clearing work with the Probation Department. This task will be ongoing from the current time period until funding is no longer available.

22 DEFENSIBLE SPACE DROP OFF PROGRAMS

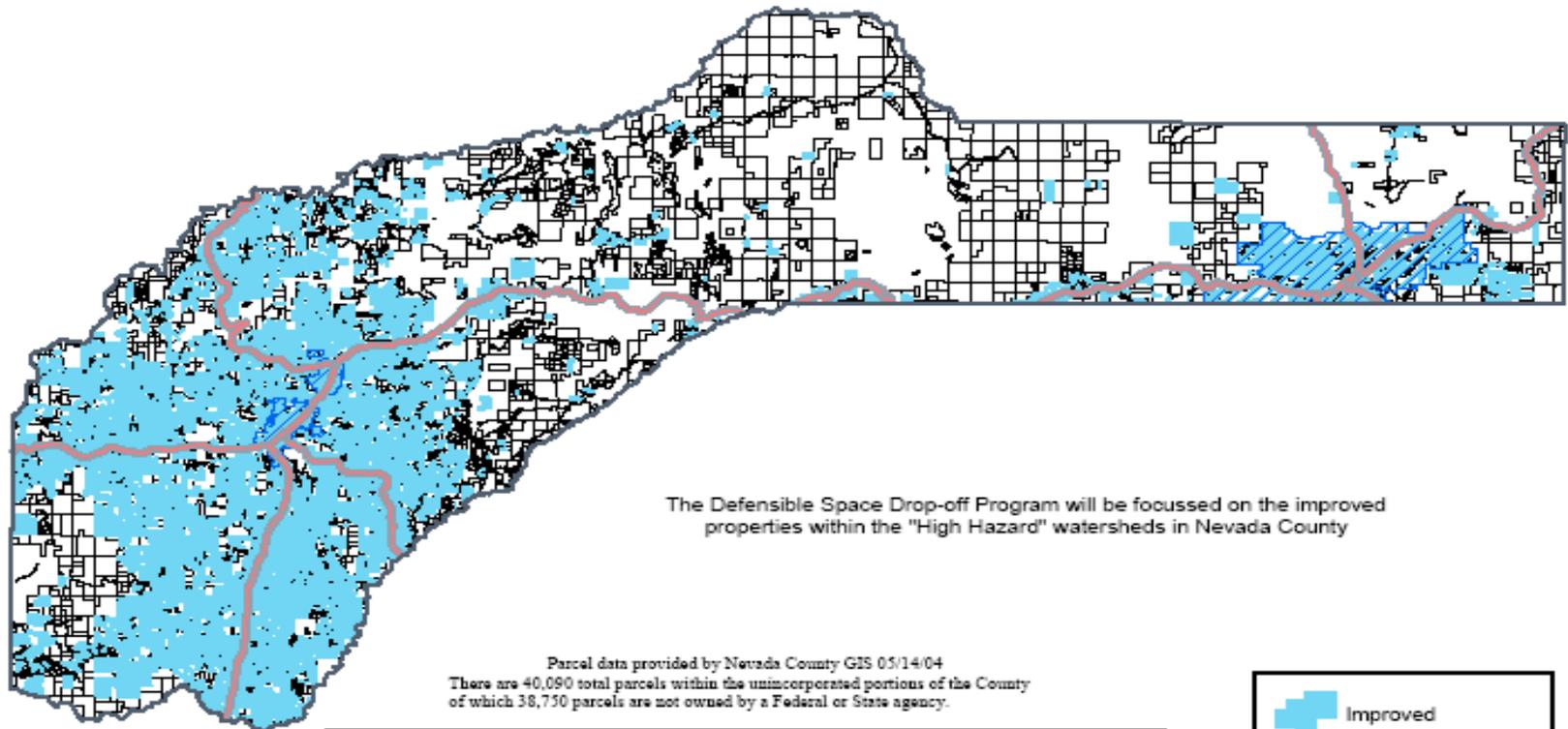
In an effort to encourage residents in outlying portions of the County and the East side of the County to clear defensible space, the FSCNC provides drop-offs days and locations throughout the County where residents are allowed to drop off vegetative material, including pine needles and other materials not able to be processed through the chipping program, for a weekend time frame. Materials are then ground and transported to cogeneration facilities or distributed as mulch. This program has proven more effective than chipping in the Eastern portion of Nevada County.

Event 1: Secure Funding for Program Continuation – This program is currently funded through grants of Proposition 40 Funds.

Event 2: Schedule Drop-offs: Multiple drop-offs have been scheduled throughout the County in 2006 in Condon Park, Owl Creek, Glenshire, Plavada, Soda Springs, Hobart Mills and Tahoe Donner.

Event 3: Conduct Drop-Offs: The drop-offs will be open for a full month with material being processed within seven days of the close of each drop-off. Material will be trucked to a cogeneration facility or left onsite.

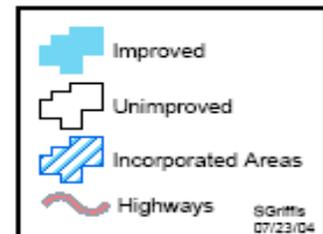
Nevada County
Defensible Space
Drop-off Program



The Defensible Space Drop-off Program will be focussed on the improved properties within the "High Hazard" watersheds in Nevada County

Parcel data provided by Nevada County GIS 05/14/04
There are 40,090 total parcels within the unincorporated portions of the County of which 38,750 parcels are not owned by a Federal or State agency.

	Improved <= 10	Improved >10	Unimproved <=10	Unimproved >10	All <= 10 acres	All > 10 acres	Total
Parcels	24,783	2,486	5,128	3,375	32,889	5,861	38,750
Acres	55,039	73,606	25,428	224,871	78,465	298,277	376,742
% of Total	14.81	19.54	8.23	59.64	20.83	79.17	



23 RED DOG – YOU BET NEIGHBORHOOD FUELS REDUCTION PROJECT

In recent years the Red Dog – You Bet area of Nevada County has begun to grow dramatically and has seen a great increase in the number of recreational enthusiasts frequenting the area whom often leave illegal bonfires or campfires unattended. The residents of the Red Dog – You Bet area feel that their roadsides are insufficiently cleared and with such a large number of homes in the area, the neighborhood is at a high risk of disaster in the event of a wildfire.

Roadways in the area are very narrow and windy. There is a heavy accumulation of Pine saplings, Manzanita, Scotch Broom and other native vegetation along the roadways in the area, many of which are unpaved and feature overhanging fuels. Due to heavy fuels in the area and a growing population of residents and recreational enthusiasts alike, the Red Dog – You Bet neighborhood association came to the Fire Safe Council in 2003 seeking assistance with grant funding for roadside clearing to provide safer ingress and egress in the event of a wildfire.

Actions involved in the Proposed Project: The Red Dog – You Bet Neighborhood Fuels Reduction Project was developed to create a 15' clearance on both sides of private roadways in the Red Dog – You Bet area, as well as provide mileage markers on main roadways. The Bureau of Land Management also considers this area as a high priority for fuels reduction efforts. There is incredibly strong support for these types of projects from the local community.

Event 1: Roadside Clearing. A Fire Safe Council of Nevada County representative will meet with landowners in the area as well as those responsible for fire protection to determine the highest priority areas to be treated. Areas to be cleared will be clearly marked and after a Request for Proposals has been put out, the FSCNC will select a clearing contractor to complete the fuels reduction work. The end result will be safer ingress for firefighters and egress for residents during a wildfire.

-As of August 2005, fuels reduction work on the first 15 miles of identified roadway was completed. Currently the CEQA and Environmental work is being done for expansion of the project for an additional 5 miles beyond the original fifteen. This expansion is in line to be completed through a Bureau of Land Management grant through the Fire Safe Council of Nevada County by using California Conservation Corps crews.

Event 2: Roadway marking. The FSCNC plans to work with landowners and firefighters in the area to determine the most critical areas in which to place mileage markers. Many of the roadways in the area are unpaved and poorly marked, thus making it difficult for those attempting to report a fire or other emergency, to accurately report their location to dispatchers. As well, many who recreate in the area are not familiar with the geography of the area, thus creating an even greater hardship in attempting to report an emergency, durable mileage markers will help to alleviate this danger.

24 YUBA COUNTY FOOTHILLS WATER SUPPLY PROPOSAL

BACKGROUND: Due to the rural make-up of Yuba County, most of the communities do not have a centralized water system. Water for fighting fires must come from ponds, creeks, pools etc... This project would establish at least two strategically located 10,000 gallon tanks in each of the foothill fire districts.

Yuba County is a very rural county. Other than one medium sized city, Yuba County is characterized by numerous small communities embedded in the foothills of the Sierra Nevadas. Each of these communities is the epitome of a wildland urban interface area. The areas covered by this project are identified in the local CDF Unit Fire Plan as being at risk to a costly and damaging fire. Yuba County is recognized as having one of California's lowest per capita income levels. The communities do not have the resources or the funding to establish the water supply systems to adequately protect them from a spreading wildfire. However there is a strong sense of community involvement and any money spent will generate an outpouring of volunteers to see the project through. Since 1997, there have been two extended attack fires that threatened a number of these communities and destroyed several structures.

During the fall months, the local water agencies shut their systems down in part due to the lack of available water. Yuba Water Agency charged the fire agencies over \$15,000 for water used on the Pendola fire because they had to buy water back from other agencies.

PROJECT DESCRIPTION:

Event 1: Identify potential locations for water tanks. Work with the local fire districts and communities to determine locations that provide ease of access for fire fighting equipment, yet, discourage potential vandalism or misuse. The locations will need to be strategically located so firefighting equipment will be guaranteed an adequate supply of water until additional resources can arrive.

(This portion has been completed)

Event 2: Purchase and install water tanks. Based on the information gathered in **Event 1**, funding sources and the method(s) of installation will be determined. As this project has the potential to benefit a variety of districts, agencies, and private organizations, we anticipate a lot of participation and cooperation from the variety of stakeholders.

Event 3: Use fire personnel and volunteers to maintain the water tanks and the grounds they are placed on. Establish a maintenance schedule to keep the water storage tanks in a state of readiness.

The cost of this project will vary based on the number of locations available to site the water tanks, land costs, number of tanks, and tank costs. Original estimates were in the neighborhood of \$8,000 per tank, which would bring the total project cost to **\$80,000**. Yuba County has expressed some interest in assisting with project funding for this project.

As of June 1st, 2005, five tanks have been installed under the auspices of this project, one in each fire district (Strawberry Valley, Camptonville, Browns Valley, Smartville, and Oregon House). These tanks were funded through a Fire Safe Council Grant. A continued effort will be made to install a second tank in each district as funding becomes available.

25 YUBA COUNTY PUBLIC WORKS ROADSIDE CLEARING PLAN

Actions involved in the proposed project:

Roads side clearance projects that will benefit the various foothill community's fire protection and traffic safety have been identified by the cooperative efforts of CDF, USFS, and the Yuba Watershed Protection & Fire Safe Council. Through a system of prioritization and cooperation the Yuba County Department of Public Works (YCDPW) will direct their roadside clearing efforts to those roads identified as having the greatest potential for improving fire safety, evacuation, egress, and access.

Event 1: A priority list of roads will be provided to the YCDPW. They will then direct their roadside clearance crews to direct their efforts on the roads based on the established priorities. Under the current plan, it is anticipated that twelve to fifteen miles will be accomplished this coming fiscal year and there are a total of eighty-eight miles identified for treatment.

This portion of the project has been completed.

Initial funding for this program was accomplished through Proposition 204 funds through the Fire Safe Council. Now that those funds have been expended YCDPW is continuing the program in coming fiscal years with partial funding through HR 2389 Title III funds and general gas tax revenues. The continuance of the funds is uncertain so currently the planning extends for the next five years. However, if additional funds become available they will be directed to the program and the list of roads may be expanded.

Justification: This project will result in a direct reduction of the fire hazard to the homes immediately adjacent to the identified roads and will provide enhanced protection to the communities of Dobbins – Oregon House, Brownsville, Challenge, Loma Rica and many more.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Local Service Groups
- U.S. Forest Service
- Feather River Air Management District
- Yuba Watershed Protection & Fire Safe Council

Estimated project cost is **\$950,000**. As of June 1, 2004, over \$200,000 had been spent on the project, the majority of which came from Prop 204. Last year \$58,500 was contributed from HR 2389 funds and \$30,000 from gas tax revenues for a total of \$88,500. Updated totals were not available at the time of publishing of this year's plan.

The program had been utilizing California Youth Authority crews from the Washington Ridge Conservation Camp to assist with the labor involved in this project. With this winter's removal of CYA crews from Washington Ridge, this program has been placed on hold. It is anticipated that the project work can resume once the transition from CYA to CDC (Calif. Dept. of Corrections) is completed at Washington Ridge.

26 Desired Future Condition

The population growth in the project areas will set the guidelines for the respective desired future conditions. Currently, the goal is to establish buffers for a minimum of thirty feet around each structure that resemble a Fuel Model 8 with an additional buffer similar to a Fuel Model 9 for another seventy feet. This would provide an overall buffer of one hundred feet around each structure where fire behavior would be significantly reduced due to the lack of ground fuels. Currently, as few as ten percent of the homes within the project areas meet the FireSafe standards. As that number approaches 100 percent, a large fuel reduction area will be created. This will ultimately result in an overall decrease in fire behavior in these areas; thereby, improving the fire services ability to extinguish the fires in the initial attack stages.

The goal of the roadside fuel reduction areas is to improve ingress and egress for the communities and develop defensible locations to be used by fire suppression resources to suppress oncoming wildfires. Any fuel break by itself will NOT stop a wildfire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack or firing out. Air resources can use the location for fire retardant drops. (see Appendix D for an example shaded fuel break prescription.)

Action Plan

Currently all of the priority projects identified in this plan are in some stage of implementation. The Placer County Projects have received over \$600,000 funding through Proposition 204 and the National Fire Plan. There is also a chipper module working with the landowners throughout Placer County to aid in fuels reduction. Placer County funds ½ PY for a Pre-Fire Planner.

In Nevada County, the Fire Safe Council Coordinator position is now being funded by the County, the Forty-Niner Project has been awarded \$860,721.00 by the Federal Emergency Management Agency through the State Office of Emergency Services; and, a local fire district has undertaken the Alta Sierra Project. The Nevada County Consolidated Fire District (NCCFD) is currently doing inspections and enforcing the requirements of PRC 4290. Along with Nevada County and the Northern Sierra Air Quality Management District, NCCFD is providing chipper support to the residents that complete their clearance requirement. Also, CDF and the National Fire Plan have dedicated over \$150,000.00 towards fuels reduction around residences in western Nevada County. The CDF and Nevada County have a contract to provide a Pre-Fire Planner at the county level and the position is considered a great success.

Several miles of shaded fuel break work have already been completed in the Ure Mountain and Oregon Ridge Projects in Yuba County. The recent Pendola and Williams fires have spurred the interests of the residents and brought home the importance of meeting FireSafe standards.

The Unit is constantly re-evaluating our projects and developing a plan of action with the stakeholders of any potential new projects. Each of the above projects is currently being viewed on a three-year timeline as that is what the funding periods are limited to.

27. Battalion Level Prevention and Pre-fire Management Programs for the Coming Year (2006-2007)

Battalion 10 (Dry Creek Area)

Summary:

The Dry Creek Battalion serves a 41 square mile area with a population of approximately 7000 residents. The Battalion is located entirely in the LRA but has significant wild land fire potential. We will continue our high profile prevention program within the Battalion.

FIRE PREVENTION PROGRAMS

Burn Permit Administration

Issuing points for Burn Permit's will be CDF/Placer County Fire Station 100. The local pollution control district determines burn hours. Pre-inspections will be provided on a requested or as needed basis. With each permit written, a Placer County Air Pollution Control District's Residential Open Burning informational sheet will be included. A copy of the permit will be filed at Station 100.

Defensible Space

The Battalion 10 goal will be to target areas within the Battalion that have a significant wildland fire threat and inspect 100 homes using the PRC 4291 program, although all areas within the Battalion are LRA. Station 100 personnel will concentrate on the Central Ave., Vineyard Rd. PFE Rd. and Walerga Rd. South Brewer Road from West Sunset to Baseline. A five-year cycle through the significant wildland fire threat area will provide education and prevention information to the affected homeowners.

Power line Inspections

Inspection of power lines will occur during the PRC 4291 inspections. Staff will advise the battalion chief of a violation, the battalion chief will coordinate an inspection by the Units Fire Prevention Bureau.

Fire Safe Programs

The Placer County Fire Planner will continue to provide building plan fire and life safety reviews for PRC 4290 and uniform fire code regulations.

Public Education

School programs- Station 100 staff provides fire safe presentations to schools with in the battalion. Age specific fire prevention material will be handed out at each presentation.

Parades- The engine company staff will display the engine so members of the public can inspect the engine and equipment. Staff will hand out fire prevention material and discuss fire prevention issues

Business fire safety programs- Station 100 staff will provide instruction on the proper use of fire extinguishers to local businesses within the battalion.

Fire Prevention Signs- Station 100 request's 3 fire prevention signs, which will be placed in target areas during the fire season.

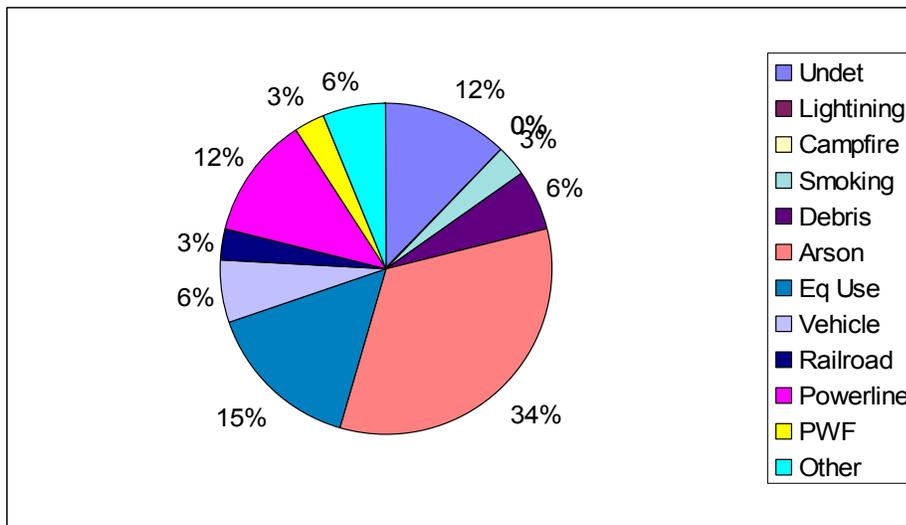
Station 100 Message board- timely messages will continue to be placed on the message board.

Community BBQ and Pan Cake Breakfast- staff will assist as needed and provide Fire Prevention material and advice.

Placer County Fair Roseville- assistance will be provided to the Fire Prevention Bureau to staff a Fire Prevention booth.

Fire Cause Reduction

The Battalion chief will seek assistance from the Fire Prevention Bureau to provide preliminary fire investigation training to assure accurate fire cause investigations.



Battalion 11

(Auburn & Foresthill Area)

Battalion 11 will work to reduce fire ignitions and reduce damage by fire occurrences by actively participating in public education programs, fuel reduction programs, and homeowner education programs. These efforts will center in the communities of Auburn, Foresthill, Newcastle, and Christian Valley. The components to meet these goals are as follows:

1. 4291 Inspection Program: (400 hrs)
Support grant funded inspectors conducting residential inspections for compliance for PRC 4291. Inspections will occur in the general Auburn and the general Newcastle and Christian Valley area. Include information on reducing equipment use and debris fire ignitions.
2. Pre-Fire Chipper Program: (200 hrs)
Support local residents through the local Fire Safe Council in maintaining residential properties free from flammable vegetation.
3. Stagecoach Road: (1 days)
Continued maintenance of the existing fire access road beneath the City of Auburn.
4. North Fork - Drivers Flat to Long Point Fuel Break: (2 days)
Extend the new fuel break along the North Fork of the American River.
5. McKeon - Ponderosa Fuel Break: (2 days)
Improve and continue to maintain existing fuel break.
6. Lower Lake Clementine River access road maintenance: (2 days)
Improve and continue to maintain deteriorating fuel break.
7. Auburn - Robie Point Fuel Break: (2 days)
Improve existing fuel break below the City of Auburn.
8. Lower Lake Clementine Ridgeline Fuel Break: (10 days)
Re-institute fuel break on the upper ridge of Lake Clementine.
9. Engine Company 4291 Inspections: (30 hours)
Conduct inspections for residential compliance for PRC 4291.
10. State Park Control Burn - Foresthill Bridge: (3 days)
Maintain fire control lines and conduct control burn, as conditions allow, below the Foresthill Bridge, prior to the 4th of July. This area constantly suffers from arson fires as burning debris and fireworks are thrown from the bridge.
11. Programs: (9 days)
 - Meadow Vista Pioneer Day Parade: Enter 1 CDF engine in the parade.
 - Fourth of July Parades - Foresthill and Auburn: Participate in both parade celebrations.
 - Auburn Air fest: Attend and assist fire prevention staff with static display during the Air Fest.
 - Gold Country Fair: Construct and staff the fair booth display.

- Fire Prevention week open house: Conduct open house tours of the CDF / Placer County Fire Facility, Auburn Headquarters.
- Fireworks Patrols: With use of engines, paid staff, and VIP's conduct high visibility neighborhood patrols.

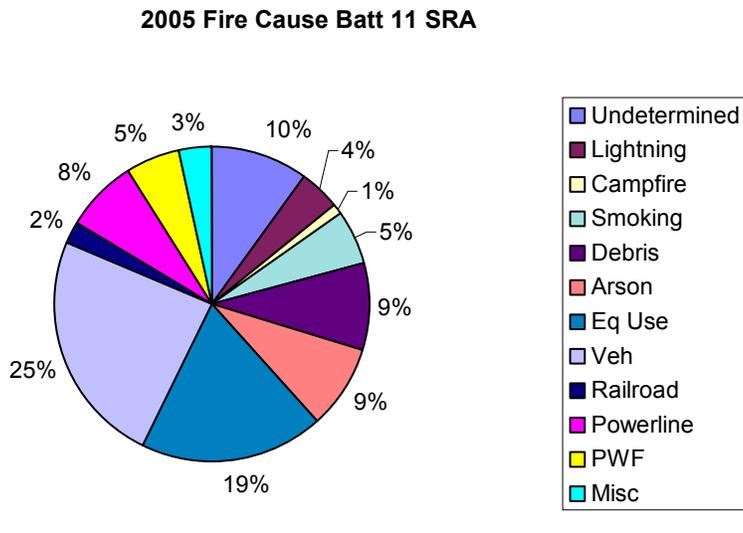
12. Burn Permit Administration: (Various)
Headquarter staff, station staff, and VIP staff will administer dooryard burn permits to the public.

13. Initiate a VMP project extending the federal Auburn fuelbreak

CONCLUSION:

The Auburn-Foresthill Battalion continues to maintain excellent working relationships with various community fire agencies, public service groups and Fire Safe Councils. The cooperative effort of all entities is maximized in efficiently educating the public on how to protect themselves and their property from the ravages of fire. The continued relationship with fire agencies assures a rapid and efficient response to fire threats in the communities.

2005 Wildland Fires : 102



Battalion 12 – No Update provided for 2006 (2005 included for reference) (Nevada City & Higgins Area)

Battalion Summary : Battalion 12 covers approximately 185,000 acres of Nevada County. It is occupied by an estimated 71,000 people living in roughly 24,000 residential structures. Fuel types range from oak woodland to timber, and the topography ranges from rolling hills to mountains. The battalion has a significant urban interface problem.

Because of the significant urban intermix problem, much of the fire prevention effort has been spent on reducing the potential for large damaging fires. This has been accomplished through the efforts of a seasonal fire prevention inspector who last year conducted PRC 4291 inspections on 2,772 residents within the battalion, along with a schedule 'A' Fire Protection Planner whose focus has been placed on land use review, concentrating on fuel modification, adequate access and egress and water storage for fire protection. CDF has also been instrumental in the newly developed Nevada County Fire Plan addressing the need for hazardous fuel Modification, CDF is also involved with the Nevada County Fire Safe Council that oversees the Nevada County chipping program.

Battalion Goals: Reduce the number of fire starts through public education and to reduce the potential of a large fire through vegetation management.

1. Public Education:

Public education continues to be a priority within Battalion 12 to reduce the number of fire starts. The action plan for public contact and education is as follows:

A. Burn Permit Administration CDF-500 hrs. VIP-1200 hrs. FPD150 hrs

Twenty-Five of the total fire incidents in the battalion were either escape debris or illegal fires resulting in 19% of the total incidents. Indicating there is a better need to educate the public on proper debris burning methods.

CDF LE-62s (Dooryard Burn Permits) will be issued by cooperators consistent with past practice. Issuing points will be CDF Stations 20 and 21, Nevada County Consolidated FPD, Peardale/Chicago Park FPD Stations , Higgins FPD Stations and Ophir Hill FPD. Only those personnel trained and authorized by the CDF Battalion Chief will be allowed to issue the LE-62s. The emphasis will be a placed on the terms of the permit, the responsibilities of the permit holder, and alternative methods of vegetation disposal.

LE-5's and Project permits on SRA will be issued after an inspection by an authorized employee of CDF.

B. Public Education Events

CDF-300 hrs. NCFSC-600 hrs. Local Govt.-200 hrs. VIP-100 hrs

The CDF staff in the battalion is involved in numerous public education programs. Many of the programs are a cooperative effort with other agencies. The public education program includes school programs, career days/health fairs, youth group tours, home and garden shows, homeowner/community groups, fire safe work shops, fire prevention week and the Nevada County Fair.

On going events through out the year:

- Fire Safe Council & Community Groups – A representative from CDF will attend as needed, an engine company may be needed for demonstration.
- School Programs – CDF & Fire District personnel, VIP's.
- Career Days (Bear River & Nevada Union High Schools) – CDF & Fire District personnel.
- Home & Garden Shows – CDF representative will attend and assist the Fire Safe Council as needed.
- Fire Safe Work Shops / Fire Prevention Week – CDF & Fire District personnel with engine for display and demonstration.
- Lake Vera Camp Grounds – CDF & Nevada County Consolidated personnel will meet with each camp administrator prior to the beginning of their season (usually May).
- Air Fest- CDF & Fire District with engines for parade and display (July)
- Nevada County Fair – CDF personnel & VIP's will staff the booth daily. CDF will have engines and crews for display & demonstration (August)
- Higgins FPD Open House – CDF & District personnel and equipment (May)Vegetation Management / Defensible Space

C. Fire Prevention/News Releases:

CDF will continue to utilize a local radio station, the local news paper, as well as the LOP & Alta Sierra monthly publications and the Nevada County Fire Safe Council's newsletter to educate the public on fire safe issues. The focus over the past years has been the safe use of mowers. There where 20 fire starts from equipment use last year, only four (4) where caused by mowers, a reduction from the past, so the message is working. In addition CDF contacted rental yards with prevention material and to ensure compliance with spark arrestor laws.

D. PRC 4291 inspection:

The inspections serve a dual purpose, vegetation management and public education. Two seasonal fire prevention inspector, CDF engine companies, or a local government fire prevention officer within the battalion conducts the 4291 inspections. Last year there was 2,772 residents inspected in the battalion. The focus of the inspections is defensible space compliance and public education.

2. Vegetation Management: The vegetation management programs are directed at reducing the potential of a large fire and reducing the damage from a large fire. CDF-8,850 hrs. CDF/FEMA-1,800 hrs. NCFSC-850 hrs.

A. PRC 4291 inspection:

The goal this year is to continue using the seasonal fire prevention inspectors, CDF engine crews and Nevada County Consolidate F.P.D. personnel to inspect around residents for defensible space compliance.

B. Hazard Reduction Programs:

CDF has extended the defensible space, chipping program for a year. The funding for this program has been extended through December 31, 2005. Last year the program treated 340 parcels within the project area. The projection for this year is to treat around 350 to 400 parcels. This spring we will be starting work on the shaded fuel break portion of the project, the plan is to treat approximately sixteen (16) miles of road ways in the project area.

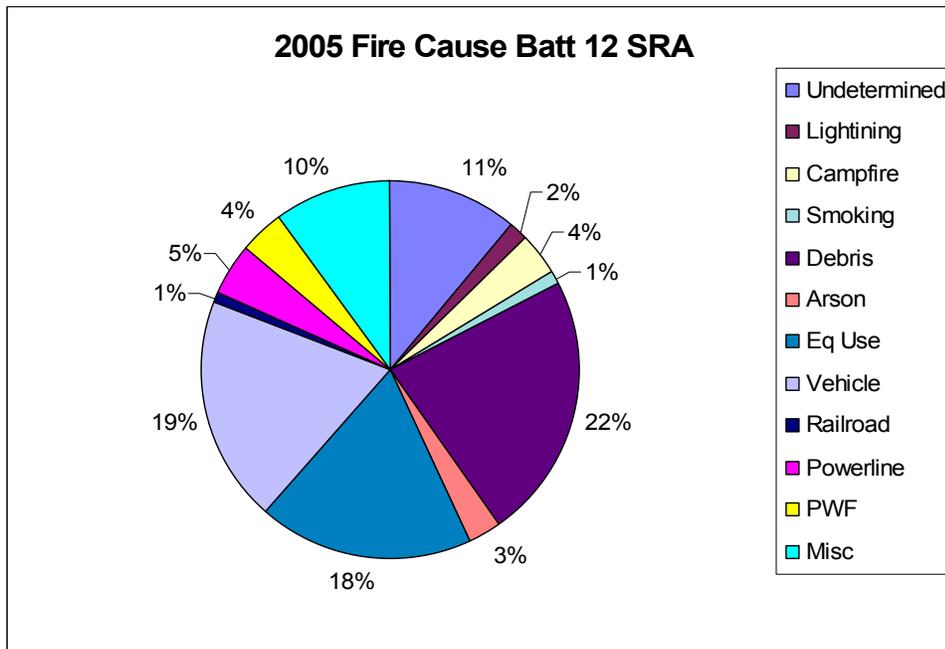
CDF continues to assist the Fire Safe Council with funding for their defensible space chipping. They treated 533 parcels last year and plan to do about the same number this year. The Fire Safe Council is

currently working with the county to develop a permanent sight for vegetation chipping program. The sight will allow the public to drop off brush and chip it into biomass fuel.

CDF, USFS and BLM are working together to complete a shaded fuel break in the Harmony Ridge Scott's Flat area. Work should begin late spring and will tie in with a shaded fuel break that BLM completed a few years ago. This will provide a shaded fuel break along the ridge above the South Yuba River from North Bloomfield Rd. to Scott's Flat Cascade Shores subdivision.

A Schedule 'A' Fire Protection Planner works with developers and the Planning Department on land use and PRC 4290 issues, ensuring that adequate access/egress, fuel modification and other fire protection standards are met.

2005 Wildland Fires : 131



Battalion 13 **(Colfax & Alta Area)**

Battalion 13 (Colfax & Alta Area)

Battalion 13 has identified two of the largest causes of fires for the year 2005 as equipment use and debris burning. These two accounted for 68% of all starts. The following goals are outlined to help reduce the ignition sources through public education and fuel management.

1. Fire Safe Programs CDF-600hrs

Work with developers and the Planning Dept. via the CDF/Placer County Fire Protection Planner to ensure that PRC 4290 requirements are met or exceeded on all new construction. Participate in field inspections at BC and Company Officer level.

Chief Brand, along with other CDF personnel, participate in the Ponderosa Fire Safe Council, meeting regularly and supporting any logistical and technical needs.

The Fire-Storm of Southern California is still a good wake up call, Chief Brand has been involved in multiple community meetings with regards to defensible space and fire safety. These programs will continue.

2. Burn Permit Administration CDF-500 hrs City of Colfax 100 hrs

Alta and Colfax Stations issue approx. 800-1000 permits each year.

All employees cover the compliance issues with every permittee. This year Colfax CDF will be issuing permits with-in the city limits of Colfax.

There will be open hours during the winter. Burn hours will be implemented around May 1 and total restriction will start around July 1 depending on weather. The Ban will be lifted as per CDF in the fall at the end of declared fire season.

LE-5 and Project permits on SRA will be issued with an inspection by an authorized employee of CDF.

*** All permittees are given material covering air pollution rules and knowledge of our chipping program.**

3. Defensible Space CDF-700 hrs,

With-in Battalion 13 we are targeting high hazard high hazard areas beginning first with areas in and around the Colfax High & Elementary schools with the cooperation of the school officials.

Contract employees are currently conducting Public Resources Code 4291 within the Battalion. Due to the revision of PRC 4291, Battalion personnel along with Chief Brand have been busy informing the public with regards to the revision.

We are in the process of using the CDF/Placer County Fire Hazard Mitigation (chipping) Program near the Colfax High School. This program is available to all residents requesting it.

There have been contract inspectors, who work the communities within the battalion for LE-38 inspections. This is just one of the ongoing PRC 4291 programs in the battalion. This program is

funded by grant funds from Proposition 204. The stations will do any follow up inspections should they be needed.

The Ponderosa Fire Safe Council has been educating the public with meetings, coffee klatches and one on one contacts.

4. Railroad / Power Companies CDF-50 hrs

CDF is in direct contact with Southern Pacific representatives on a regular basis. We are informed of any on-going maintenance and rail grindings on a monthly basis. Spot inspections are on-going and any problems are addressed accordingly.

Powerline inspections will occur during the PRC 4291 inspections as inspectors look up and down while conducting their inspection, and where the lines are available. Powerline caused fires, within the Battalion, relating to negligence are insignificant and do not warrant the resources to follow up.

5. Public Education CDF-1000 hrs VIPs- 250 hrs

CDF staff are involved in numerous public education programs. The area is a well-known recreation area. The target audience is quite large and has proven to be receptive to various programs as follows:

CDF is involved with Fourth of July parades at both Colfax & Dutch Falt.

The local elementary schools are targeted for Smokey Bear programs. Recreational areas are frequently visited by CDF personnel, giving fire safe talks and handing out prevention material.

6. On going events through out the year CDF-450 hrs

This year Caltrans has agreed to increase their fuel modification program from the Auburn Battalion to the Alta Area along Interstate 80. The units prevention bureau, and both the Auburn & Colfax Battalion Chiefs have met with Caltrans representatives regarding this program.

Local cable access runs a banner on defensible space and other PRC 4291 issues.

The CDF engine companies are up-dating pre-fire plans and conducting company inspections through-out the year.

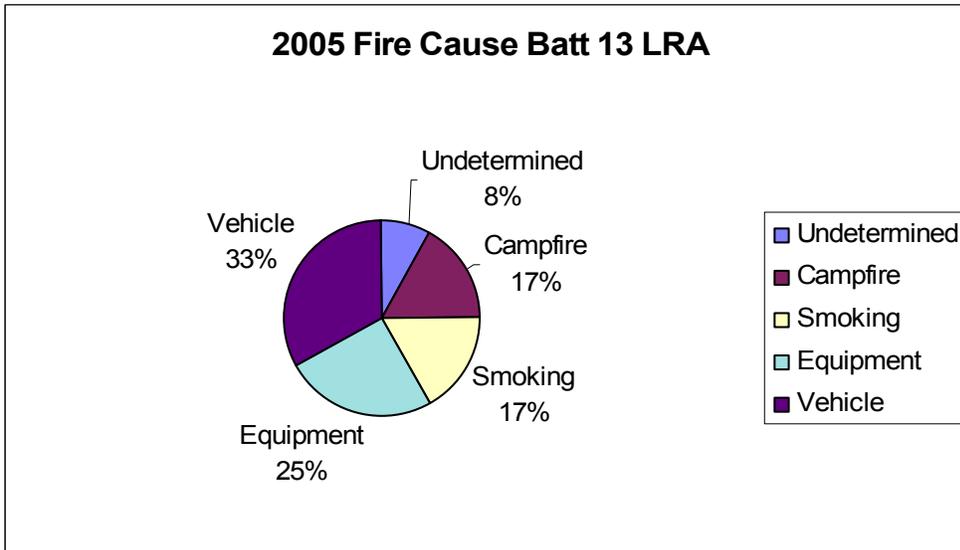
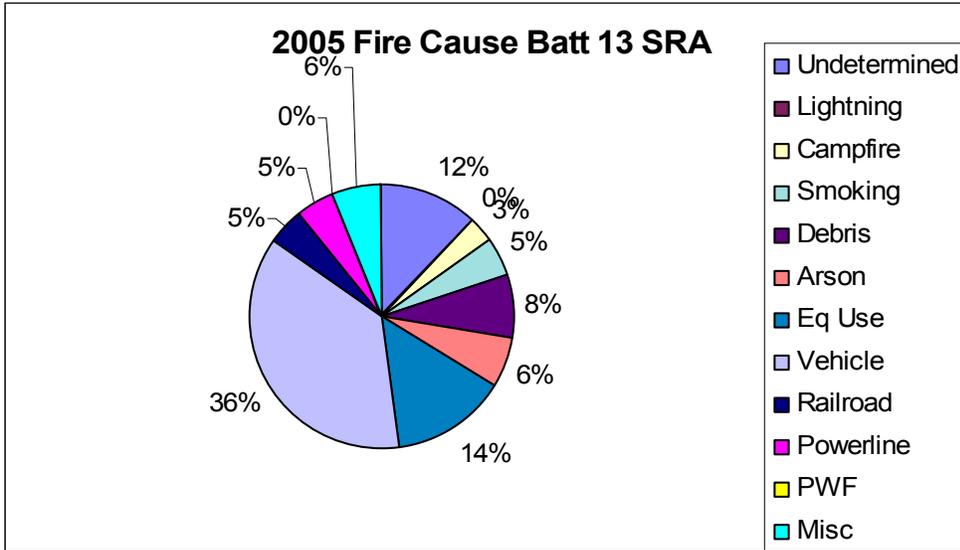
The local Battalion Chief works closely with the local Fire Safe Councils on various issues.

Chief Brand is continuing to work closely with the media, regarding small engine, burning and fire safe issues.

CONCLUSION

While the Colfax/Alta Battalion is not highly populated, the day to day traffic flow from the major East/West Freeway (Interstate 80) continues to be a problem, due to the fires that originate from the freeway. This continues to be a challenge and public awareness seems to be the best approach. The burn ban has helped dramatically with the debris burning starts along with continued public education.

2005 Wildland Fires : 85 SRA and 14 LRA (99 Total)



Battalion 14

(Smartsville & Columbia Hill Area)

Battalion Goal: Reduce the number of equipment and debris ignitions throughout the Smartsville Battalion through public education and vegetation management.

1. **Fire Safe Programs** 200 hrs CDF 20 hrs VIP

Work with developers and the Planning Dept to ensure that PRC 4290 requirements are met or exceeded on all new construction.

Act as the CDF Representative on the Nevada County Fire Safe Council.

Provide logistical support to the Fire Safe Council, through VIPs, to help them achieve the Council's goals.

2. **Burn Permit Administration** 200 hrs CDF

Cooperators consistent with past practice will issue LE-62's. Issuing points will be CDF Station # 40 and #42, the Penn Valley Fire District, and the North San Juan Fire District. The Penn Valley Fire Protection District will issue at Station #44 and at the administrative office for those areas within Penn Valley and Rough & Ready. The North San Juan Fire District will issue out of Station #3 on Tyler Foote Crossing Road. This process will ensure that homeowners can get a permit when the CDF station is not staffed. Burn hours will be determined by CDF outside the city limits and the individual cities within their boundaries. There will be open hours during the winter. Burn hours will be implemented around May 1 and total restriction will start around July 1 depending on weather. The Ban will be lifted as per CDF in the fall at the end of declared fire season.

An authorized employee of CDF or the USFS will issue LE-5 and Project permits on SRA.

3. **Defensible Space** 640 hrs CDF

Section 4291 of the Public Resources Code will be addressed on SRA. A County funded inspector will be used to cover door to door in all areas of SRA within the county. High occurrence fire areas will be targeted.

The CDF stations and Battalion Chief will continue to support this activity with logistical support, inspections and citations, if needed.

4. **Railroad / Power Companies** 50 hrs CDF

Past spot inspections indicate no violations, however fire occurrence has become significant.

Powerline inspections will occur during the PRC 4291 inspections as inspectors look up and down while conducting their inspection, and where the lines are available. The Prevention Bureau Chief will be meeting with Powerline Representatives to discuss PRC

4292. Powerline caused fires, within the Battalion, relating to negligence are insignificant and do not warrant the resources to follow up.

5. Public Education 100 hrs CDF

CDF staff is involved in numerous public education programs. The area is a well-known recreation area. The target audience is quite large and has proven to be receptive to various programs as follows:

School Programs - An interagency effort targets all schools in Penn Valley, reaching grades K - 12 in the spring.

Fourth of July Parade - CDF will have an engine and an antique engine in this year's parade.

Air Fest - A CDF engine will attend in July.

Fire Fighters Annual Picnic - A CDF engine and crew will attend this event.

Beale AFB Fire Prevention Week – CDF will provide an engine for the parade and static display for public education.

6. On going events through out the year 200 Hrs CDF 20 Hrs VIP

Lake Englebright Camp Ground - The Army Corp. of Engineers and CDF will construct fire lines around all shoreline campsites starting in May.

Malakoff State Park Camp Ground - A CDF engine will address campers during special events planned by the camp area.

Spenceville Rifle Range – A fuelbreak will be constructed around the rifle range during May, and the interior burnt.

Point Defiance/Rices Crossing Fire Access Roads – Maintenance of these roads will be done periodically to ensure fire access for equipment.

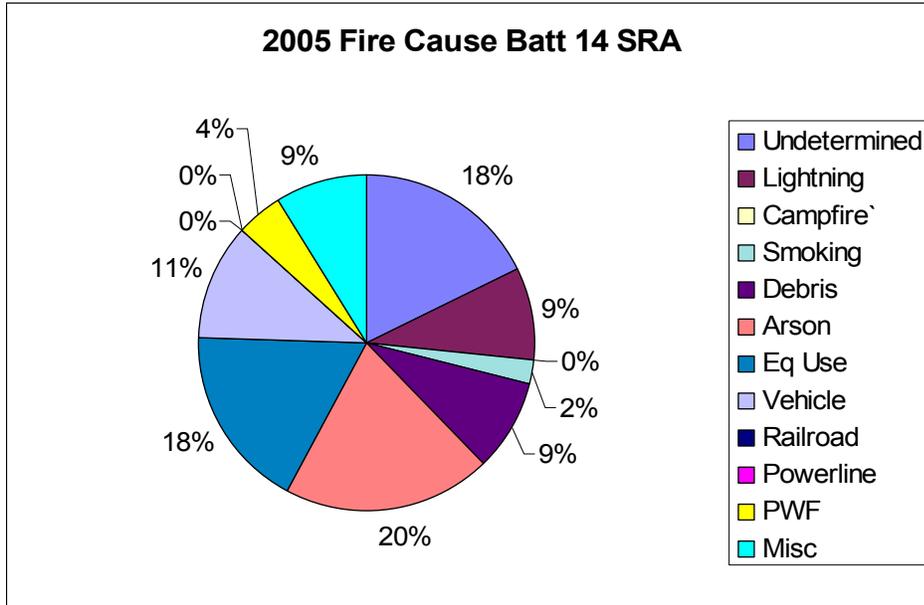
Channel 44 - The local message station will run the defensible space tape throughout the summer and event specific messages on request.

Fuel Break/Reduction - Fire crews will continue to support the communities of North San Juan, Nevada City, and Grass Valley in a comprehensive fuel reduction and fuel break program. The primary focus will be the Columbia Hill Fuelbreak and VMP burns.

CONCLUSION

Battalion 14 is quite busy with prevention activities. The strong relationship between CDF, Penn Valley Fire Protection District, Smartsville Fire District, North San Juan Fire District, USFS and other local FD's has provided for a professional and comprehensive program that has shown benefits in public awareness and concern. As shown in the fire cause analysis, wildland fires caused by children "playing with fire" and "smoking" have been negligible, indicating that the battalion's fire prevention efforts directed at school age children have been very successful.

Wildland Fires for 2005: 47



Battalion 15

(Truckee & Donner Summit Area)

Summary:

The Town of Truckee was incorporated in 1994, taking with it 21,000 acres of SRA . This year a contract for suppression on 2,720 acres is currently active, and is anticipated to be so for the 2006 fire season. We will continue our high profile prevention program within the Town limits.

FIRE PREVENTION PROGRAMS

Martis Peak Lookout Project

Martis Peak Fire Lookout was put into service as a detection platform on July 13th, 2005, and was staffed daily through October 18th. Martis Peak reported 45 smokes in 2005, at distances of up to 36 miles. Sixteen of these smokes were first reports. Martis Peak also recorded the locations of numerous lightning strikes, and was instrumental in tracking the progress of developing thunderstorms. Lookout staff at Martis Peak made over 500 public contacts in 2005. The operating agreement with the USFS will remain in place for 2006 with minor changes. We will continue to promote the lookout through the local media and community groups this spring to generate interest in volunteer staffing seven days per week. All volunteers will be signed up as Volunteers In Prevention (VIP). Northstar fire has funded a lookout position at Martis Peak since 2002, and has expressed interest in funding a position for the 2006 fire season. This will be a four days per week position, so the remaining three days per week will require staffing by VIPs.

Fire Safe Programs

Section 4290 of the Public Resources Code will continue in Sierra County. The "No Growth" position of Sierra County indicates no immediate change in the future. Growth continues in the eastern portions of Nevada and Placer Counties. This contributes to a significant workload.

Burn Permit Administration

LE-62's will be issued by cooperators consistent with past practice, with the following exception. Donner Summit Fire will no longer issue LE-62 permits for FRA land in the Cedars area. Issuing points will be CDF Station 50, USFS at the Truckee Ranger District Headquarters, and Donner Summit FD. The Truckee Fire Protection District will issue at Station 91 and 92 for those within the Town limits and SRA within the district. This process will ensure absentee homeowners can get a permit when the CDF station is not staffed. Burn hours will be determined after consideration for all fire entities on the eastside. There will be open hours during the winter. Controls will start about May 1st with burning hours during daylight only. All burning will be cancelled by July 1st. The ban will be lifted in the fall with burning during daylight hours only, preferably in the morning.

An authorized employee of CDF or the USFS will issue LE-5 and Project permits on SRA with an inspection. Within the Town limits, the Truckee Fire Protection District will issue.

Defensible Space

Station 50 personnel will address section 4291 of the Public Resources Code on SRA. Assistance will be given to the Truckee Fire Protection District (TFPD), the North Tahoe Fire Protection District (NTFD), Meeks Bay FD, Alpine Meadows FD, and Squaw Valley FD to facilitate inspections on SRA within USFS Direct Protection. This will be done by supplying the Inter Agency Inspection Form LE-38, prevention material, and personnel to assist in mass inspection programs.

Northstar FD has a comprehensive inspection program in Placer County within SRA that has achieved 100 percent compliance. The CDF engine and Battalion Chief will continue to support this activity with logistical support, inspections and citations, if needed.

Railroad / Power Companies

Past spot inspections indicate no violations and fire occurrence is very low. Inspections of the Railroad will be handled by the USFS and findings will be turned over to the Battalion Chief.

Power line inspections will occur during the PRC 4291 inspections as inspectors look up and down while conducting their inspection, and where the lines are available. The Battalion Chief will be meeting with Power Company representatives to discuss PRC 4292. Power line caused fires relating to negligence are insignificant and do not warrant the resources to follow up.

Public Education

CDF staff is involved in numerous public education programs. The Truckee-Tahoe area is a world known resort area. The target audience is quite large and has proven to be receptive to various programs as follows:

Kids Day - A booth with Smokey and prevention material relating to children will be at this year's event in May. This is an interagency effort involving most of the area fire departments.

School Programs - An interagency effort by CDF, TFPD, and the USFS, targets all schools in Truckee, reaching grades K - 5 in the spring. Students create fire safety posters for display on roadside fire prevention signs.

Fourth of July Parade - CDF will have an engine in this year's parade.

Truckee Rodeo - CDF engine and crew will hand out prevention material. Smokey will make an appearance.

Reno Rodeo - Assist Sierra Front with staffing a booth.

Fire Fest - A CDF engine will attend in October in South Lake Tahoe.

Donner Summit Fire Annual Picnic - A CDF engine and crew will attend this event.

ON GOING EVENTS THROUGHOUT THE YEAR

Tahoe Re:Green - An on going process assisting allied agencies around the Lake Tahoe Basin. Projects include: fuel reduction on state owned and conservancy lands and PRC 4291 cooperative inspections.

Channel 6 - The local message station will run the defensible space tape throughout the summer and event specific messages on request.

Fuel Break/Reduction - Fire crews will continue to support the communities of Tahoe Donner and Northstar in a comprehensive fuel reduction and fuel break program.

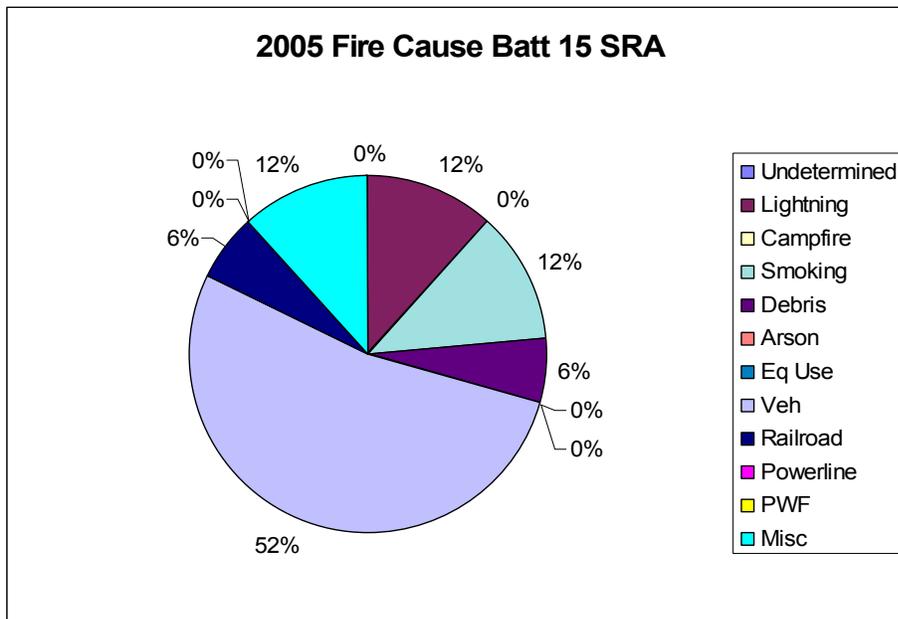
Fire Guard - During 2006, the feasibility and practicality of a fire guard along the Westbound lanes of I-80 between Truckee and Donner Summit will be investigated with proposed start-up during the 2007 fire season. The lead agency will be the Tahoe Donner Homeowners Association, with crew support provided by CDF as needed.

CONCLUSION

Battalion 15 is quite busy with prevention activities. The strong relationship between CDF, Truckee Fire, Northstar FD, USFS and other local FD's has provided for a professional and comprehensive program that has shown benefits in public awareness and concern. As shown in the fire cause analysis, wildland fires caused by children "playing with fire" have been negligible, indicating that the battalion's fire prevention efforts directed at school age children have been very successful.

2005 Wildland Fires: 17

There were a total of 17 SRA fires in 2005. For the second year in a row, the majority were vehicle fires.



Battalion 16 ***(Loma Rica & Dobbins Area)***

OBJECTIVES

The Battalion 6 staff will continue efforts to maintain the current low fire incident rate and reduce the potential for the occurrence of large and damaging fires. These objectives will be realized through an intensive program of public education, fuel reduction and risk reduction.

ACTION PLAN

COMMUNITY INVOLVEMENT

Public relations and interaction between CDF and the community is a key factor in promoting a public understanding of CDF's fire prevention role. Each year the Battalion 6 staff will:

Station 61 will continue a year round coordination of the sales and installation of street and address signs and house numbers.

Station 60 and 61 along with VIP's and the volunteers from the LR/BV C.S.D. will participate in local community activities:

Wild Hog Glory Daze – Loma Rica Lions Club – May

Brownsville Mountain Fair – Foothill Fire Department – July

Bok Kai Parade – Marysville – March

Beale Fire Prevention Week – Beale A.F.B. – November

FIRE PREVENTION AND AWARENESS

An ongoing program, which furthers the public's awareness of the wildland fire problem and develops public habits conducive to fire safety, will be provided. Annually the Battalion 6 staff will:

During the months of May and June the Battalion Chief will release (4) four general fire prevention news releases to the Appeal Democrat and the Rabbit Creek Journal newspaper.

During fire season Station 60 and 61 will conduct their physical fitness training activities in a different location of their response areas on a daily basis. Every two weeks 1 engine from Station 60 will cover the Rackerby area.

Post fire prevention signs as shown in "Exhibit – A".

Volunteers In Prevention (VIP) will conduct school programs each winter at the following schools: Yuba Feather, Dobbins, Loma Rica, and Browns Valley. Station 60 and 61 will provide assistance and an engine at each program

Station 60 and 61 will be expected to conduct fire prevention programs when requested by local groups, provided fire activity allows for the commitment. Whenever possible these requests can be deferred to the V.I.P. program.

The Battalion Chief will participate as an acting member on the Yuba Watershed Protection and Fire Safe Council. His role will be to provide professional guidance to the areas for Fuel Breaks, Community Water Systems, seeking grants to assist the community for the funding of fire Safe Projects.

Station 60 and 61 during the first few weeks of fire season will conduct PRC 4291 inspections in predetermined areas. The inspections will focus on home safety and fire prevention, stressing safety while using power equipment and debris burning.

Coordinate with Loma Rica/Browns Valley CSD personnel and incorporate fire prevention and burning permit issuance program to the local responsibility areas of the fire district. A door-to-door program to promote the reflective house numbering program.

BURNING PERMIT PROGRAM

It must be recognized that every other year contact with the burning permit permittee provides CDF with the best opportunity to present a fire prevention message. This contact will not become an assembly line procedure, emphasis will be placed on the terms of the permit, and time will be taken to send a general fire prevention message.

In March the Battalion chief will update the Yuba County Burning Permit Issuance Plan in conjunction with the Feather River Air Quality Management District.

In April the Battalion Chief will train the V.I.P.s in burning permit issuance and ensure that CDF employees have reviewed the plan.

COOPERATORS MEETINGS

As shown in Exhibit B meetings will be conducted with local cooperators covering fire prevention specific to their facilities or agency.

FIRE ENGINEERING

Throughout the year the Battalion Chief or Yuba County Fire Protection Planner will reduce the wildland fuel loading by reviewing all development projects within the SRA and require developers to instill fuel reduction practices.

The goal this year is to burn a minimum of 800 acres on the Richards VMP Project.

This year there will be a strong effort to continue with Prop 204 Grant Projects.

Yuba Watershed Protection and Fire Safe Council Fuel Break/modification projects

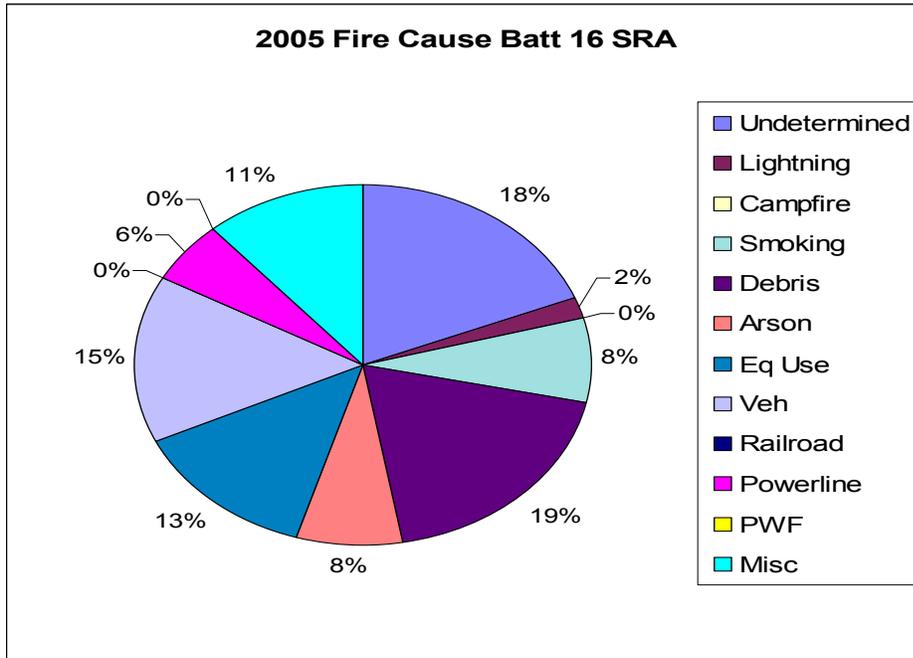
Yuba County Road fuel modification project

CSA 2 emergency evacuation route development

POWERLINE INSPECTIONS

Each spring the Battalion Chief will spot check 1/3 of the power lines within the battalion, a map will be maintained to ensure that a different area is inspected each spring.

2005 Wildland Fires: 57 SRA, + 1 LRA (Vehicle)



FIRE PREVENTION SIGNS POSTING

<i>LOCATION</i>	<i>4X8</i>	<u>PERMITS REQUIRED</u>	<u>PERMITS SUSPENDED</u>	<u>RESPONSIBLE PARTY</u>
1 - Brownsville ball field	X			2316
1 - Browns Valley ball field	X			2316
2 - Marysville Rd. Dobbins	X			Station 60
3 - Rackerby Post Office		X	X	2316
3 - Brownsville Post Office		X	X	2316
3 - Challenge Post Office		X	X	2316
3 - Dobbins Post Office		X	X	Station 60
3 - Oregon House Post Office		X	X	Station 60
3 - Gold Eagle Market Brownsville		X	X	2316
3 - Ace Foothill Hardware		X	X	2316
3 - Family Stop Deli		X	X	Station 61
3 - Browns Valley Post Office		X	X	Station 61
3 - Gold Eagle Market Loma Rica		X	X	Station 61
3 - Loma Rica Market		X	X	Station 61
Loma Rica-Browns Valley F.D. fire prevention signs				2316

- 1= Rental signs - rent due in the spring
- 2= Signs go up May 1, come down at the end of fire season
- 3= Post these signs before May 1.

COOPERATORS MEETINGS

<i>AGENCY</i>	<i>TOPICS</i>	<i>ANNUALLY</i>	<i>EVEN YEAR</i>	<i>ODD YEAR</i>	<i>RESPONSIBLE PARTY</i>
PG&E	Conductor clearance	X			2316
USFS TAHOE	1	X			2316
USFS PLUMAS	1	X			2316
YUBA COUNTY WATER AGENCY	1			X	2316
COLLINS LAKE	2		X		2316
BULLARDS BAR	2		X		2316
THOUSAND TRAILS	2		X		2316
LAKE FRANCIS	2		X		2316
YUBA COUNTY ROAD DEPT.	1			X	2316
FISH & GAME	1			X	2316
RENAISSANCE VINEYARD	3	X			Station 60
DOBBINS- OREGON HOUSE F.D.	3	X			Station 60
FOOTHILL F.D.	3	X			Station 60
LOGGING AGENCIES	X				2316
YUBA WATERSHED PROTECTION- FIRE SAFE COUNCIL	4		MONTHLY		2316
YUBA COUNTY FIRE CHIEF'S ASSOC.	4		MONTHLY		2316

1= AGENCY SPECIFIC

2= RECREATION AREA FIRE PREVENTION

3= COVER FIRE PREVENTION IN THE SPRING - FIRE CONTROL TRAINING

4= FIRE PREVENTION, FUELS REDUCTION, EMERGENCY PREPAREDNESS

EXHIBIT - B

Battalion 17

(Lincoln, Paige, Sheridan, Fowler & Thermolands Area)

Battalion Summary: The Lincoln Battalion serves a large area of SRA and LRA. There are several areas that would be threatened by a significant wildland fire. Personnel will be actively inspecting property to assure compliance with PRC 4291 and to educate the public about the dangers of wildland fires and how they can assist us in reducing the threat that they pose.

FIRE SAFE PROGRAMS

The Placer County Fire Protection Planner will continue to provide building plan fire and life safety reviews for PRC 4290 and uniform fire code regulations.

Burn Permit Administration

Issuing points for Le 62's will be CDF/Placer County Fire Station 70 and Station 77. The local pollution control district determines burn hours. Pre-inspections will be provided on a requested or as needed basis. With each permit written, a Placer County Air Pollution Control District's Residential Open Burning informational sheet will be included. A copy of the permit will be filed at Station 70 or Station 77.

Defensible Space

The Battalion 7 goal will be to target areas within the foothills that have a significant wildland fire threat and inspect 400 homes using the PRC 4291 program. Station 70 and Station 77 personnel will concentrate on the Fowler-Fruitvale, Thermolands area of Placer County. The homes within the following road boundaries will be inspected this coming spring; Andressen Road, Meadow Lark Lane, Rolling Hills, Karchner Road, Thousand Oaks Road, Dornes Road, Valley View Circle, Valley View Drive, McCourtney Road north of Thermolands, Garden Bar, Virginia town and Wise Roads. Campgrounds at Camp Far West Lake will be inspected prior to June 15th for compliance of related Forest and Fire Laws. A five-year cycle through the significant wildland fire threat area will provide adequate education and prevention information to the affected homeowners.

Power line Inspections

Inspection of power lines will occur during the PRC 4291 inspections. Staff will advise the battalion chief of a violation, the battalion chief will coordinate an inspection by the Units Fire Prevention Bureau.

Public Education

School programs- Station 70 staff along with the Lincoln group; provide fire safe presentations to schools within the battalion. Age specific fire prevention material will be handed out at each presentation.

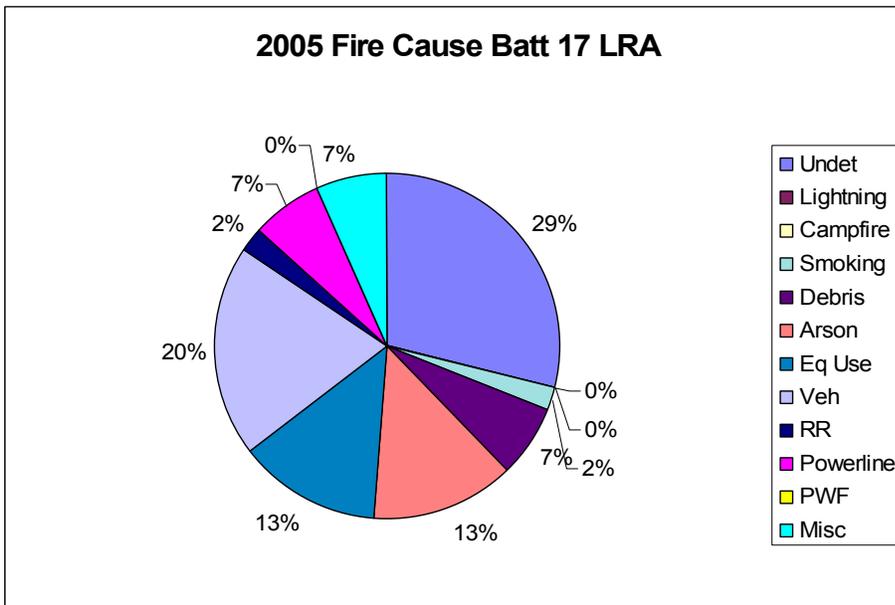
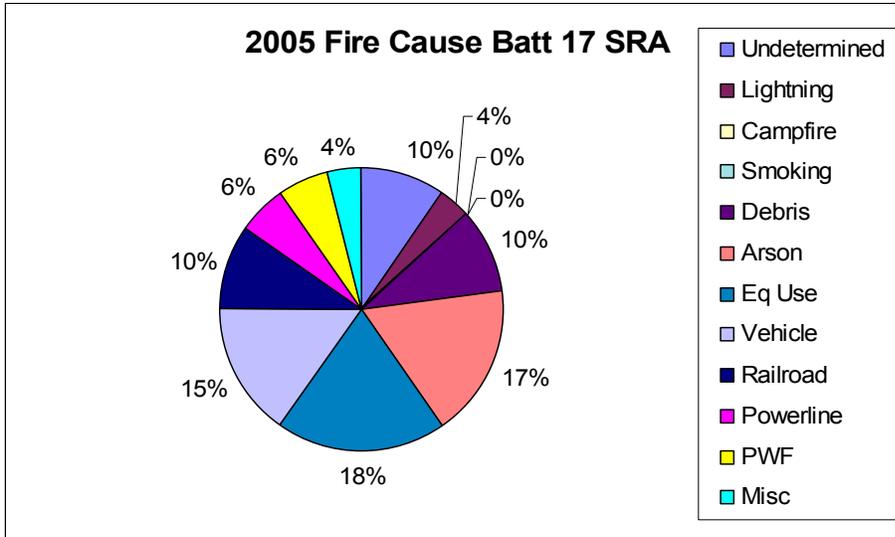
Parades- each year the City of Lincoln invites Station 70 and the Lincoln companies to their annual parade. The engine company staff will display the engine so members of the public can inspect the engine and equipment, staff will hand out fire prevention material and discuss fire prevention issues.

Business fire safety programs- Station 70 and Station 77 staff will provide instruction on the proper use of fire extinguishers to local businesses within the battalion.

Fire Prevention Signs- Station 70 staff provide maintenance of several signs within the Battalion. Station 70 staff request 3 additional fire prevention signs that will be placed in targeted areas during the fire season.

Thunder Valley Casino- Station 77 in cooperation with Thunder Valley Casino will provide fire prevention material and information to customers of the Casino during National Fire Prevention Week.

2005 Wildland Fires : 61 SRA, 47 LRA



Battalion 19

(City of Marysville and CSA/Hallwood/District 10)

Battalion 19 will work to reduce fire ignitions and reduce damage by fire occurrences by actively participating in public education programs, business inspections, and plan review process. These efforts will be provided to the City of Marysville, Hallwood/District 10 and to communities within the Yuba-Sutter area. The components to meet these goals are as follows:

1. Commercial Business Inspection. (120 hrs)
Inspect local business, and code enforcement.
2. Fire Preplans.
Update fire preplans for all business. (24 hrs)
3. Plan Review
Conduct fire plan review on building projects within the city and district. (63 hrs)
4. Public Education (149 hrs)
Participate in public education programs within the City and Yuba-Sutter Area.
Marysville Joint Unified School District – Provide public education along with participation in School organized functions i.e., Read-a-Thon, Athletic events, ,
Lunch visits, Fire Station tours, Fire department class visits, School Safe program planning.

Senior Safety-Provide fire safety training and public education to local senior care facilities.

City sponsored Activities- Christmas Parade, Bok Kai Festival, Fourth of July Parade, Gold Rush Days,
Peach Festival, Hot Rod Jamboree, Marysville Rodeo, and the Yuba-Sutter Fair.

Participate in Fire Prevention week with Fire Station Open House

Participation at Marysville Motocross, providing prevention and EMS standby duties.
5. Campfire and Burn permit issuance (60).
Issue campfire permits and provide local burn policy information.

CONCLUSION:

The Marysville Battalion continues to interact with its community emphasizing fire safety. Marysville maintains a good cooperative relationship among its neighbors and collectively provides a strong fire safety message that benefits all. This message helps protect its citizens and the surrounding areas.

28. Completed Projects and Fire Plan Successes

Since the initial implementation of the Fire Plan process in NYP a number of projects have been completed to some degree. Through these projects CDF and its cooperators are able to demonstrate the success of the program. The following projects have been completed. There is a brief summary after each one that will identify if the initial goals were accomplished and what the Unit feels the results of each project will be.

The projects that have been completed prior to June of 2006 include:

****NEW – Pre Fire Protection Planner in each County****

- Foresthill Fuel Breaks
- Ure Mountain Pre-Fire Project
- Gillis Ridge Fuel Break
- Meadow Vista/Applegate Fuel Breaks
- Forty-Niner Pre-Fire Project
- Cascade Shores Pre-Fire Project
- Columbia Hill Fuel Breaks
- Owl Creek Neighborhood Fuels Reduction Project
- Alta Sierra Fuels Reduction Program (Ongoing)

NEVADA YUBA PLACER UNIT PRE-FIRE PROTECTION PLANNER PROJECT PROPOSAL (# 1 Priority Project)

PROJECT DESCRIPTION: Fund 3 PYs at the Fire Captain level to be utilized in Nevada, Yuba, and Placer Counties as Pre-Fire Protection Planners. These personnel will work directly with the County Planning Departments at the review stage of proposed building projects and developments.

Nevada-Yuba-Placer has two of the top ten fastest growing counties in the state. With this growth, comes development. As the Unit is primarily rural, most of the development is taking place in the rural-urban interface (I-zone) also known as the Wildland Urban Interface (WUI). The Counties have chosen to adopt the Public Resources Code 4290 (PRC) for all new construction. However, they are not staffed or trained to carry out the regulations as outlined in PRC 4290. CDF is currently responsible for the plan reviews. Pre-fire planning issues presently make up thirty – fifty percent of the CDF field Battalion Chiefs' workload. The need for a Pre-Fire Protection Planner at the county level to review all new projects is essential. This project is primarily designed to ensure that all new development and growth within the Unit is fire safe planned, implemented, and maintained. One other advantage of this project is that CDF will have somebody working with the Planning Departments to keep Unit personnel abreast of any potential changes in zoning or regulations that might adversely affect the Department's ability to serve its mission.

Event 1: Fund 1 person year at the Fire Captain level for Nevada County.

Event 2: Fund 1 person year at the Fire Captain level for Placer County.

The above portions of the project had been completed prior to 2005.

Event 3: Fund 1 person year at the Fire Captain level for Yuba County.

This was accomplished at the beginning of 2006.

Estimated Cost of Proposed Project: **Total = \$280,134**

3 Pre-Fire Protection Planners X \$93,378 = \$280,134* X 0.5 (State's cost share) = \$140,067

The proposed project cost to the state to fund the 1.5 person years is \$140,067. Each county would have to match \$46,689** to fully fund the pre-fire protection planner for their county. (** This includes an administrative charge for contracting with CDF)

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County Currently funded half through Prop 172 funds/half through the state.
- Yuba County
- Placer County Currently funded through Prop 172 funds.

FORESTHILL FUEL BREAKS:

Existing roads were used for the location of the shaded fuel breaks taking advantage of the area occupied by the road surface, which is devoid of all vegetation. Modifying the fuels for a distance of 25 feet on both sides of the existing road gave an effective shaded fuel break width of approximately 70 to 80 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long-term maintenance of the fuel breaks.

Shaded Fuel Break Locations:

1. Yankee Jim's Road from Foresthill to the North Fork of the American River
 - Approximately 7.5 miles
2. Spring Garden Road from Yankee Jim's Road to the Foresthill Road
 - Approximately 3.5 miles
3. Ponderosa McKeon Road from the Foresthill Road to the Middle Fork of the American River
 - Approximately 5 miles
4. Foresthill Road from Ponderosa McKeon Road to Michigan Bluff Road
 - Approximately 12 miles
5. Area west of the town of Michigan Bluff from Chicken Hawk Road to a USFS fuel break.
 - Approximately 2 miles

The total area encompassed by the shaded fuel breaks is about 203 acres over a distance of approximately 30 miles.

URE MOUNTAIN PRE-FIRE PROJECT PROPOSAL (Completed)

Actions involved in the project:

The Ure Mountain Pre-fire project was designed to tie in with pre-fire projects that have been undertaken by Yuba County, CDF, and the Dobbins – Oregon House Fire Department as a cooperative program. This project includes homeowner education, fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

Event 1: Chipper support for homeowners. Home inspections will be conducted in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to hire a professional chipping service to follow up the inspections. The inspectors will notify the residents when the chipper and crew will be in their neighborhood. The homeowner can then clear the vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property. As a result of a grant by Northern Sierra Air Quality District, a similar sized subdivision in Nevada County offered this support during the summer and fall of 1996. It had a strong response from the community and was considered to be very successful.

Event 2: A series a shaded fuel breaks along existing roads and public utility right-of-ways that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these fuel breaks will facilitate a safer evacuation of residents in this access-limited area should a large fire occur. Using existing roads and right-of-ways for the locations of the shaded fuel breaks takes advantage of areas that are devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing roads will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks. It will require coordination with both the county and affected property owners, but has extensive community support. The use of a mechanical masticator to do the initial heavy work, followed up by handcrews, has proven to be the most cost-effective way to accomplish the fuel breaks. The proposed fuels breaks would occupy approximately 420 acres.

Justification: This project will result in a direct reduction of the fire hazard to the 500 homes within the project and will provide enhanced protection to the communities of Dobbins – Oregon House, Brownsville, Challenge, Loma Rica and many more.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Local Service Groups
- Natural Resources Conservation Service
- Feather River Air Management District
- Dobbins - Oregon House Fire Department

Gillis Ridge Fuelbreak (Completed)

Allen Edwards retired after many years in State Service. He had decided to spend his time working with his sons on his family's timber property in Placer County. This property is located above the North Fork of the American River, a canyon known in the area for experiencing a number of major fires in the past. The combination of fuels, weather and topography all but guaranteed that history would eventually repeat itself and the American River Canyon would once again be under siege by a wildfire.

The canyon below the Edward's property was covered primarily by Manzanita, Ceanothus, and Scrub Oak. There were also pockets of oak and conifer stands in the drainages and scattered across the landscape. The brush was near critical levels based on live fuel moistures and due to its age had a very significant amount of dead materials mixed in with the live. The standing fuels averaged between six and eight feet in height but could be found up to fourteen feet tall in places. The mixed oak and conifer stands typically had a significant brush understory. These stands were even more volatile than the rest of the landscape due to the presence of "needle drape" throughout the understory. This added layer of fine fuels resulted in an increase in torching which also increased the potential for spotting.

The North Fork of the American River flows almost due North - South below the Edward's property. Because of this, the fuels receive direct sunlight through the first half of the day. The humidity and fuel moisture are significantly reduced on this slope by mid-day and the fuel temperature is dramatically increased. Mid-September is typified by hot, dry weather and continuous canyon winds. The standard S-SW winds combine with the daytime up-canyon winds to create very breezy conditions in the canyon and surrounding areas. Around mid-night the up canyon winds will give way to the colder air settling into the canyon causing strong down-canyon winds.

The topography of the American River Canyon has a very powerful effect on any fire that occurs within it. The slope ranges from ten to two hundred percent with most of it in the 45 – 75 % range. This slope greatly increased the fire's spread by allowing the pre-heating of the fuels and keeping the flaming front in contact with a constant supply of unburned fuel. It also hampered fire-fighting efforts by limiting the access to the fire's edge, as there were very few roads in the area.

When Allen first began working his land he realized that he needed to consider the potential for a wildfire coming out of the canyon. One of his first efforts was to develop fuelbreak along the ridgeline of his property to help reduce the likelihood of a fire spreading to the remainder of his parcels. Along the ridge top, his property was primarily a second growth mixed conifer woodland. It was typified by uneven aged Ponderosa Pines, Black Oak, and a heavy brush component. Working with his sons, Allen took the time to thin the stands for up to 150' along the roadway. In doing this he removed the ladder fuels and provided an open stand from which fire fighters could make a stand against an encroaching wildfire. Prior to treatment one could have easily found 30 – 40 stems in a 15' – 15' area. After treatment that number was reduced

down to 3 – 6 stems in the same area. He also took the time to prune all remaining stems up at least eight above the ground. By doing these two things he was able to have a significant effect on the fire's behavior within the fuelbreak. At the time of the Ponderosa Fire Allen was working with the BLM in an effort to extend his fuelbreak through their land that is adjacent to his.

The Division Supervisor that was responsible for that portion of the fire, Ken Hughes, said, "The fuelbreak was integral in our operations along Gillis Ridge. It gave us a place to safely fire from where we would not put our crews in danger. We were able to extend the fuelbreak along the ridge and tie in with the river to fully contain the head of the fire. Without the work he, (Allen Edwards) had done prior to this fire there is a very good likelihood that the fire would have run up into the homes further to the west."

Even though this fuelbreak is not listed in the current Nevada – Yuba – Placer Fire Management Plan as a project, the Unit has looked at it a number of times and recommended it for funding through the Natural Resources Conservation Service (NRCS). They direct most of their funding to projects that have been determined through CDF's Fire Planning process to have a great potential for reducing government costs and citizen losses due to a wildfire.

It cost Allen Edwards and the NRCS about \$4,500 total to treat about ten acres of land. That money proved to be a wise investment as the fuelbreak resulted in a fire perimeter that had very few homes and other structures within it. Without the fuelbreak it is very likely that the fire would have continued up into the south eastern edge of the city of Colfax.

FORTY - NINER PRE-FIRE PROJECT (Completed)

Due to the extensive movement of California's population from the urban areas to the more rural areas, the loss of structures to wildland fire is ever increasing. The Forty-Niner area is a prime example of a community in the rural-urban interface/intermix. Many of the homes were constructed prior to any type of regulations concerning fire safe issues being enforced. It is estimated that there are over 1,600 homes within the project area. Of those 1,600 homes approximately 95% do not meet the **minimum** requirements (based on Calif. Public Resources Code 4291) for fire safe clearance and access.

Recent ground surveys of the area estimate over thirteen tons of dry, dead fuels per acre. Much of this fuel is Greenleaf Manzanita or Ceanothus, both of which can result in extreme fire behavior and spotting. Due to the heavy fuels in the area, simply meeting the minimum requirements will not likely prevent structural damage during a period of severe fire behavior. This was evident in the recent Williams fire in which one-third of the homes destroyed met the minimum clearance requirements but were not prepared for a firestorm.

Large fires in the unit have caused approximately 48 million dollars worth of damages and destroyed over 270 homes since 1985. Nevada, Yuba, and Placer counties experience 800-900 fires per year in the area protected by CDF. On average, one to two percent of those escape the initial attack stage and result in an extended attack or major fire. Based on those numbers eight to nine fires per year have the potential to become costly and damaging fires. As long as California continues to experience the movement of the population from the urban areas into the rural areas, this problem will continue to worsen. However, through the implementation of the CDF State Fire Plan and the identification of high-risk areas, we will be able to reduce the damage to life, property, and the environment due to wildland fires.

Actions involved in the proposed project:

The Forty-Niner pre-fire project was designed to tie in with current pre-fire projects that have been implemented by the Nevada County Resource Conservation District, CDF, Bureau of Land Management, and the Natural Resource Conservation Service as a cooperative program. This project includes fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

Event 1: Chipper support for homeowners. Home inspections will be conducted in the late spring and summer months. To date over 100 of the homes in this project area have been inspected. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to hire a chipping contractor to provide chipping services to the residential landowners. This chipping will be coordinated to provide for the most cost efficient coverage possible. Once the homeowner clears the vegetation around their residence, they will notify the coordinator who will then schedule chipping services for them and any other nearby participants. The crew will then chip the vegetation and deposit the material back onto the property. This program has been ongoing for approx two years and over

200 landowners within the project area have utilized the chipping service so far. It has received a strong response from the community and is considered to be very successful.

Event 2: A series of shaded fuel breaks along existing roads and public utility right-of-ways that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these fuel breaks will facilitate a safer evacuation of residents in this access-limited area should a large fire occur. Using existing roads and right-of-ways for the locations of the shaded fuel breaks takes advantage of areas that are devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing roads will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks. It will require coordination with both the county and affected property owners, but has extensive community support. The use of a mechanical masticator to do the initial heavy work, followed up by handcrews, has proven to be the most cost effective way to accomplish the fuel breaks. The proposed fuel breaks would occupy approximately 180 acres.

Justification: This project will take approximately three years once on the ground work begins. It is estimated that over 180 acres and 400 residences will be treated by the project providing enhanced protection to over 20,000 acres of wildland-urban interface.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- FireSafe Council of Nevada County (FSCNC)
- Federal Emergency Management Agency (FEMA)
- Governor's Office of Emergency Services (OES)
- Local Service Groups
- Nevada County Resource Conservation District (NCRCD)
- Natural Resources Conservation Service (NRCS)
- Northern Sierra Air Quality District (NSAQMD)
- Forty-Niner Fire Protection District (49er FPD)

Estimated Cost of Proposed Project

Total = \$826,350

The work accomplished to date is the result of a FEMA Hazard Mitigation Grant. FEMA has thus far contributed over \$481,000 to this program while CDF and others have contributed over \$120,000 as part of the match share to the program.

CASCADE SHORES PRE-FIRE PROJECT (Completed)

The Cascade Shores pre-fire project was also designed to augment a current pre-fire project that has been implemented by the Nevada County Resource Conservation District through a CDF funded grant. This project includes fuel break construction and road side clearing to reduce fuel loads. CDF Conservation Crews assisted in this project. There has been strong support and requests of these types of projects by the local community.

Cascade Shores Pre-fire Project

Event 1: An inspection program of the Cascade Shores area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Nevada County Planning Department estimates that there are approximately 1,100 housing units in this area. To date over 200 of these residential properties have been inspected. Inspection of these housing units will serve two purposes:

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2000, that only about 5% of the residences required a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 2: Second LE 38 inspection of approximately 55 housing units.

Event 3: Third LE 38 inspection of approximately 11 housing units.

*Includes General Services vehicle rental for inspectors.

Event 4: A series of shaded fuel breaks along existing roads and connecting old mining diggings that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these fuel breaks will facilitate a safer evacuation of residents in this access limited area should a large fire occur. Using existing roads for the location of the shaded fuel breaks takes advantage of the area occupied by the road surface that is devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing road will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks.

Shaded Fuel Break Locations:

1. Pasquale Road west of Cascade Shores subdivision. Approximately 5 miles long.
2. Quaker Hill Cross Road. Approximately 4 miles long.
3. Along the old mining diggings to the south and east of Cascade Shores. Approximately 3 miles long.

The proposed fuels breaks would occupy approximately 145 acres.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. . The proposed support for the homeowner is to hire a chipping contractor to provide chipping services to the residential landowners. This chipping will be coordinated to provide for the most cost efficient coverage possible. Once the homeowner clears the vegetation around their residence, they will notify the coordinator who will then schedule chipping services for them and any other nearby participants. The crew will then chip the vegetation and deposit the material back onto the property. This program has been ongoing for approx two years and over 130 landowners within the project area have utilized the chipping service so far. It has received a strong response from the community and is considered to be very successful.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- Local Service Groups
- Nevada County Resource Conservation District
- Natural Resources Conservation Service
- Northern Sierra Air Quality District
- Forty-Niner Fire Protection District
- Cascade Shores Subdivision Homeowners Association

Estimated Cost of Proposed Project

Total = \$252,924.43

The work accomplished to date is the result of a FEMA Hazard Mitigation Grant. FEMA has thus far contributed over \$143,000 to this program while CDF and others have contributed over \$35,000 as part of the match share to the program.

COLUMBIA HILL SHADED FUEL BREAK PROJECT

With California's wildland-urban interface areas quickly growing, as well as the population of Nevada County, the objective of the Columbia Hill Shaded Fuel Break Project is to create a shaded fuel break in the Columbia Hill area of Nevada County. Strategically, the project will tie in with the earlier established Montezuma Fuel Break to give firefighters a place to make an efficient stand against a wildfire on the San Juan Ridge.

In the 6 mile fuel break area there are approximately 85 separate landowners, 47 of whom chose to participate in the project. Nearly all of these homeowners have insufficient defensible space and combining this with poorly maintained roadside vegetation, the Fire Safe Council of Nevada County was able to work with the California Department of Forestry and Fire Protection to identify the prior mentioned aspects of the area as a recipe for disaster.

The Columbia Hill area is predominately heavy timbered land with thick manzanita understory fuels.

Actions involved in the proposed project

The Columbia Hill Fuel Break Project was designed to tie in with previously established fuels reduction efforts, such as the Montezuma Fuel Break. Specifications written into the project called for the creation of a 400' wide shaded fuel break to run 200' along both sides of Tyler Foote and Cruzon Grade Roads in the project area. There has been strong support and great interest in this project from the involved community.

Event 1: Fuel Break Construction. A community meeting was held in July of 2003 to introduce this project to the community. After a number of other mailings to landowners, the FSCNC began meeting with landowners who chose to participate in the project to mark property boundaries as well as determine what specific work they would like accomplished. Under the grant funding the project the FSCNC was also able to hire a contracted forester who met with each landowner who wished to have timber removed from their land to mark timber and confirm their wishes. Once this was accomplished, a Timber Harvest Plan was submitted to the California Department of Forestry and Fire Protection and the hand clearing and timber work was put out to bid. Pending approval of the Timber Harvest Plan, the FSCNC will select a licensed timber operator to contract with to complete the work at which time a FSCNC representative will be on site at all times to ensure correct operations are taking place on individually owned lands. The end result will be a 400' wide fuel break throughout much of the Columbia Hill area.

This portion of the project has been completed with the exception of one small section that has been cleared to 100' along roadway.

Event 2: Fuel Break Maintenance. With the exception of one parcel, all participating landowners have agreed to donate revenue from their harvested timber back to the Fire Safe Council of Nevada County. These funds will be placed in a trust fund and utilized to maintain the fuel break over the next five to ten years.

OWL CREEK NEIGHBORHOOD FUELS REDUCTION PROJECT

In 1988, the Forty-Niner fire ravaged the Owl Creek area of Nevada County. Since that time, residents of the area have seen the fuels in the area regenerate to the levels that were present prior to that fire. Many homeowners in the area have a genuine concern regarding the threat of wildfire and approached the Fire Safe Council of Nevada County in 2003 to seek grant funding for roadside fuels reduction in their neighborhood. There are approximately one hundred separate landowners in the area of Owl Creek, McKittrick Ranch, Barn Owl, Hoot Owl, Arctic Owl, Red Tail Hawk and Pau Hana Roads, 68 of whom chose to participate in the fuels reduction project funded under a Bureau of Land Management Community Wildfire Prevention Grant.

Currently the roadways in the area have heavy fuel accumulations on the roadsides, including dense manzanita and scotch broom. In some areas these accumulations are so great that it is extremely difficult to drive the roads, thus it would be impossible for fire engines to use these roads as access, many of which were initially intended as fire roads. In the event of a wildfire such fuel loads would greatly hinder the ability of residents to evacuate, as well as compromise the safety of residents and firefighters alike. The goal of this program is to bring roads in the area up to higher safety and evacuation standards.

Actions involved in the proposed project:

The Owl Creek Neighborhood Fuels Reduction Project was designed to create safer evacuation routes for residents as well as safer, more efficient ingress for firefighters. This program will provide 30' of roadside clearing on both sides of the road to any landowner within the project area who wishes to participate. The project is completely participant driven and the work completed is up to the specific landowner. There is also a number of Bureau of Land Management Parcels in the area which are of great concern to the residents. With the issuance of a variance, these lands will benefit from the roadside clearing as well. There has been great support from the community for this project, as it was initiated by the community itself.

Event 1: Roadside clearing for participating landowners. Fire Safe Council of Nevada County (FSCNC) staff and volunteers have met with all 68 participating landowners to complete on-site consultations and determine what work is to be completed. FSCNC coordinated brush clearing contractors will be moving through the area in an efficient manner, completing the roadside clearing work as indicated by the FSCNC consultation notes. All materials removed will be chipped and spread back onto the property with the exception of Scotch Broom which is to be removed to a landfill or transfer station. The project work was completed by mid-June of 2004.

OREGON RIDGE FUEL BREAK PROJECT

Actions involved in the proposed project:

The Oregon Ridge Pre-fire project was designed to provide a strategic location to attack a spreading wildfire. The fuel break spans the length of Oregon Ridge. It begins in the town of Challenge and continues past the Oregon peak lookout. It is over six miles long and up to 300 feet wide. Oregon Ridge is made up primarily of large land holdings owned and managed by timber companies (CHY, Soper-Wheeler, and Siller Bros). These companies immediately recognized the potential benefits of having a fuel break on their property. The Pendola Fire burned through this area a couple of years prior to the re-establishment of the fuel break. Had it been in place at the time of the fire, the threat to the communities of Dobbins and Oregon House would have been significantly reduced. The Oregon Ridge fuel break is the result of a cooperative program that has grown from a grass roots effort in the foothills of Yuba County. This project includes homeowner education, fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

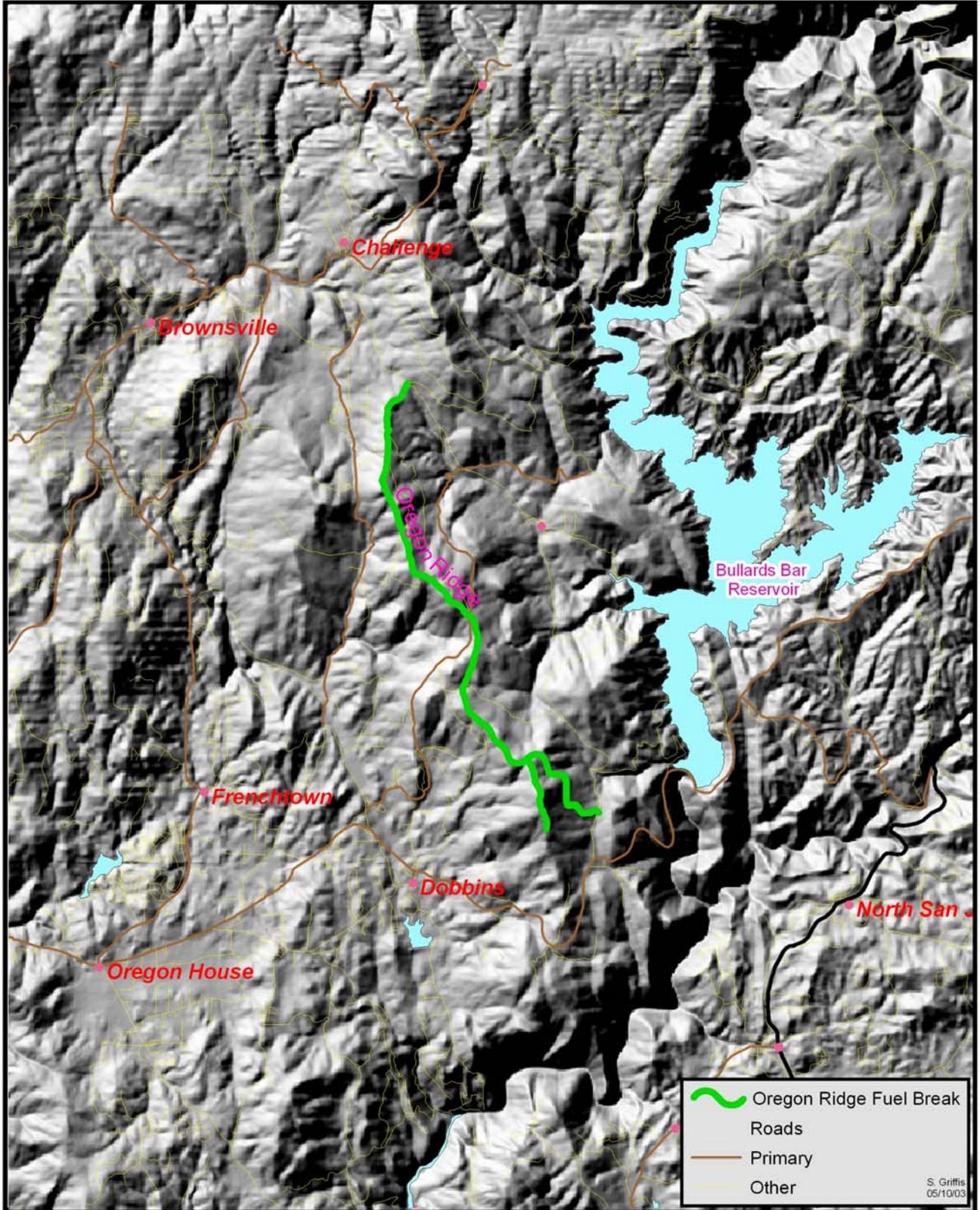
Event 1: A shaded fuel break along existing logging and fire access roads that are located along the ridge-top to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. Using existing roads for the location of the shaded fuel breaks takes advantage of the area occupied by the road surface that is devoid of all vegetation. Modifying the fuels for a distance up to 125 feet on both sides of the existing road will give an effective shaded fuel break width of approximately 300 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel break.

Justification: This project will result in a direct reduction of the fire hazard to the communities of Dobbins – Oregon House, Brownsville, and Challenge.

Much of the work on this project has been accomplished with funds from Prop 204 and some private funds. Total Project cost estimate **\$50,000**.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Yuba River Watershed and FireSafe Council
- Local Service Groups
- Tahoe National Forest
- Plumas National Forest
- Natural Resources Conservation Service
- Feather River Air Management District
- Dobbins - Oregon House Fire Department



Oregon Ridge Fuel Break



29 Appendices

1. [Assets at Risk Ranking Methodology](#)
2. [Individual Assets at Risk maps](#)
3. [NYP Implementation Process](#)
4. [PRC 4291 - Defensible Space and Fuel Break Guidelines](#)
5. [Stakeholder Input Information](#)
6. [Structural Ignitability Section](#)
7. [Auburn Recreation Area FirePlan](#) (not updated in 2006)
8. [Nevada County Fire Mitigation Framework](#)

A. CDF Fire Plan Assets at Risk.

Asset at Risk	Public Issue Category	Location and ranking methodology
Hydroelectric power	Public welfare	1) Watersheds that feed run of the river power plants, ranked based on plant capacity; 2) cells adjacent to reservoir based plants (Low rank); and 3) cells containing canals and flumes (High rank)
Fire-flood watersheds*	Public safety Public welfare	Watersheds with a history of problems or proper conditions for future problems (South Coastal Plain, field/stakeholder input), ranked based on affected downstream population
Soil erosion	Environment	Watersheds ranked based on erosion potential
Water storage	Public welfare	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	Public health	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Public welfare	Four mile viewshed around Scenic Highways and 1/4 mile viewshed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Public welfare	Timberlands ranked based on potential damage by FIA region/owner
Range	Public welfare	Rangelands ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Public health Environment Public welfare	Potential damages to health, materials, vegetation, and visibility; ranking based on vegetation type and air basin
Historic buildings	Public welfare	From State Office of Historic Preservation, ranked based on fire susceptibility
Recreation	Public welfare	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility
Structures	Public safety Public welfare	Ranking based on housing density and fire susceptibility
Non-game wildlife	Environment Public welfare	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Game wildlife	Public welfare Environment	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders – Omitted statewide in 2005 due to lack of methodology/data
Infrastructure	Public safety Public welfare	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines)
Ecosystem Health	Environment	Ranking based vegetation type/fuel characteristics

* Fire-Flood watershed asset data is currently for southern California and has not been included in this document.

B. The individual assets at risk maps follow. (Maps located at end of document)

Some maps have not been updated as the values at risk and rankings have not changed since the last map was published.

Included are:

[Hydroelectric Power](#)

[Soil Erosion](#)

[Water Storage](#)

[Water Supply](#)

[Scenic](#)

[Timber](#)

[Range](#)

[Air](#)

[Historic Buildings and Landmarks](#)

[Recreation](#)

[Housing](#)

[Wildlife: Represents both Game and Non-game Wildlife](#)

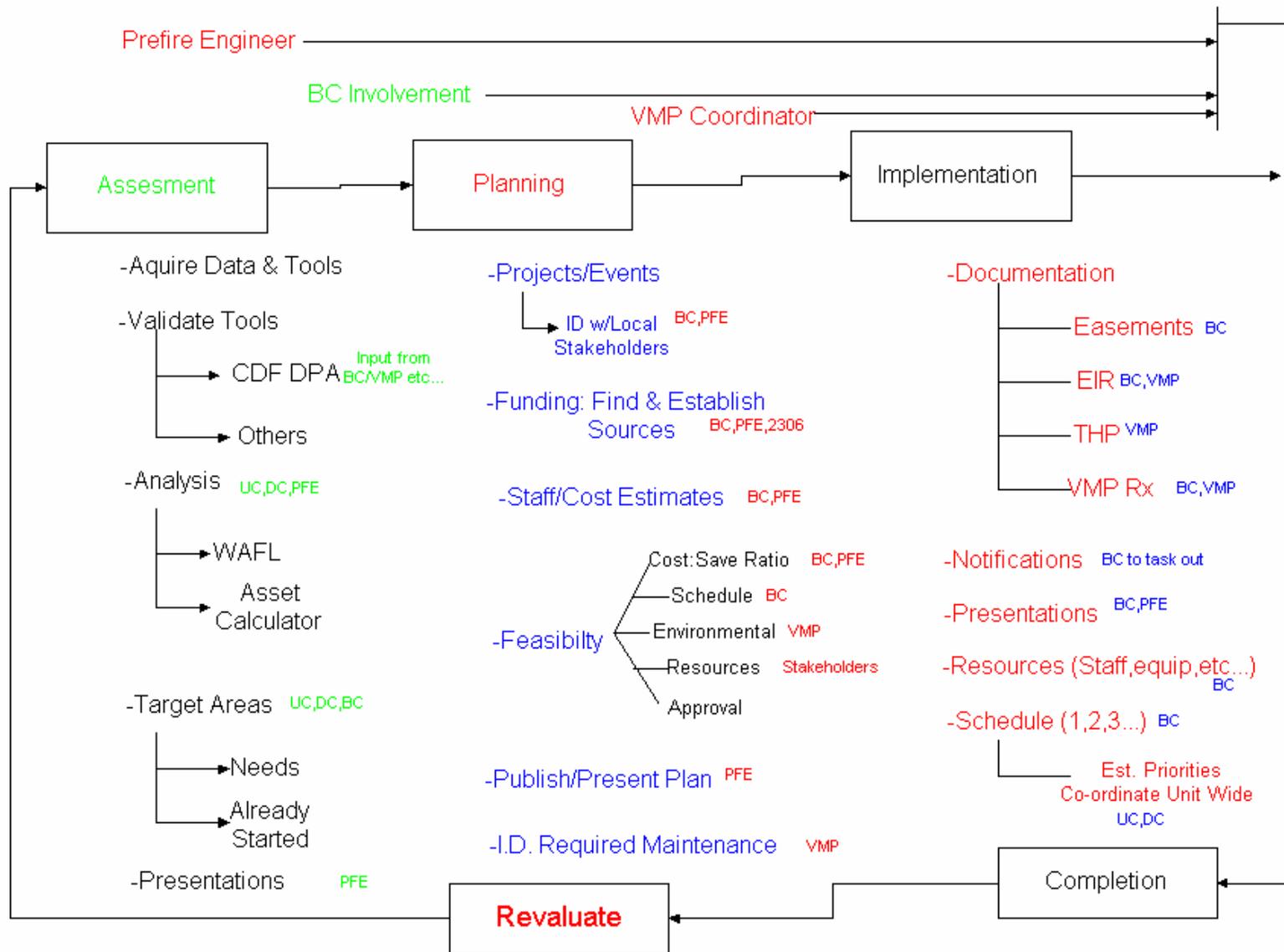
[Infrastructure](#)

[Fire-Flood Watershed](#)

[Ecosystem](#)

[All Watershed Assets Combined](#)

NYP Pre-fire Management Plan Implementation Process



Standards for Hazardous Fuel Reduction for Nevada-Yuba-Placer Unit

In previous Fire Plans, three separate fuel reduction prescriptions were described (Defensible Space, Defensible Landscape, and Modified Shaded Fuel Break). With the adoption of the new PRC 4291 standards, NYP is recommending landowners utilize the guidelines adopted statewide. Further, we recommend landowners utilize the “Defensible Space – Reduced Fuel Zone” guidelines for areas beyond the required 100 feet. These guidelines can be downloaded from the Internet at :

http://www.bof.fire.ca.gov/pdfs/4291finalguidelines2_23_06.pdf

The prescription for a Modified shaded fuel break has been retained for reference.

Modified shaded fuel break: defined as a defensible location, where fuels have been modified, that can be used by fire suppression resources to suppress oncoming wildfires. Any fuel break by itself will NOT stop a wildfire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack or firing out. Air resources can use the location for fire retardant drops. The public and fire resources can use the location for more efficient ingress and egress.

The only trees eligible to be removed under the following prescriptions are in the 10- inch diameter class (diameter of main stem at breast height) or smaller. All trees larger than the 10- inch diameter class will only be pruned to a height of 8 to 10 feet above the ground, not to reduce the live crown ratio of the plant to below 50%. Exceptions for defective trees and snags are noted below.

I. Modified Shaded Fuel Break Prescription:

Implementation consists of removing or pruning trees, shrubs, brush, and other vegetative growth on the project area. For site protection, all work is encouraged to be completed by use of a masticator and/or hand crews supported by chippers and/or burning. Heavy equipment with blades is not recommended for use for fuel reduction work.

1. Understory Fuels

Understory fuels over 1 foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or groups of plants up to 10 feet in canopy diameter may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

For rare and endangered species concerns, elderberry trees shall not be removed or treated within the shaded fuel breaks in elevations below 3000 feet.

2. Mid-story Fuels

Only trees up to the 10-inch diameter class (at breast height (dbh)) may be removed. Exception to this size limit shall be trees that have significant defect and/or which do not have a minimum of a 16-foot saw log. Live but defective trees larger than the 10-inch diameter class providing cavities or obvious wildlife use will be retained.

Trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines. Larger overstory trees (> 10 inches dbh) do count as residual trees and, in order to reduce ladder fuels, shall have vegetation within their drip lines removed. Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

For rare and endangered species concerns, elderberry trees shall not be removed or treated within the shaded fuel breaks below the 3000 feet elevation level.

Criteria for residual trees (< 10 inch diameter class (dbh)):

Conifers:

Leave trees that have single leaders and thrifty crowns with at least 1/3 live crown ratio.

Conifer leave tree species in descending order:

- Ponderosa pine
- Sugar pine
- Douglas fir
- White fir
- Incense cedar

Intolerant to shade species have a higher preference as leave trees because their seed will be less likely to germinate in the understory.

Snags

Snags are a conduit for fire spread during a wildfire. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

18 inch diameter class or larger and not more than 30 feet in height which are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

Hardwood trees:

Leave trees that have vertical leaders and thrifty crowns with at least 1/3 live crown ratio. Retain all elderberry trees.

Hardwood leave tree species in descending order:

- Big Leaf Maple- Riparian area, less common
- Blue Oak - least leaf surface area, less volatile when burning
- Black Oak - higher leaf surface area
- Madrone - more volatile when burning
- Live Oaks - most volatile when burning, branches closest to ground.

Brush:

It is desirable to remove as much brush as possible within the shaded fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more that 5 feet wide. Retain all elderberry trees.

Brush leave species in descending order:

- Toyon – Less Common
- Buckeye – Less Common
- Dogwood – less common
- Lemmon Ceanothus - less common, less volatile
- Buck brush (Wedge leaf ceanothus) - smaller brush plant, less volatile
- Redbud - less common

Coffeeberry - less common
Whitethorn - lower lying plant
Deer brush - larger plant, high leaf surface area, more volatile when burning
Manzanita - larger plant, high leaf surface area, more volatile when burning
Chamise - foliage contains highest amount of flammable oils, most volatile when burning

3. Wetlands:

Functional wetlands will be avoided for treatment and ground operations.

4. Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

WLPZ widths shall be in conformance with Title 14, California Code of Regulations, 936.5, Procedures for Determining Watercourse and Lake Protection zone Widths.

916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

Table 2

Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures¹

Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.
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Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
>50	150 ²	ADG	100 ³	BEI	See CFH		See CFI	

1 - See Section 916.5(e) for letter designations application to this table.

2 – Subtract 50 feet width for cable yarding operations.

3 – Subtract 25 feet width for cable yarding operations.

Class I watercourse (Fish bearing):

Exclude from treatment and equipment operations (except on existing roads).

Class II watercourse (Aquatic habitat for nonfish aquatic species):

No treatment of overstory and the treatment of understory will not reduce vegetative cover below 50%. One thousand hour and smaller sized dead fuels (≤ 5 inches in diameter) will be removed. Ground based equipment will not operate within the zone except on existing roads. Prune residual trees.

Class III watercourse (No aquatic life present):

Full shaded fuel break prescription will be implemented but no ground based equipment will operate within the zone except on existing roads.

Summary of AAR Adjustments in Response to Stakeholder Comments Nevada-Yuba-Placer Ranger Unit FRAP 7/26/96

Hydroelectric

Stakeholder	Comment	Action/Response
YCWA	There are 2 plants at Englebright Lake, and since their output is over 50 it should be ranked medium	They were added to the database from the DWR list. However, all reservoir based plants are treated as Low ranking, regardless of capacity
YCWA	Sedimentation of storage facilities can reduce power generation	The primary impact on power we considered was sedimentation affecting equipment. Since reservoirs help to settle out particles, reservoir based plants are all ranked low. If others in this stakeholder group also think that power reduction due to lowered storage capacity is significant, we may want to rethink how we rank reservoir based power plants.
PCWA	There are missing plants in Michigan Bluff and Foresthill quads	The DWR list has the Oxbow and Ralston plants in this area (both PCWA). PCWA provided lat-lon for these plants.
PCWA	Provided lat-lon coordinates for 5 plants	Used the data to generate new locations for these plants
NID	Provided erodibility estimates for some lakes/reservoirs	Changed ranking for Bowman and Spaulding reservoir based plants from Low to unranked due to low erodibility
NID	Provided a map showing plants and canals	Led to some minor adjustments in plant locations, major adjustment for Chicago Park Plant. Also was invaluable for locating additional canals. Assumed that the canals above NID were primarily for power, at or below NID are for water supply.

Fire-Flood

The input from stakeholders is difficult to use in its current form, since they identified streams, not watersheds. I suggest we start printing copies of the 3D large stakeholder map and add CALWATER planning watershed boundaries. We can provide these to stakeholders to identify actual watersheds.

Secondly, the rankings they are assigning are not consistent with the description of this AAR. The ranking should be based on downstream population that might be affected by the fire-flood

sequence (this is a public safety issue!). Stakeholders need to be given proper direction to distinguish this AAR from the soil erosion AAR, which is related exclusively to erodibility.

Some areas they identified in lower elevations certainly have a flooding problem, but fire probably has a minimal impact due to low erodibility and flat slopes. After further discussions between our hydrologist and the stakeholders, we eliminated all areas except the Bear River drainage, which is assigned a Low ranking.

Water Storage

Stakeholder	Comment	Action/Response
NID	<p>Provided a map and a list of facilities with dead storage capacity and erodibility</p> <p>1) a number of smaller facilities we missed were listed, but they all had low erodibility</p> <p>2) Rollins was listed as having high capacity</p> <p>3) Bowman, Jackson Meadows, and Lake Spaulding were identified as having low erodibility</p>	<p>1) these facilities would not be ranked so we did not add them in</p> <p>2) changed ranking to Low</p> <p>3) Changed to unranked</p>
YCWA	Bullards is a critical source of ag water for Yuba County	Under our criteria this is still classified as a storage facility. Since they consider it to be high value, we could rank it High for storage under our criteria if it also has a low dead storage capacity. Based on their concerns, I changed the rank to High.
YCWA	Camptonville quad cells 27, 36, and 43 contribute to sedimentation which is a big problem here	Changed rank of these cells to High

Water Supply

Stakeholder	Comment	Action/Response
NID	Provided maps of ditch locations	Within the NID area, ditches on the map were captured and assigned as water supply features.
	Combie?	

Scenic

Stakeholder	Comment	Action/Response
?	Tahoe Basin should be ranked High - designated as a National Treasure by Congress	Assigned a High ranking to Tahoe Basin
?	The American and Yuba rivers are designated scenic rivers	According to our information, the American is designated, and this has been added. However, the Yuba is designated as "study" and was not added
?	I80 and hwy49 are designated scenic	We have parts of them included
?	All areas over 5500' should be designated as scenic	Many of these areas are (e.g. Tahoe Basin). Ranking all these lands would diminish the relative importance of the areas that are currently ranked
?	Trails should be designated as scenic	Some of the more prominent trails may be ranked in the recreation AAR. Capturing and ranking all trails is probably not realistic.
?	Hwy89 and 267 in Tahoe should be included	Part of 89 is in the scenic loop. Also, part of 89 that starts at the county line but goes into El dorado county is designated scenic - its viewshed does extend into NEU.

Air

Concerns were raised over the studies used as the basis for the methodology. While the absolute dollar values can be questioned, the real issue is whether relative rankings between air basins/veg types are correct. Since no stakeholder provided meaningful comments to suggest changes, the initial rankings were retained.

Recreation

Based on stakeholder input, the Western States Trail was added as a recreation feature.

Game Wildlife

In 2005 we were informed that this category had been omitted from the statewide assessment process as there was no agreed upon methodology to assess the data. NYP has left this item in

due to stakeholder input. We will be utilizing the default values until such time as we can come up with a widely accepted methodology to rank these values.

Non-game Wildlife

We were never able to get participation from the local Fish and Game biologist, i.e. the data were never validated. Kevin Schaefer suggested that we just use the initial rankings.

Also, the Forest Service did not agree with the representation of their lands. In the future, we need to work closer with them to take advantage of the expertise they have related to USFS lands.

Infrastructure

Since this was added relatively late in the NEU process, it was never validated.

Soil Erosion

We attempted to construct rankings based on stakeholder input, but it was never received. Late in the NEU process we implemented a methodology for ranking cells for soil erosion, but this was not validated.

Recommendations for Ignition Resistant Building Construction

One of the major objectives of wildfire control in general, and pre-fire management hazard reduction in particular, is reducing the loss of life and property. The historical pattern of building loss during Interface fires indicates that vegetation fuel management must go hand-in-glove with ignition resistant building construction to maximize the effectiveness of fire loss mitigation measures.

Building loss and survival on the 1961 Bel Air fire, which destroyed 505 houses, was well documented. The report “**Decision Analysis of Fire Protection Strategy for the Santa Monica Mountains**” (available at <http://www.ucfpl.ucop.edu/UWI%20Documents/167.pdf>) found that 71% of the buildings with 26-50 feet of brush clearance survived the fire. However, the survival rate of buildings exposed to the fire increased to 95% for houses that had both brush clearance and ignition resistant building construction (in this case non-wood roof covering). A similar pattern was seen on the 1990 Santa Barbara Paint fire (Source: “**California’s I-Zone: Urban/Wildland Fire Prevention & Mitigation**” p.120).

On the Paint fire, which destroyed 479 houses and major buildings, the survival rate (above) was 86% for houses with both non-flammable roofing and 30 feet of brush clearance. Only 4% of the 438 houses surveyed in the Paint fire survived where non-flammable roofing and 30 feet of brush clearance were absent. The modeling of structure loss and survival on the Paint fire revealed that brush clearance alone only “explained” or accounted for 11% of the variation seen in the structure survival patterns.

This is strong evidence that vegetation management *alone* will not be able to fully explain, nor mitigate, building loss on wildfires. Hence the need for the comprehensive approach in this plan, using a combination of vegetation management and addressing recommendations for ignition resistant building construction. This is also strong evidence that this comprehensive approach will work. The “**Los Angeles Times**” (1 April 2004) reporting on the Southern California conflagrations of October 2003 clearly revealed the need for, and effectiveness of, combining vegetation management and ignition resistant building construction for reducing building loss in wildfires:

“Amid the ashes of the most costly wildfires in California's history lies evidence of a crucial lesson: Fire-resistant construction and vigilant removal of flammable vegetation significantly improved the odds of a home's survival, according to a Times analysis of fire records from more than 2,300 destroyed structures.

The impression left by an out-of-control fire racing through communities can be one of random destruction, with one house, or a whole block, burned to the ground and the next one spared for no apparent reason.

In fact, according to the Times analysis - which covered homes destroyed by the deadliest of the blazes, San Diego County's Cedar fire - houses built since 1990 were far less likely to burn than those constructed in any previous decade. Houses built during the 1990s were damaged or destroyed at less than half the rate of houses built earlier.”

The communities and homeowners covered by this plan have, for the past 40 years, had recommendations that can be (and have been) taken to reduce the ignitability of structures. An outcome of the 1961 Bel Air fire was publication of the “**Fire Safety Guides for California Watersheds**” by the County Supervisors Association of California in 1965. These recommendations have been updated through the years. The current version of these “Fire Safe Guides” is “**Structural Fire Prevention Field Guide for Mitigation of Wildfires**” and can be found at <http://osfm.fire.ca.gov/structural.html>.

These recommendations for ignition resistant building construction include:

- Roofing
- Eaves & Balconies
- Exterior Walls
- Rafters
- Windows
- Doors
- Attic ventilation openings
- Underfloor Areas

In response to the persistent loss of life and property in wildfires the most important of the recommendations is now a requirement. All new buildings, and significant re-roofing of existing buildings in the communities covered by this plan are required to have ignition resistant roofing (California Building Code §1503).

Additional information regarding Structural Ignitability may be found on the Internet at http://www.nps.gov/fire/download/pub_public_wildlandfirethreat.pdf

Auburn State Recreational Area



June 2005
(not updated for 2006)

Fire Management Plan

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Nevada-Yuba-Placer
Fire Management Plan

INTRODUCTION

The United States Bureau of Reclamation is responsible for the management of the Auburn Dam and Reservoir Project lands, a project originally authorized by Congress in 1965. The total acreage within the project boundary is 42,000 acres. Of this, Reclamation has ownership for approximately 26,000 acres. The remaining acreage is owned by BLM, the United States Forest Service, and private parties. California State Parks and Recreation (CSP) and California Department of Forestry and Fire Protection (CDF) have management authority over all Project lands through cooperative agreements with Reclamation. The total lands are known as the Auburn State Recreation Area (ASRA) and are operated by the State of California as a state recreation area.

The California Department of Forestry and Fire Protection has provided fire prevention and suppression services at the Auburn Dam and Reservoir project lands since 1979. Elements identified in the contract as a part of fire prevention and suppression services involve: 1) plan for fire suppression, 2) patrol the designated areas, 3) operate heavy equipment to construct and maintain fire roads, breaks and to reduce fire fuel, and 4) improve wildlife habitat.

This document will guide the activities of CDF personnel and act as a plan to accomplish fire prevention and suppression activities in the Auburn State Recreation Area.

STRATEGY

The strategy involved with identifying fire prevention activities in the ASRA is similar to that of developing a battalion fire prevention plan. The process begins by evaluating historic and potential ignition locations and causes. Identifying the assets at risk from wildfire within and immediately adjacent to Reclamation lands. Evaluating fire history, and evaluating fuels hazards throughout. An additional component involves an assessment from Department of Parks and Recreation resource ecologists to identify ecosystem conditions and what prescribed fire's role would effect.

After combining and evaluating the factors listed, pre-fire management activities or a prescription will be established in order to mitigate the identified threats, hazards of wildfire ignition, and protect assets at risk from wildfire.

An approach using "target areas" may be used to assist with focusing efforts; however, as of the time of this document creation, it is not necessary.

VISION STATEMENT

It is important to describe the, "Ideal Condition" of the Reclamation lands receiving fire prevention service. This statement provides the "light at the end of the tunnel", and is the condition which to focus activities towards.

A setting where accomplished fire prevention activities mitigate wildfire ignition and wildfire effect involves: 1) Fuel breaks adjacent to resource and property assets threatened by fire on Reclamation lands, 2) maintained fire roads with safety zones in strategic locations, 3) handline constructed around day use areas/picnic areas throughout the ASRA, 4) maintenance of established fuel breaks 5) fire prevention signage at all use areas throughout the fire season, 6) coordinated forest and fire law enforcement and patrol in all areas of ASRA, 7) establishment of industrial operations guide for industrial operators on Reclamation lands, with enforcement of the regulations within the guide and, 8) continued aggressive fire suppression of wildfires within the ASRA under CDF's operating procedures.

GOAL

To protect life and both public and private resources by reducing the risk and hazard of wildland fire within the Auburn State Recreation Area by implementing management strategies that promote the preservation and restoration of natural resources and protection of cultural resources.

FIRE PLAN ASSESSMENTS

Fire plan assessments influence the prioritization and selection of fire prevention activities. These factors are the proof or statistics supporting prioritization. Not all projects are prioritized based on the assessments; other influences guide projects as well, such as: Politics, past practice, cost and ethics.

Fire Ignition History and Potentials

The leading number of ignitions in the ASRA are categorized as “miscellaneous” causes. Statistically, this information is not of much assistance to the planner, however, the following is. Arson is the second highest cause. Many fires are unidentified, which can be translated to either arson or vehicle caused fires. See Ignitions Map and Cause maps for distribution by cause.

VEHICLES

There are several thoroughfares within the ASRA, Hwy 49, Forest Hill Rd, Yankee Jims Rd, Ponderosa Way, and Auburn Foresthill Rd. These roads provide the highest potential from which, fires may start. The fire ignitions originate from vehicle exhaust, vehicle fires, and arson.

Other vehicle fire potential stems from the recreational vehicle use at Mammoth Bar and traffic leading to it. It is imperative that recreational vehicle exhaust systems be checked for compliance and limited to designate areas. Additionally, it must be mentioned, there has not been a recorded fire starting from a recreational vehicle within the Mammoth Bar OHV area. This displays the effectiveness of managed recreational use and adequate engineering to prevent fires from the OHV area.

POWERLINES

Another potential ignition source exists from power line system within the ASRA. 3% of fires in the ASRA have been a result of powerline caused fires; however, these fires contribute a high percentage of acres, relatively, to the overall acres burned over the last twenty years. The ASRA contains both transmission and distribution lines, which must be inspected annually.

RECREATIONAL

Wherever there are human activities, the potential for fire exists. The ASRA provides recreation opportunities, which enable people to venture into the wildland by vehicle, foot, and other non-conventional means. Although, there is not a high quantity of fires starting from people hiking, fishing, bike riding, horse back riding and rafting, uneducated people burning toilet paper, sparks from horseshoes striking rocks, and illegal warming fires create the potential for fire ignitions. Fires started by these sources may be difficult to access by firefighting personnel, thus the fires get to extended attack and major status. The Ignitions Spot Map displays the pattern of fire causes and their relative location. It is obvious that many fires originate around the “confluence” and the Forest Hill Bridge. These areas will receive, as they have in the past, high fire prevention attention.

It is important to note that since 1990 there have been approximately 100 fires in the ASRA, while the ASRA has received extremely high visitation. The ASRA received 287,891 visitors in fiscal year 1994-1995 and has steadily increased to 987,971 visitors in fiscal year 2000-2001. The ratio of fire starts to visitors is very low. Much of this success is related to managed recreational use and steady fire prevention efforts. (See Ignition Spot Map).

ASSETS AT RISK

Assets at risk in the ASRA involve natural resources and private properties in the form of residential structures and the lives of the people living in them. Structures located within the ASRA and whose residential properties adjoin the property with Reclamation lands are threatened by fire originating from the ASRA. On the other hand, natural resources are threatened by fires originating from those same structures. These interface lands create a significant management issue and will be addressed later in this document (see Housing Density Map). Reduction and quick control of unwanted fires protects these assets.

The location of highest structural risk involves the structures on the canyon rim in the City of Auburn and unincorporated areas down canyon and up canyon of the City. These residential properties share boundaries with the Reclamation lands and thus are directly influenced by wildfire originating on Reclamation lands.

The location of second highest priority involves the interface at the community of Cool in El Dorado County. This community has a moderate housing density and is also an exposure to wildfire burning out of the ASRA and into the community as does the threat from fire burning into the ASRA from the community. There is a process of further developing and maintaining a fuel break on the canyon rim adjacent to Cool primarily being performed by the CDF battalion chief in Amador –El Dorado Unit who has the Cool area in his/her battalion.

WILDFIRE HISTORY

Unfortunately, the fire history map in this document includes fires over 300 acres in size, however, the ignition spot map may be used to identify fire frequency. The benefit of the fire history map relates to the frequency of large damaging wildfires in the ASRA. Another aspect of the map reveals where fire has not occurred, which identifies the build up of fire fuels, which identifies the potential for large damaging fires. Another aspect of the map reveals the dependence that fire suppression resources put on stopping fires at the ridge tops. This information is useful while interpreting future and existing fuels management projects to other agencies and citizens.

FUEL HAZARD

The Fuel Hazard map displays fuel hazard status to the nearest 450 acres. Although, this map does not reflect fuels management activities, it can display the current status over the general area and show what the vegetation potential is. The last fires to burn in the ASRA having significant vegetation impacts were in the 1960s, yet the fuels status are high and very high. If correlated with the fire history map, the amount of fire fuels build up from a lack of fire is also evident.

WILDLIFE HABITAT

The most effective method of restoring the ecosystem to its original state is to reintroduce fire into the ecosystem. This creates edge, diversity, and reestablished native plant and animal species. The additional benefit is a reduced fuel load assisting fire suppression forces during wildfire events. Identify on map. State Parks resource ecologists have been consulted to provide information regarding potential projects involving prescribed fire and any favorable locations to burn. Although, a response to my request for input for relating to potential controlled burn locations has not been received, coordination efforts will be continued with CSP resource ecologists.

LAW ENFORCEMENT

There will be a continuous effort to enforce the Public Resources Code in the ASRA for both planned activities and patrol. Additional laws will be enforced as encountered by the Captain Specialist, such as Penal and Fish & Game Codes. Federal codes may be enforced in the ASRA as the lands are federal.

The Fire Captain Specialist will perform routine patrol of day use areas and popular visitation areas throughout the park. This will be accomplished through aircraft, vehicle, off road vehicle and foot access. Close coordination will occur with State Parks Personnel during many contacts with violators and law enforcement operations.

As per the Industrial Fire Prevention Guide established by the Captain Specialist, all commercial, recreational and industrial projects will be reviewed for fire prevention standards. Inspections of industrial and recreational equipment will be conducted and documented. Red tags will be used to put equipment out of service, if necessary.

Recreational vehicles are subject to inspection, and will be a target of inspection. The Mammoth Bar OHV area is a managed OHV area that receives much attention from state park rangers. Coordination for vehicle inspection is necessary, as to not duplicate efforts and to maintain efficient law enforcement.

Private lands within the ASRA are subject to PRC regulations. Enforcement of the PRC will be a priority on those private lands within the boundaries of the ASRA. The goal is to reduce fire threats to the ASRA wildland.

ENGINEERING

Fire prevention engineering is the most influencing factor relating to protecting assets at risk from wildfire. Engineering involves the creation of fuel breaks, fire breaks, fire road construction, and other fuels management activities. *CDF's primary pre-fire engineering fuel break strategy involves two objectives: Protect assets at the canyon rims, and inhibit fire from spreading up and down the river canyons.* There is an existing system of fuel break throughout the ASRA (see Fuel Break Map), which are designed behind this philosophy. They are listed below. Both shaded and unshaded fuel breaks are evaluated for condition and need on an annual basis. The establishment of new fuel breaks is also an evolving process, which is paced by resource availability and future maintenance capabilities. There are two wildland-urban interface shaded fuel breaks proposed in the ASRA. The Auburn Shaded Fuel Break is proposed to stretch along the canyon rim adjacent to the City of Auburn, and the Auburn Lake Trails Fuel Break is proposed to rest along the canyon rim and adjacent to the community of Auburn Lake Trails. Work on the Auburn Fuel Break is scheduled to start in May of 2002 while the Auburn Lake Trails Fuel Break is proposed to begin in 2003.

Fire roads are also an integral part of pre-fire engineering. The fire road system in the ASRA is intended to provide access for fire suppression crews to areas difficult to access. Additionally, the fire road system provides, to a lesser extent, fire break benefits when applicable. The fire roads are incorporated into wildfire preplanning and tactics while fighting wildfire. Fire roads within the ASRA are maintained by CDF, and are evaluated annually. The fire roads within the ASRA are listed below. (See Fire Road Map for correspondence)

Prescribed burning is another tool used as a pre-fire engineering mechanism, which modifies fuels into a less hazardous loading and provides wildlife habitat conditions favorable to early stage succession. With the exception of the "Bridge Burn" controlled burn planning is evolving. In terms of strategic planning for prescribed burns, effort will focus on wildlife habitat improvement, exotic weed control and fire fuels reduction. With the evolution of this document, future editions will identify the strategic use of controlled burning.

Nevada-Yuba-Placer
Fire Management Plan

FUEL BREAKS IN THE ASRA (Does not include trails)

<u>NAME</u>	<u>LOCATION</u>	<u>NUMBER</u>
Long Point Fuel Break	Upper end of Lake Clem, South of river	1
Drivers Flat	Drivers Flat road area south of Long Point	2
Brushy Mtn	Along Brushy creek down to Middle Fork	3
Mammoth Bar	Connects Forest Hill Rd & Mammoth Bar	4
Auburn Shaded Fuel Break	Along canyon rim/ Auburn City	5
Auburn Lake Trails Fuel Break	Along canyon rim/ Auburn Lake Trails	6

FIRE ROADS

<u>NAME</u>	<u>LOCATION</u>	<u>NUMBER</u>
Stage Coach	Under Forest Hill Bridge	1
Drivers Flat	Drivers Flat to river canyon	2
McKeon- Ponderosa	Middle fork to Ponderosa Rd	3
Lake Clementine Access	Lower Lake Clem Rd to middle of Lake	4
Knickerbocker Flat	Olmstead Loop trail, Cool	5
Long Point South	Foresthill Rd to Mid Fork Am River	6
Long Point North	Foresthill Rd to N. Fork Am River	7
Western States	Hwy 49 under Robie Point	8

INFORMATION/EDUCATION

Information and education is a necessary tool to the prevention of fire within the ASRA. CDF will be proactive in attempts to reach visitors to the ASRA. The primary method of information will come from sign posting. Non traditional sign locations will be identified and posted. The public contact made by the Fire Captain Specialist will be a major educational component, and when necessary, media releases will be made through radio and newspapers.

YEAR 2005

FIRE PREVENTION PLAN

The intent of this annual Plan is to organize a sequence of events or projects that drive CDF personnel to achieving the goals and vision described in the Auburn State Recreation Area Fire Prevention Plan.

In 2005, there will be few new developments for fire prevention on the Bureau of Reclamation Project Lands (ASRA). Most of the fire prevention activities will be maintaining and revisiting projects developed in 2002 & 2003. Fire prevention projects within the ASRA are categorized within the following three wildfire prevention elements: Law Enforcement, Engineering-Planning, and Information-Education.

LAW ENFORCEMENT

PATROL

Law enforcement patrols will occur throughout the ASRA, although, high priority areas will receive more frequent patrol, many areas of the park will be patrolled. High priority patrol areas include: **River confluence, Lake Clementine (upper and lower), down river of confluence, and Mammoth Bar**. These areas receive the majority of visitation during the summer and have a history of fires.

Priority
H <u>X</u> <u> </u>
M <u> </u> <u> </u>
L <u> </u> <u> </u>

There will be coordinated patrol efforts between state park rangers and CDF (P2323). Often the need arises for hike-in contacts or high-risk contacts, where back up and more officers are necessary to make contact with violators. As these situations arise without notice, the mutual aid efforts are developed as needed.

There is intent to have 4th of July patrols throughout the recreation area, with the high use/priority areas receiving the majority of attention. Law enforcement operation will involve surveillance and high visibility patrols. This effort will be coordinated with other law enforcement agencies if the need arises.

Priority
H <u>X</u> <u> </u>
M <u> </u> <u> </u>
L <u> </u> <u> </u>

INSPECTIONS / CODE ENFORCEMENT

There will be a meeting between PG&E and CDF to identify distribution and transmission lines throughout the ASRA. These lines will be inspected for PRC 4292 and 4293 compliance. All lines on private lands within the ASRA will also be subject to inspection. Violations will be documented and handled throughout the fire prevention bureau's notification or citation process.

Priority
H <u> </u> <u> </u>
M <u>X</u> <u> </u>
L <u> </u> <u> </u>

There will be inspections of all commercial, industrial and recreational projects within the ASRA for PRC compliance and compliance with the requirements identified in the Fire Prevention Requirements for Industrial, Commercial, and Recreational guide for the ASRA. Equipment will be inspected on all such operations. (Refer to Guide for additional information).

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

All structures on private lands within the ASRA will be inspected in accordance with PRC 4291 as will the code be enforced on such properties. Recording of the location of structures and compliances will be obtained for future records.

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

Further review will be conducted of all activities within the ASRA to determine if fire prevention has been addressed as a condition of implementation. For example, a policy and procedure will be discussed with State Parks involving off road vehicle restrictions during high fire hazard days within the ASRA

Priority H ___ M <input checked="" type="checkbox"/> ___ L ___
--

ENGINEERING / PLANNING

Implement CDF's Fire Prevention Plan for Industrial, Commercial and Recreational Operations for the Auburn State Recreation Area.

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

Update the CDF Fire Prevention Plan for the Auburn State Recreation Area for 2005 and complete a year-end report of activities for 2004.

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

FUEL BREAKS

Continue implementation of the Auburn Shaded Fuel Break. The fuel break is 75% complete. It will be necessary to contract with the RCD for them to hire a project manager on CDF's behalf in order to continue to have a project manager to work on the project.

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

Continue herbicidal and manual maintenance treatments of the Auburn Shaded Fuel Break, State Park Headquarters and the BOR building on Maidu Rd.

Priority H <input checked="" type="checkbox"/> ___ M ___ L ___
--

Nevada-Yuba-Placer
Fire Management Plan

Continue implementation of the Auburn Lake Trails Shaded Fuel Break in conjunction with AEU CDF.

Priority H <u>X</u> M ____ L ____

There will be general fuels reduction work accomplished in all campgrounds in attempts to reduce spotting potential of any fire that does occur within a campground.

Priority H <u>X</u> M ____ L ____

There will be an ongoing effort to identify and record existing fire roads, and fuel breaks along with identifying the need to develop additional fire roads and fuel breaks. Concurrently, there will be an effort to revisit fire roads and fuel breaks that have gone un-maintained for over time. Efforts will occur in the Spring to prioritize projects accordingly.

Priority H <u>X</u> M ____ L ____

FIRE ROADS

The following fire access roads will be graded this year:

Stage Coach	Hwy 49 to Robie point	<table border="1"><tr><td>Priority H ____ M <u>X</u> L ____</td></tr></table>	Priority H ____ M <u>X</u> L ____
Priority H ____ M <u>X</u> L ____			
Long Point	Drivers Flat to river canyon	<table border="1"><tr><td>Priority H ____ M ____ L <u>X</u> ____</td></tr></table>	Priority H ____ M ____ L <u>X</u> ____
Priority H ____ M ____ L <u>X</u> ____			
McKeon- Ponderosa	Middle fork to Ponderosa Rd	<table border="1"><tr><td>Priority H ____ M <u>X</u> L ____</td></tr></table>	Priority H ____ M <u>X</u> L ____
Priority H ____ M <u>X</u> L ____			
Lake Clementine Access	Lower Lake Clem Rd to middle of Lake	<table border="1"><tr><td>Priority H ____ M ____ L <u>X</u> ____</td></tr></table>	Priority H ____ M ____ L <u>X</u> ____
Priority H ____ M ____ L <u>X</u> ____			
Knickerbocker Flat	Olmstead Loop trail, Cool	<table border="1"><tr><td>Priority H ____ M ____ L <u>X</u> ____</td></tr></table>	Priority H ____ M ____ L <u>X</u> ____
Priority H ____ M ____ L <u>X</u> ____			
Sliger Mine Road	Park boundary to Cherokee Bar	<table border="1"><tr><td>Priority H <u>X</u> M ____ L ____</td></tr></table>	Priority H <u>X</u> M ____ L ____
Priority H <u>X</u> M ____ L ____			

More effort will be made to identify fire roads within the ASRA that should be maintained by CDF. The names will be recorded in the Master ASRA Fire Prevention Plan and prioritized in terms of strategic importance. A corresponding map will also be produced.

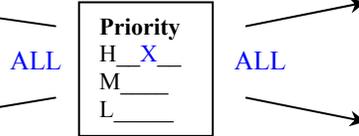
Priority H <u>X</u> M ____ L ____

HAND LINE CONSTRUCTION

Handline firebreaks will be constructed around each area where campfires are permitted. These areas include:

GROUND FIRES ALLOWED

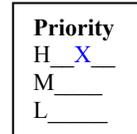
Iowa Hill Campground
Drivers Flat Campground
Kelleher Campground
Lake Clementine Boating Access Camps
Cherokee Bar Campground



BBQS ALLOWED(Seasonal)

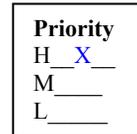
Yankee Jims Parking
Ponderosa Way Parking area
Upper Lake Clem Day Use area

Handlines will be constructed along both sides of the North Fork of the American River at the Forest Hill Bridge. This will be accomplished in June 2004.

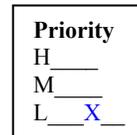


PRESCRIBED FIRE

Understory burning between control lines around the Forest Hill Bridge.



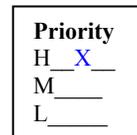
There might be some understory burning conducted on the Auburn Shaded Fuel Break for maintenance purposes.



INFORMATION / EDUCATION

Ensure fire prevention signing is posted throughout ASRA and that signs are in good condition. Make repairs or replace as needed.

Install fire prevention signs at Cherokee Bar.



Nevada County Fire Plan Document

THE NEVADA COUNTY FIRE PLAN



A FRAMEWORK FOR REDUCING THREATS TO PUBLIC
SAFETY AND REDUCING COSTS AND LOSSES AS A
RESULT OF WILDFIRE IN NEVADA COUNTY

August 2004

NEVADA COUNTY FIRE PLAN

ACKNOWLEDGEMENTS

This Fire Plan was prepared with the assistance of numerous individuals who contributed immeasurably to what the Fire Plan Committee believes to be one of the most comprehensive fire plans in the state. Without this group of individuals bringing their broad range of backgrounds and interests to the discussion table, the effectiveness and overall acceptability of the Fire Plan would not be what it is today.

Although many people contributed at various points along the way, a group of individuals were a part of the process from start to finish. The Fire Plan Committee extends their thanks and appreciation to the following people for their interest and contributions:

- Barbara Bashall, Nevada County Contractor's Association**
- Nate Beason, Property Owner**
- Keith and Ellyn Cook, Property Owners**
- Judy Dadigan, CDF Administrative Secretary**
- Rich Johansen, Agricultural Advisory Commission**
- Fire Captain Sean Griffis, CDF Pre-Fire Engineer**
- Division Chief Kelly Keenan, CDF Unit Forester and Pre-Fire Program Manager**
- Charly Price, USFS Graphic Artist**
- Barbara and Don Rivenes, Sierra Nevada Forest Protection Campaign**
- Battalion Chief Chuck Thomas, Truckee Fire Protection District**
- Margaret Urke, California Assn. of Business, Property and Resource Owners**
- Marcel Verdooner, Property Owner**

NEVADA COUNTY FIRE PLAN COMMITTEE

- Tony Clarabut, Chairman, CDF Unit Chief/Nevada County Fire Marshal**
- Tim Fike, Fire Chief, Nevada County Consolidated Fire District (NCCFD)**
- Gary Fildes, Division Chief, United States Forest Service (USFS)**
- Rich Reader, Nevada County Office of Emergency Services (OES)**
- Jeff Dunning, Nevada County Fire Safe Council (FSC)**
- Assisted by**
- 911 Consulting Group, Inc**
- William F. Maxfield, Chief Consultant**
- Jim McFadden, Senior Consultant**

MISSION STATEMENT

PROVIDE RECOMMENDATIONS
TO THE BOARD OF
SUPERVISORS OF MEASURES
TO REDUCE THE IMPACTS OF
WILDLAND FIRES TO LIFE,
PROPERTY AND NATURAL
RESOURCES IN NEVADA
COUNTY.



NEVADA COUNTY FIRE PLAN

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NEVADA COUNTY FIRE PLAN

FIRE PLAN SUMMARY

On September 23, 2003, faced with a history of large and damaging wildland fires in California and clear indications the trend would continue, the Nevada County Board of Supervisors appointed a five member Fire Plan Committee (FPC) and charged it with developing the Nevada County Fire Plan (NCFP) that would reduce the risk from wildland fires in the County and that would comply with the Disaster Management Act of 2000 and the Healthy Forest Restoration Act of 2003.

The committee, consisting of local, state and federal fire service professionals, as well as representatives from the Nevada County Office of Emergency Services and the Fire Safe Council of Nevada County, provided direction for the Fire Plan development. Committee members were principal advisors and planners for this project and identified key interface issues, which were then refined and validated by a series of focus groups held throughout the County; resulting in a county fire plan designed to reduce the impacts of high intensity, large damaging wildland fires.

Over nine months, the Fire Plan Committee held eighteen public meetings and received public comment on the draft plan in 15 workshops which ultimately led to the Nevada County Fire Plan. This effort was based on an understanding that a century old public policy of fire exclusion in an ecosystem dependent upon fire as a natural fuels management tool has led to the current situation of a tremendous over accumulation of fuels and a predictable likelihood of continued high intensity, large and damaging fires in Nevada County.

These predictable fire dangers are compounded by the increasing number of homes and people living within the wildland urban interface of the County. As a result of four major fires in Nevada County in the last 16 years, nearly 200 structures have been destroyed, with costs of over 33 million dollars in damages and almost \$40 million in suppression costs.

NEVADA COUNTY FIRE PLAN

With the experience of the fire professionals on the committee, input from the public and community stakeholders, and a survey of priorities from the public attendees, as well as research of existing local and state codes and regulations, a long term plan focusing on wildland fuels reduction in Nevada County was developed. This plan is based on recognition of the danger brought about by the vast accumulation of wildland fuels in Nevada County, a problem that is compounded by a human desire to live in an environment where fire has historically been a part of the ecosystem.

The plan focuses on reducing the impacts of large and damaging wildland fires through 42 specific recommendations.¹ These recommendations were agreed upon through a formal prioritization process by the FPC as well as stakeholder input from the public meetings. Those dealing with fuels management and the continuation of fuels reduction assistance programs were determined to be of highest priority by both the public and the FPC.

The efforts of this committee were guided by the premise that the plan needed to present reasonable and achievable recommendations that would directly and positively impact our ability to reside in Nevada County with significantly reduced risk from wildland fire. With the implementation of this plan and the acknowledgement of property owners of their stewardship responsibilities on their own land, the contributors to this plan feel that goal can be reached. Even though we can not be completely assured that losses from wildland fire can ever be fully eliminated, we do know that without significant intervention, the likelihood of large and damaging fires is not only inevitable but will be repeated time and time again.

The Fire Plan Committee developed a collaborative approach for reducing wildland fire risks to communities and the environment in Nevada County. This collaborative approach reflects the views of a broad cross-section of governmental and nongovernmental stakeholders. It outlines a comprehensive approach to the

¹ See Table in Appendix - A

NEVADA COUNTY FIRE PLAN

management of wildland fire, hazardous fuels, and ecosystem restoration and rehabilitation on public and private forest and range lands in Nevada County. The Fire Plan emphasizes measures to reduce the risk to communities and the environment and provides an effective framework for collaboration to accomplish this.

The end results sought by all stakeholders are healthier watersheds, enhanced community protection, and diminished risk and consequences of severe wildland fires.

The primary goals of the Fire Plan are to:

- 1. Reduce Fire Severity and Intensity through Fuels Management*
- 2. Enhance Public Safety and Improve Effectiveness of Emergency Services through Infrastructure Improvements*
- 3. Reduce Risk to Life and Property through New or Revised Codes, Ordinances and Compliance Programs*
- 4. Increase Community Awareness and Involvement to Promote Participation and Voluntary Compliance*
- 5. Involve Fire Agencies, County Departments, Public and Private Land Managers, and the Fire Safe Council in Collaborating on County-Wide Goals and Plans to Consistently and Efficiently Implement Mitigation Measures*

New management practices, skills, and tools and the acceptance of stewardship responsibilities are needed to address the changing environment of the wildland-urban interface. New fuels management and fuels reduction programs were determined by the FPC to be of greatest importance towards addressing wildland-urban interface challenges, opportunities, and needs in Nevada County.

NEVADA COUNTY FIRE PLAN

THE ROLE OF LOCAL GOVERNMENT

Large areas of once primarily contiguous forestland in Nevada County are increasingly influenced by humans and are surrounded by or intermixed with urban development. These areas of increased human influence and land use conversion make up the wildland-urban interface. Historically, severe wildfires throughout California have demonstrated the complex challenges that the wildland-urban interface presents for the diverse group of people that live and work there. The result of four major fires in Nevada County in the last 16 years brought the wildland-urban interface fire problem to the forefront for the Nevada County Board of Supervisors, spurring the development of this Fire Plan.

How, when and where land can be used, and who makes that determination is one of the most contentious questions faced by any community that is in the wildland-urban interface. Conflicts can arise between newcomers and long-term residents; between private and public land management needs; and between Federal, State, and local governments. Current land-related public policies at all levels of government are contributing to the severity of these conflicts by failing to provide a way for communities to direct and control the increasing demand for land development that results when large numbers of people move into the interface. As long as people have the ability and desire to live in rural and undeveloped areas, land use policies should be designed to minimize the negative impacts such movement has on natural resources in the interface.

Local governments have traditionally held the authority to make land use decisions because, in addition to being seen as more sensitive and responsive to local concerns, they are perceived as having more expertise in implementing fair and efficient land use policy. These local land use policies, however, often have the effect of increasing development and expanding the wildland-urban interface.

NEVADA COUNTY FIRE PLAN

The Planning Process

The success of the FPC is a direct result of stakeholders' involvement in the development of the Nevada County Fire Plan. This Fire Plan is the result of a collaborative effort of the FPC and the primary stakeholders in Nevada County. The comments and contributions obtained through the public workshops, as well as several individual Fire Plan presentations to special interest groups, contributed to the goals, objectives and recommendations in this Plan.



Over nine months, the Fire Plan Committee scheduled meetings twice a month which the public attended and contributed valuable input to the process. In addition, the FPC hosted workshops throughout the County including Truckee, Grass Valley and North San Juan.

Observations were compared with industry standards of “best practice”. These sources include:

- California Public Resources Code (PRC 4290, 4291)
- Urban-Wildland Interface Code
- California Fire Plan
- Uniform Fire Code
- California Department of Forestry and Fire Protection
- United States Forest Service
- National Fire Protection Association

The FPC reviewed the following components:

- Overview of the Community
- Stakeholders
- Geographic Setting
- Fuels

NEVADA COUNTY FIRE PLAN

- New Construction Development
- Weather Conditions
- Fire History
- Roads
- Water Availability
- Community Fire Safe Plans Templates

This information was used to develop specific recommendations for the Fire Plan. The recommendations represent opportunities to minimize potential loss of life and property from wildfire and improve the quality of service provided to the citizens of Nevada County.

While reduction of major destruction of property and loss of life can be achieved partly through proper implementation and enforcement of fire hazard zoning and mitigation laws, it should be noted that there can be no guarantee that a major fire can be prevented from causing major destruction of property or loss of life.

NEVADA COUNTY FIRE PLAN

INTENT OF THE FIRE PLAN

The intent of the NCFP is to provide to the Board of Supervisors recommendations to reduce the impacts of wildland fires to life, property and natural resources in Nevada County. Secondary to the intent of reducing the impact of wildland fires, this plan is intended to meet the requirements of the Disaster Management Act of 2000 and the Healthy Forests Restoration Act of 2003 in order to maintain grant eligibility for wildland fire mitigation projects.

The purpose of the Disaster Mitigation Act of 2000:

- (1) Establishes a National Pre-Disaster Mitigation Fund for a 3-year period
- (2) Governors may recommend 5 or more local communities annually for assistance
- (3) Funds are provided for technical assistance to communities
- (4) "Small impoverished communities" may receive increased federal shares
- (5) Federal Emergency Management Agency (FEMA) to establish an interagency task force to coordinate Federal pre-disaster mitigation

The purpose of the Healthy Forest Restoration Act of 2003:

- (1) To reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects;
- (2) To authorize grant programs to improve the commercial value of forest biomass (that otherwise contributes to the risk of catastrophic fire or insect or disease infestation) for producing electric energy, useful heat, transportation fuel, and petroleum based product substitutes, and for other commercial purposes;
- (3) To enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape;
- (4) To promote systematic gathering of information to address the impact of insect and disease infestations and other damaging agents on forest and rangeland health;
- (5) To improve the capacity to detect insect and disease infestations at an early stage, particularly with respect to hardwood forests; and
- (6) To protect, restore, and enhance forest ecosystem components.

NEVADA COUNTY FIRE PLAN

WILDLAND FIRE HAZARD MITIGATION

Nevada County interface challenges are complex, compelling, and shared commonly among a diverse group of people who live and work in the interface. Many of these challenges are due to differences in the number of private landholdings, topography, climate, vegetation type, and culture. However, natural hazards, such as wildland fires, are a part of the world around us. Their occurrence is natural and inevitable; still, there is much we can do to control their force and intensity.

“Hazard mitigation” is a technical term for efforts aimed at reducing risks to people and property from natural hazards. It includes both structural measures, such as protecting buildings and infrastructure from the forces of fire, and non-structural measures, such as natural resource protection and wise vegetation management. These activities can target existing development or seek to protect future development by avoiding any new hazardous construction. It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made.

The easiest way a community can get serious about hazard mitigation is through the development and adoption of a local hazard mitigation plan. A mitigation plan will ensure that measures to reduce the present and future vulnerability of a community are thoroughly considered before, during, and after the next disaster strikes.

Mitigation planning offers many benefits that include:

- Saving lives and property;
- Saving money;
- Speeding recovery following disasters;
- Reducing future vulnerability through wise development / redevelopment;
- Expediting both pre-disaster and post-disaster grant funding; and
- Demonstrating a firm commitment to improving community health and safety.

NEVADA COUNTY FIRE PLAN

More importantly, mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of mitigation is that current dollars invested in mitigation practices will significantly reduce the demand for future dollars by lessening the amount needed for emergency recovery, repair and reconstruction. Further, these mitigation practices will enable local residents, businesses and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track sooner and with less interruption.

Mitigation planning also leads to benefits that go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health and natural features, and enhancing recreational opportunities.

NEVADA COUNTY FIRE PLAN

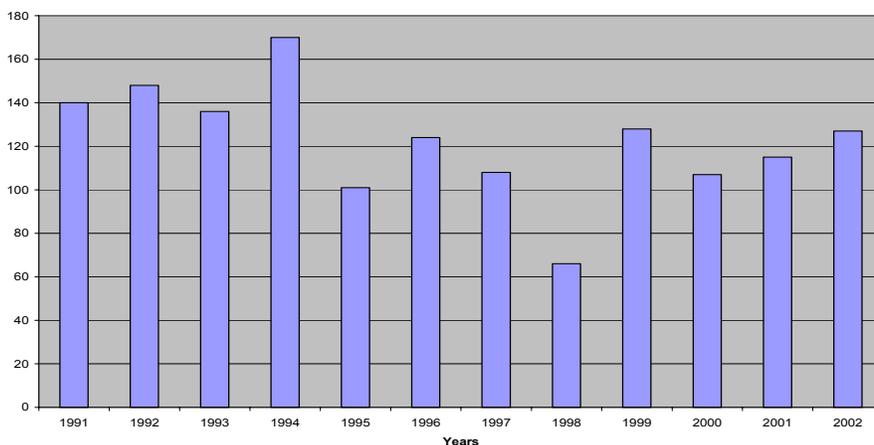
THE PROJECT AREA

The project area encompasses approximately 978 square miles of diverse and rugged rural lands in the Sierra Nevada foothills of Nevada County, California. Nevada County includes Grass Valley, Nevada City, Lake Wildwood, Alta Sierra, Penn Valley, Rough & Ready, North San Juan, Truckee, Cedar Ridge, Lake of the Pines, and rural areas of the Sierra Nevada foothills. This high fire threat zone is characterized as a classic interface area with significant history of large and damaging wildfires. Nevada County has a diverse bio-system. The western border, located in the Sacramento Valley, contains grass-covered foothills with oak trees. Traveling eastward the landscape changes to a mix of deciduous and conifer forests with a mix of heavy brush. The forests turn to conifer with a brush under-story as the elevation goes high into the Sierra Nevada Range, approaching 8000 feet in elevation. Continuing further east and down the Eastern slope of the Sierras one finds conifers with a brush under-story mix with heavy brush fields, ending at the California/Nevada border with conifer forests and sagebrush.

The area consists of both public and private lands and contains a mix of land uses with a population of approximately 90,000 people and 45,000 housing structures in a wildland-urban intermix setting commonly referred to as the I-Zone. (the urban/wildland interface).

On the private lands within the county, over a recent 12 year period, the county

Nevada County Wildfire Ignitions by Year



experienced just over 120 wildland fires per year. Lightning caused fires actually account for very few fire starts on private lands as evidenced by the year 2002 in which the county experienced 133 wildland fires with only one

NEVADA COUNTY FIRE PLAN

being caused by lightning. History shows that most fires in the county are caused by the accidental, careless or intentional acts of the people who live in or visit Nevada County. Clearly, with the fuels, weather, topography and an increasing population, Nevada County is at significant risk from wildland fire.

Public lands include:

- 175,694 acres in the Tahoe National Forest
- 2,475 acres in the Toiyabe National Forest
- 10,485 acres of other Federal Lands, which include the Bureau of Land Management (BLM), Department of Fish & Wildlife (DF&W), and the Army Corps of Engineers.

In addition, the Nevada Irrigation District controls 8,636 acres, Pacific Gas & Electric 10,882 acres and the State 11,394 acres, which may include, but not be limited to State Parks, California Department of Forestry & Fire Protection (CDF), Department of Fish and Game.

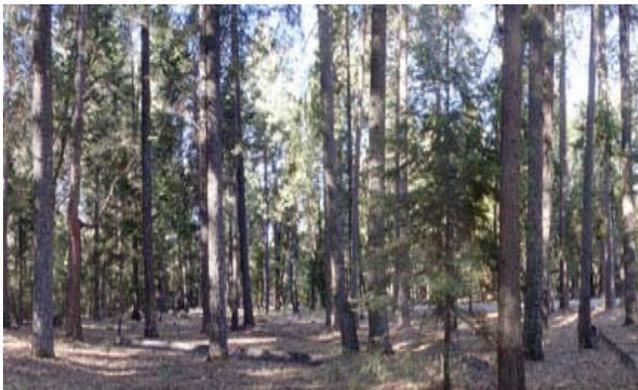
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THE WILDLAND FIRE PROBLEM

The fire problem in Nevada County is directly related to the amount of hazardous fuels that have accumulated since the disruption of the natural fire cycles that normally occurred prior to the land use change effects that began at about the turn of the century. It was at this time that the effects of non-native American settlement of the region caused the land use to change and move away from being compatible with the natural fire regimes.

Fire history studies conducted in the Sierra Nevada, southern Cascades, and Klamath mountains point toward pre-European settlement fires (prior to 1849) burning, with mostly low to moderate severities within most of the vegetation types found in the County. Barbour and Majors (1977) and the Sierra Nevada Ecosystem Project (1996) indicate that the grassland areas had an average period between fires of 2-8 years; oak woodlands, 2-8 years; mixed conifer, 5-16 years; east-side pine, 5-16 years; various brush types; 5 to 30 years; and Red Fir, 16-26 years. These vegetation types evolved over time to adapt to these fire cycles. California's Mediterranean climate, dominated by wet winters and hot dry summers with lightning from frequent summer thunderstorms and Native American burning worked in harmony with our fire adapted ecosystems.

The effect on fuels due to these frequent fires was a periodic consumption of relatively light amounts of vegetation and dead material. As a result, these conditions produced fires with mostly low to moderate severities and intensities that generated short flame



lengths. Most of the larger trees survived these low to moderate intensity fires. The short flame lengths kept the fire on the ground. Studies and historical observations indicate that very few of the fires before the 1900's, except in small patches, burned into the crowns of the larger Conifers. Based on written

accounts from the late 1800's and the very early 1900's, in areas covered by the mixed-conifer vegetation type, approximately 1-10 percent of the larger conifers perished

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during each fire event. Most of these low intensity fires burned in fuels that were not continuous from the ground into the upper layers of the forest. The periodic fires kept a natural separation from the ground fuels to the upper forest layers.

This natural cycle of periodic fire no longer occurs. Current land uses, i.e. the presence of people and their houses, dictate that wildland fires be suppressed due to risks to life, property, and the environment. A century of virtual elimination of natural and cultural fire has led to a buildup of fuels to today's current unnaturally high levels and has resulted in significantly higher intensity fires that are difficult to suppress. Today, many of our vegetation types have a continuous layer of live growing fuels from the forest floor to the upper tree layers that act as fuel for a wildfire. This, unfortunately, results in larger fires with more damaging effects to life, property, and the environment.

Today, people in Nevada County are attracted to live and build their homes in remote



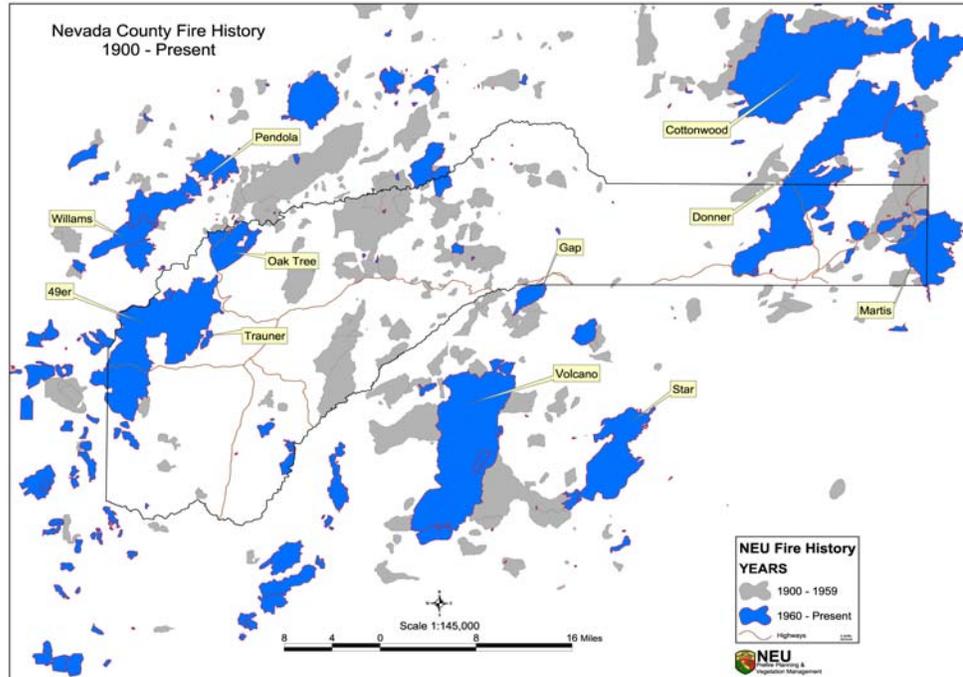
areas, on hillsides, and in and among the native woodlands. There is a misconception held by many of us that today's grasslands, oak woodlands, and forests are "natural" and as such, think if we just keep suppressing fires, these vegetation types will remain the same. This is a grave error. All of our fire adapted ecosystems are complex entities. They are not like a photograph and non-changing over time; they are constantly changing. There is a tremendous amount of growth and in-growth every year. As a result, without periodic fire or treatment,

these vegetation types have ever increasing unnaturally high fuel loads that, over time, have created hazardous fire conditions. We now understand that the extreme fire

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behavior we are witnessing is a result of the long term interruption of the natural fire cycle.

The combination of our topography, climate, and present day fuel conditions produces large, high severity and intense wildland fires; e.g., the Forty-niner fire in September 1988, (33,500 ac/185 homes); the Martis fire, June 2001, (14,500 ac/4 structures); the Trauner fire, August 1994



(500 ac/12 homes); and the Cottonwood, fire, August 1994, (46,800 ac). The Forty-niner fire, the Martis fire and the Trauner fire resulted in over 33 million dollars damage and more than 27 million dollars in suppression cost. The Cottonwood fire cost 12.5 million dollars to suppress.

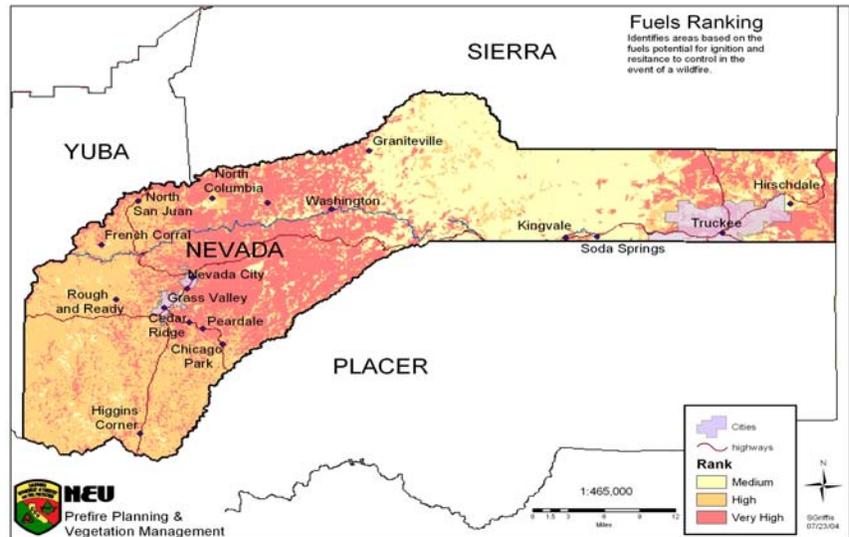
We can never go back to the natural fire cycles as land use has changed dramatically since the mid-1800's and we now have life and property intermixed within the wildland environment. However, we can, with vegetation management, reduce fuels to those pre-settlement "natural" levels in target areas in and around our communities.

The FPC is acutely aware that the present day wildland fuel condition is the root of the fire problem in Nevada County. It is the reason the conditions and standards addressing roads, water supply systems, fire related codes and ordinances, wildland fire protection

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systems, and firesafe education are being addressed through this Plan. The FPC recognizes that all these parameters need to be addressed now.

The FPC understands that all of us living in Nevada County live in fire adapted environments. With this now comes a reality that we, as individual property owners, need to adopt a stewardship responsibility and manage fuel levels to their historical natural levels. We all need to do this not only for our individual property and life safety but, for our community's safety as well. If we all do our part in managing fuels, we can reduce extreme fire behavior and give fire suppression resources a better chance to extinguish fires with less damage to life, property, and the environment.



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PRIORITY RECOMMENDATIONS

Over the course of the development of this plan, the Committee, in collaboration with a variety of stakeholders and citizen participants, identified five specific goals to be accomplished through the implementation of 42 different recommendations. In a formalized priority setting process 10 of the 42 recommendations received 53% of the votes cast and were identified as having the most significant impact on “reducing threats to public safety and reducing costs and losses as a result of wildfire in Nevada County” It is suggested by the Fire Plan Committee that after this plan has been accepted by the Board of Supervisors, that the initial implementation efforts be focused on these recommendations. Those top ten are identified here, followed by a complete listing of all the goals, objectives and recommendations. (Refer to Appendix A for a complete prioritization schedule).

GOAL I – FUELS MANAGEMENT

Recommendation 5: The FPC recommends that the Board of Supervisors adopt the Fuel Management prescription (found in Appendix B) as the foundation of an expanded ordinance for providing defensible space around structures



Recommendation 6: The FPC recommends that the Board of Supervisors adopt a fuel management prescription (found in Appendix C) as the foundation for a new ordinance for wildland fuels management on improved and vacant parcels in and adjacent to communities or neighborhoods of ten acres or less and on parcels greater than 10 acres that are immediately adjacent to smaller parcels

Recommendation 7: The FPC recommends that the Board of Supervisors adopt as a fire risk reduction policy the following implementation timeline for education, assistance and compliance programs for fuels management ordinances recommended for adoption

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by this Plan. The FPC further recommends that enforcement be used as the method of last resort and that a process of phased enforcement over a number of years be utilized.

Year 1

- Public Education
- Assistance Program
- Enforcement of Defensible Space

Year 2

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement at Building Permit Issuance

Year 3

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement at Building Permit Issuance
- General Enforcement Emphasized In Very High Hazard Severity Zones

Year 4

- Continuation Of Year Three

Year 5

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement At Building Permit Issuance
- General Enforcement Emphasized In High Hazard Severity Zones
- General Enforcement Of Community/Neighborhood Fuel Management

Subsequent Years

- Continuation of Year 5

Recommendation 8: The FPC recommends that resource agencies (CDF, Natural Resource Conservation Service, Resource Conservation District, USFS, and BLM) jointly develop guidelines for fuel management on large parcels. These guidelines must take into account variations based upon fuel types, differing land management objectives and proximity to communities/neighborhoods

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Recommendation 11: In recognition of the relationship between fuel reduction and public safety, the FPC recommends that the Board of Supervisors seek a permanent funding mechanism for the provision of chipper services or alternative services at a reduced rate and free fuels management advising services to the landowners of Nevada County. Funding for this program may be entirely or partially offset through grants, but the program is of such value that it should not be grant dependent

GOAL II – INFRASTRUCTURE IMPROVEMENTS

Recommendation 15: The Board of Supervisors direct the Department of Transportation, in cooperation with the County Office of Emergency Services, law enforcement and the fire services to identify county maintained roads not meeting design standards for current or anticipated ADT, and that those roads be prioritized for upgrading as funds become available

Recommendation 16: The FPC recommends that a compliance program be put in place to ensure that private roads required as a condition of approval are maintained over the long term, to the same standard that they were originally approved

Recommendation 19: The FPC recommends that the Board of Supervisors, through the County Fire Marshal's Office, conduct a study for funding a countywide system of strategically located rural fire protection water storage tanks. It is further recommended that this study be funded with Title III funds. (Grant Funds to the County from the USFS under HR 2389) With the successful implementation of this program the FPC recommends the abandonment of the application of individual water storage tank requirements on single-family residences.

GOAL III – COMPLIANCE PROGRAMS

Recommendation 25: The FPC recognizes the continuing constraints that are being placed upon outdoor burning. The Committee recommends that green waste pickup, mulching or composting be the preferred alternative for leaf and pine needle disposal. Outdoor burning should be reserved as a priority for disposal of wildland fuels where no other options are feasible

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GOAL V – IMPLEMENTATION OF MITIGATION MEASURES

Recommendation 38: The FPC recommends that the Board of Supervisors seek a source of funding for the appropriate staffing of the County Fire Marshal's Office to implement many of the recommendations of this Fire Plan that are most efficiently and effectively provided on a county wide basis. Those programs include the phased in implementation of the fuels management ordinances, the management of the county wide Rural Fire Protection Water Supply System, management of tax funded assistance programs for landowners, providing leadership in producing resource documents for the public and providing training to the fuels management industry

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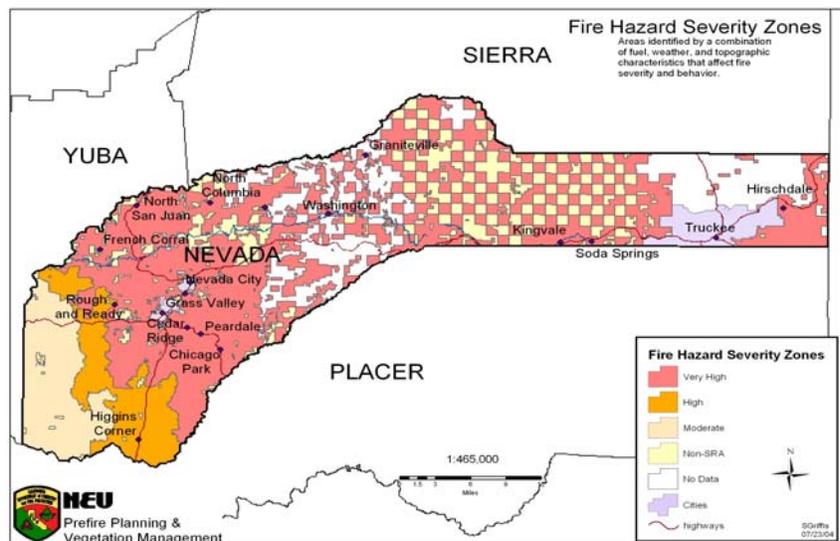
GOALS, OBJECTIVES AND RECOMMENDATIONS

GOAL I - REDUCE FIRE SEVERITY AND INTENSITY THROUGH FUELS MANAGEMENT

PROBLEM STATEMENT

Nevada County contains all the major vegetation types found within the northern Sierra Nevada: annual grasslands, oak savannas, oak woodlands, montane chaparral, both pine and fir dominated mixed-conifer, red fir, sage, and east-side pine. It also contains the rugged topography of the deeply incised westerly flowing drainages and the steep escarpments found on the eastside of the range.

The County also has the typical California Mediterranean climate that produces extreme fire weather conditions from a few days, to many days annually. This combination of topography, climate, and the elimination of the historic fire cycles which previously reduced vegetative fuel accumulations, sets the stage for repeated destructive wildland fires.



OBJECTIVE – A

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Improve public awareness and understanding that Nevada County lies within a fire-adapted ecosystem that historically relied upon natural fire or cultural burning by natives to maintain the vegetative fuel accumulations. With fire no longer being an option for fuel management in communities, landowners need to take appropriate steps to mimic the fire regime of the past. It needs to be stressed that there is a direct relationship between high fuel accumulations and high intensity, destructive wildland fire.

Recommendation 1: The FPC recommends that the CDF, USFS, BLM and the Nevada County Superintendent of Schools, and other interested groups, work together to develop a school curriculum based upon the historic nature of the Sierran Forests and the role of cyclical historic fire as nature's way of maintaining vegetative fuels accumulations.

Recommendation 2: The FPC recommends that the USFS and Nevada County Superintendent of Schools implement the concept of a Forest School within the Tahoe National Forest to provide students a laboratory in which to study and understand the dynamics of the Sierra Nevada forest.

Recommendation 3: The FPC recommends that the NRCS, CDF, FSC and Resource Conservation District jointly conduct seminars for landowners on proper stewardship techniques based upon fuel management prescriptions developed for this Plan.

Recommendation 4: In collaboration with the Fire Safe Council, create a Video Lending Library of videos focused on proper land stewardship, proper defensible space, fire prevention, disaster preparedness and application of the various fuel management prescriptions and seek outlets to inform the public of this library.

OBJECTIVE - B

Define the desired future fuel condition based upon a general understanding of historic fuel conditions that primarily promoted low to moderate intensity fires as opposed to high and extreme intensity fires that commonly occur today; and

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develop a vegetation management prescription for defensible space around structures.

Recommendation 5: The FPC recommends that the Board of Supervisors adopt the Fuel Management prescription (found in Appendix B) as the foundation of an expanded ordinance for providing defensible space around structures.

OBJECTIVE - C

Develop prescription for defensible community-level fuel modifications on the wildland portion of all parcels 10 acres or less. Require parcels larger than 10 acres which are immediately adjacent to parcels 10 acres or less to provide fuels management to the maximums under this recommendation. Those treatments are to be located in a way that offers the highest level of protection to the community/neighborhood areas.

Recommendation 6: The FPC recommends that the Board of Supervisors adopt a fuel management prescription (found in Appendix C) as the foundation for a new ordinance for wildland fuels management on improved and vacant parcels in and adjacent to communities or neighborhoods of ten acres or less and on parcels greater than 10 acres that are immediately adjacent to smaller parcels.

Note: See Appendix I for a map displaying parcel sizes 10 acres and smaller and parcels greater than 10 acres

OBJECTIVE - D

Develop a fuels management implementation strategy phased in over 5 years, initially focusing on education and assistance with ultimate implementation through education, assistance and enforcement.

Recommendation 7: The FPC recommends that the Board of Supervisors adopt as a fire risk reduction policy the following implementation timeline for education, assistance and compliance programs for fuels management ordinances recommended for adoption

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by this Plan. The FPC further recommends that enforcement be used as the method of last resort and that a process of phased enforcement over a number of years be utilized.

Year 1

- Public Education
- Assistance Program
- Enforcement of Defensible Space

Year 2

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement at Building Permit Issuance

Year 3

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement at Building Permit Issuance
- General Enforcement Emphasized In Very High Hazard Severity Zones

Year 4

- Continuation Of Year Three

Year 5

- Public Education
- Assistance Program
- Enforcement of Defensible Space
- Point Of Sale Disclosure For Developed And Undeveloped Parcels
- Enforcement At Building Permit Issuance
- General Enforcement Emphasized In High Hazard Severity Zones
- General Enforcement Of Community/Neighborhood Fuel Management

Subsequent Years

- Continuation of Year 5

OBJECTIVE - E

Provide fuel management consulting service contacts for private property owners of parcels greater than 10 acres in size.

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Recommendation 8: The FPC recommends that resource agencies (CDF, Natural Resource Conservation Service, Resource Conservation District, USFS, and BLM) jointly develop guidelines for fuel management on large parcels. These guidelines must take into account variations based upon fuel types, differing land management objectives and proximity to communities/neighborhoods.

Recommendation 9: The FPC recommends that the Resource agencies provide training to fuels management contractors on the guidelines for fuel management on large parcels, and after successful completion of training, placed on a published hiring list.

Recommendation 10: The FPC recommends that the Resource agencies prepare and make available to the public a directory of Agency Advisors, Private Consultants and Fuels Management Companies to assist landowners in being proper stewards of their lands.

OBJECTIVE - F

Develop, organize and fund, a property owner assistance program.

Recommendation 11: In recognition of the relationship between fuel reduction and public safety, the FPC recommends that the Board of Supervisors seek a permanent funding mechanism for the provision of chipper services or alternative services at a reduced rate and free fuels



management advising services to the landowners of Nevada County. Funding for this program may be entirely or partially offset through grants, but the program is of such value that it should not be grant dependent.

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Recommendation 12: Provide consulting services for private landowners for the restoration and rehabilitation of wildlands impacted by fire, insect, and disease.

Recommendation 13: Create Directory of Assistance of Programs for large landowners i.e. Vegetation Management Program, California Forest Improvement Program, Environmental Quality Incentives Program.

Recommendation 14: Provide financial aid for community based fuel reduction to those landowners who can demonstrate financial need based upon established criteria and who are incapable of accomplishing the fuels management on their own.

GOAL II – ENHANCE PUBLIC SAFETY AND IMPROVE EFFECTIVENESS OF EMERGENCY SERVICES THROUGH INFRASTRUCTURE IMPROVEMENTS

PROBLEM STATEMENT

In order to protect citizens and emergency responders with the essential tools to mitigate disasters, government leaders and citizens alike have, through experience, seen the need to provide a basic infrastructure to allow for a safe and successful outcome to emergencies.

Infrastructure is generally thought of as the foundation from which services are provided and that most citizens benefit equally from their existence. As it applies to the provision of emergency services, infrastructure components are thought to be the responsibility of government agencies and are funded through taxes or the levy of fees.

In the context of the wildland fire problem in Nevada County, the infrastructure includes; the fire agency response organizations, the road system, a system with which to communicate emergency information with the public and a fire protection water supply

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system. All of these are critical to a successful emergency response and will be discussed under this goal.

GOAL: II ENHANCE PUBLIC SAFETY AND IMPROVE EFFECTIVENESS OF EMERGENCY SERVICES THROUGH INFRASTRUCTURE IMPROVEMENTS

OBJECTIVE - A

Identify existing County maintained roads not meeting design standards for current or anticipated use as indicated by the General Plan.

Recommendation 15: The Board of Supervisors direct the Department of Transportation, in cooperation with the County Office of Emergency Services, law enforcement and the fire services to identify county maintained roads not meeting design standards for current or anticipated ADT, and that those roads be prioritized for upgrading as funds become available.

OBJECTIVE - B

Ensure that private roads that are required as a condition of approval through the Subdivision Map Act are maintained to the design standard that they were originally required to be built to.

Recommendation 16: The FPC recommends that a compliance program be put in place to ensure that private roads required as a condition of approval are maintained over the long term, to the same standard that they were originally approved.

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OBJECTIVE - C

Review private roads that have offers for dedication placed upon them and develop mechanisms for taking those of significant regional importance to public safety into the county maintained mileage program.

Recommendation: 17 The FPC recommends that the DOT in cooperation with County OES, law enforcement and the fire services, conduct an analysis of private roads with offers of dedication on them and identify those of significant regional importance for safe ingress and egress. Once identified, those roads need to be prioritized for inclusion into the county maintained mileage program.

Recommendation 18: The FPC recognizes the current funding issues related to adding new roads to the maintained mileage program and recommends that mechanisms be explored by which to fund bringing roads of regional importance under county maintenance.

OBJECTIVE - D

Develop a countywide rural fire protection water system that provides a cost effective, adequate water supply and seek adoption into county ordinance.

Recommendation 19: The FPC recommends that the Board of Supervisors, through the County Fire Marshal's Office, conduct a study for funding a countywide system of strategically located rural fire protection water storage tanks. It is further recommended that this study be funded with Title III funds. (Grant Funds to the County from the USFS under HR 2389) With the successful implementation of this program the FPC recommends the abandonment of the application of individual water storage tank requirements on single-family residences.

Recommendation 20: Include inspection of required existing water storage facilities when inspecting for fuels management.

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OBJECTIVE - E

Develop an emergency public notification system and educate citizens and agencies on intent and use.

Recommendation 21: The FPC recommends that the Board of Supervisors direct the County OES to put in place an automated emergency public notification system which uses the phone system to distribute information to user identified zones. These zones can be identified and the message can be spontaneously constructed in response to each incident. Given that this system is not wildland fire specific, but has application on all types of incidents, the committee feels that it is appropriate to purchase this system with Office of Homeland Security Grant funds. Once in place, the committee recommends that training on its application be given to all managers within public safety. The committee also recommends that the Fire Marshal and OES monitor new methods of distributing emergency information and implement those methods if practical.

OBJECTIVE - F

Create a business environment that encourages the development of a sustainable fuels management industry that assists landowners in their fuels management efforts safely, economically and in a manner consistent with the adopted fuels management prescriptions.

Recommendation 22: The FPC recommends that the resource agencies in Nevada County jointly sponsor workshops for fuel reduction contractors that cover safe operations, the application of the fuel management prescriptions to various fuel types, and fire prevention in their operations. Those contractors attending the workshop would be placed on a resource list and made available to the public.

GOAL III – REDUCE RISK TO LIFE AND PROPERTY THROUGH NEW OR REVISED CODES, ORDINANCES AND COMPLIANCE PROGRAMS

PROBLEM STATEMENT

Modern fire safety codes and standards, and in particular those developed by the National Fire Protection Association (NFPA) trace their origins to the nineteenth-century development of automatic sprinklers. From the beginning, sprinklers performed properly as extinguishing devices; however, they were originally installed in so many different ways that their reliability was uncertain. In March of 1895, a small group of men representing sprinkler and fire insurance interests gathered in Boston to discuss these inconsistencies and develop uniform codes and standards.

Years later, we continue to struggle in our co-existence with wildfire. Annually, thousands of homes are destroyed, and all too often lives are lost, including firefighters. Hundreds of firefighters are injured and thousands of firefighters are exposed to the risks of wildland firefighting.

While reduction of major destruction of property and loss of life can be achieved partly through proper implementation and enforcement of fire hazard zoning and mitigation codes, laws, and ordinances, it should be noted that there can be no guarantee that a major fire can be prevented from causing major destruction of property or loss of life.

The four methods of interface fire hazard mitigation most often associated with increased structure survival are:

- Defensible space around structures
- Landscape level fuel management
- Ignition resistant building construction
- Defensive actions by firefighters during the wildfire exposure.

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However, it is important to have reasonable expectations of mitigation measures. A one-third or two-third reduction in historic loss patterns is reasonable with full implementation of both fuel reduction and improved building construction.

GOAL: III REDUCE RISK TO LIFE AND PROPERTY THROUGH NEW OR REVISED CODES, ORDINANCES AND COMPLIANCE PROGRAMS

OBJECTIVE - A

Review and revise, as needed, existing wildland fire related codes and ordinances to address the recognized hazards of building and living in the wildland urban interface.

Recommendation 23: The FPC review Fire Safety related Regulations in the LUDC Chapters 2, 16 and 17 and make recommendations for modifications to the BOS.

Note: The FPC established a separate subcommittee to review the existing Fire Safety Regulations in the Land Use and Development Code (LUDC), Chapters 2, 16 and 17. This committee, made up of fire prevention officers, members of the Building, Planning and Transportation Department, and members of various interest groups within the county, met over a period of three months and prepared suggested changes to the Fire Safety Regulations. Their recommendations have been reviewed and approved by the full Fire Plan Committee. Those changes are displayed in Appendix B and C.

Recommendation 24: The FPC recommends that the Board of Supervisors consider the recommended changes of Code Review Sub-Committee and move to adopt those changes into the LUDC Chapters II, XVI & XVII.

Recommendation 25: The FPC recognizes the continuing constraints that are being placed upon outdoor burning. The Committee recommends that green waste pickup, mulching or composting be the preferred alternative for leaf and pine needle disposal. Outdoor burning should be reserved as a priority for disposal of wildland fuels where no other options are feasible.

Recommendation 26: Provide green waste pickup services county wide or in rural areas schedule community vegetative waste drop off days in those areas not receiving

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green waste pickup.

OBJECTIVE B

Consider new fire safety Codes and Ordinances to meet the county's fire safe needs.

Recommendation 27: The FPC recommends that the Board of Supervisors adopt an expanded defensible space ordinance and a neighborhood/community level defensible landscape ordinance in accordance with the recommended fuels management prescriptions developed under Goal #1 and to be implemented consistent with the implementation strategy found in Goal #1

Recommendation 28: The FPC recommends that the Board of Supervisors direct that a review of the fire safety provisions of specific ordinances be conducted a maximum of five years after the implementation of the fuels management ordinances. The intent of the review is to evaluate whether or not significant fuels reduction has occurred that would allow reconsideration of prior regulations or restrictions based upon the risk being reduced in an area previously recognized as having significant wildland fire risk.

OBJECTIVE C

Review and recommend improvement of "same practical effect" process for meeting the intent of the Fire Safety Regulations.

Recommendation 29: The FPC recognizes the value of the 'same practical effect' or 'exception' process for use when the letter of the law may not be practically applied, but the intent of the law may be achieved through application of other measures and suggests that this provision in the code be retained. However, the FPC suggests that the public be better informed on how to enter and use the process.

**GOAL IV – INCREASE COMMUNITY AWARENESS AND INVOLVEMENT TO
PROMOTE PARTICIPATION AND VOLUNTARY COMPLIANCE**

PROBLEM STATEMENT

Nevada County's population is steadily increasing, with many new residents building homes in the *I-Zone*. (*I-Zone is defined as the urban/wildland interface*) Many of these new homeowners, as well as existing homeowners, are unaware of the dangers surrounding their homes. When people live in a very high fire hazard environment, the human built environs becomes an important factor in predicting the loss of life and property. Wood shake and shingle roofs, narrow roads, limited access, lack of fire-safe landscaping, inadequate water supplies, and poorly planned subdivisions are examples of increased risk to people living with the threat of wildfire.

Community education and awareness programs are an essential means of informing homeowners and citizens how to protect their belongings and loved ones from the next wildland fire that will occur in Nevada County. Much of the education needs to focus on creating and maintaining defensible space around their homes and on managing the vegetative fuels on the remainder of their property. To achieve the desired voluntary compliance, residents need to understand the role of historic natural or cultural fire in the Sierra ecosystem; and as property owners they need to become proper land stewards and implement practices which are intended to mimic the valuable role of natural fire.

The most effective and successful methods for mitigating the impact of wildland fire begin with having local decision makers and community members having a good understanding of the problem and a willingness to take necessary steps to deal with that problem.

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OBJECTIVE A

Utilize the Fire Safe Council and community and business associations, i.e. Nevada County Board of Realtors within Nevada County for public education and assistance.

Recommendation 30: The FPC recognizes the value of the Fire Safe Council as a significant contributor of providing fire safe education and information to the residents of the County and supports efforts to seek sustainable, long term funding in order to maintain their programs.

OBJECTIVE B

Develop A Template for A Community/Neighborhood Fire Safe Plan.

Recommendation 31: The Fire Plan Committee has developed a Template for a Community Fire Safe Plan. It is the FPCs intent that this template be used by the various fire protection agencies within the county, in cooperation with the Fire Safe Council, to create community specific fire safe plans. These plans will address evacuation planning, specific high hazard project areas, neighborhood preparedness, safety zones and public education at the local level. It is the intent of the FPC that the community plan in tandem with the county plan will meet the requirement of the Disaster Management Act of 2000. The FPC seeks the support of the Board of Supervisors in this effort.

OBJECTIVE C

Provide on-site consulting for landowners.

Recommendation 32: The FPC recommends that the fire services, resource agencies, and the Fire Safe Council jointly publish a resource directory of public agency advisors, consulting services and private contractors available to the public for education, designing, or completing fuels management projects on private lands.

OBJECTIVE D

Create incentives that encourage voluntary compliance.

Recommendation 33: The FPC recommends that the Fire Marshal's Office continue to

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work with the insurance industry to obtain recognition of the fact that the landscape level fuel reduction ordinance, once in effect, will significantly reduce losses from wildland fire paid by insurers in Nevada County. Also, the reduction in risk should translate into lower premium costs to policyholders.

Recommendation 34: The FPC recommends that all agencies and organizations support the Fire Safe Council's effort to create a biomass reutilization center. It is hoped that this effort will result in a monetary value being placed upon removed vegetative fuels that will, at least in part, pay for their removal.

Recommendation 35: The FPC recommends that the Board of Supervisors, in cooperation with the fire services and the Fire Safe Council, publicly recognize individual landowners, communities and public land managers for significant accomplishments in fuels management at the individual parcel level, the community level, and at the landscape level.

OBJECTIVE E

Identify fuel reduction priorities for grant funded projects and public education.

Recommendation 36: The FPC recommends that the fire services and the Fire Safe Council, based on information taken from the Community Fire Plans and the CDF's Nevada-Yuba-Placer Fire Management Plan, identify those areas within the county with significant potential for large and damaging wildfires and prioritize those for grant funded fire risk reduction projects.

OBJECTIVE F

Provide a better understanding to the public and to the architectural and building industry about the benefits and material/design options available with ignition resistant building materials.

Recommendation 37: The FPC recommends that the fire agencies, the building industry and the building material industry cooperate on a high visibility educational

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effort on the benefits of using ignition resistant building materials and methods when building in the wildlands of Nevada County, and that this effort emphasize the architectural and appearance similarities between ignition resistant building materials and more readily combustible building materials.

GOAL V – INVOLVE FIRE AGENCIES, COUNTY DEPARTMENTS, AND PUBLIC AND PRIVATE LAND MANAGERS, AND THE FIRE SAFE COUNCIL IN COLLABORATING ON COUNTY-WIDE GOALS AND PLANS TO CONSISTENTLY AND EFFECIENTLY IMPLEMENT MITIGATION MEASURES

PROBLEM STATEMENT

There are numerous fire agencies in Nevada County with various and sometimes overlapping jurisdictions. These agencies each have various plans and programs to reduce the risk and severity of wildland fires. These plans are not necessarily synchronized to a county-wide set of plans. This creates the potential for inconsistency of effort and direction.

Various programs, such as the residential fire protection water supply requirements, are thought by some fire personnel to not be meeting the originating goals. Some agencies have fuel management programs, but these tend to be very limited in scope and difficult to enforce.

Given that whatever plans to further reduce the risk and severity of wildland fires may have substantial costs to community, existing programs need to be reviewed and recommendations made accordingly.

The insurance industry is moving toward factoring fuel loads and local water supplies into their criteria for insurability of homes. The community will be looking to the fire

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agencies to assist in providing improved fire risk mitigation in synchronization with the insurance companies' concerns.

GOAL: V INVOLVE FIRE AGENCIES, COUNTY DEPARTMENTS, AND PUBLIC AND PRIVATE LAND MANAGERS, AND THE FIRE SAFE COUNCIL IN COLLABORATING ON COUNTY-WIDE GOALS AND PLANS TO CONSISTENTLY AND EFFECIENTLY IMPLEMENT MITIGATION MEASURES

OBJECTIVE - A

Provide adequate resources to implement Fuels Modification Ordinance, Rural Fire Protection Water Supply System and County Chipper Assistance Program and other programs appropriate for countywide application.

Recommendation 38: The FPC recommends that the Board of Supervisors seek a source of funding for the appropriate staffing of the County Fire Marshal's Office to implement many of the recommendations of this Fire Plan that are most efficiently and effectively provided on a county wide basis. Those programs include the phased in implementation of the fuels management ordinances, the management of the county wide Rural Fire Protection Water Supply System, management of tax funded assistance programs for landowners, providing leadership in producing resource documents for the public and providing training to the fuels management industry.

OBJECTIVE – B

Create a collaborative process for integration of countywide common goals, into each agency's Fire Prevention Program.

Recommendation 39: The FPC recommends that the County Fire Marshal take a lead role in bringing together all agencies, non-profits, county departments and associations which have a statutory or general interest in fire risk reduction or protection of the environment from wildland fire with the intent of creating and maintaining a consistent message to the public regarding fire prevention and risk reduction requirements and activities.

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OBJECTIVE - C

Public and Private Lands – The Board of Supervisors should direct the County Fire Marshal to develop a collaborative process with public land managers, open space districts, and land trusts for wildland urban interface fuel management.

Recommendation 40: The FPC recommends that the County Fire Marshal, in cooperation with the local fire agency, work with public land managers, which manage wildlands within and adjacent to communities and who may not have a statutory requirement for compliance with the County’s Fire Safety Regulations. The focus of the effort is to see that the vegetative fuels on these lands are managed in a manner similar to that being proposed for private lands in this plan.

OBJECTIVE - D:

Review the effectiveness of the fire plan in a minimum of five years and each five years thereafter.

Recommendation 41: The Fire Plan Committee recommends that the County Fire Marshal report, in May of each year, to the Board of Supervisors on the progress being made towards full implementation of the Fire Plan. And, that every five years the Board of Supervisors should reconvene the Fire Plan Committee for a comprehensive review of the effectiveness of the fire plan. The effectiveness of the plan should be evaluated based upon measures of success developed as a part of the implementation of this plan.

Recommendation 42: The Fire Plan Committee recommends that during the periodic review of the Fire Plan that if there are findings that a landscape wide fuel reduction has occurred, then a review of the Fire Safety Regulations should also occur with the understanding that the wildland fire environment is less hazardous.

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APPENDIX – A PRIORITY VOTING

Nevada County Fire Plan - Priority Voting

Yellow = (Top Recommendations)

	<u>FPC COMM</u>	<u>GV</u>	<u>NSJ</u>	<u>TRK</u>	<u>CABPRO</u>	<u>FONA</u>	<u>Totals</u>	<u>% of Total</u>
GOAL #1	33	31	10	15	37	40	166	40%
Recom. 1	0	2	1	2	2	2	9	2%
Recom. 2	0	3	1	0	0	0	4	1%
Recom. 3	0	4	0	0	0	1	5	1%
Recom. 4	0	0	1	1	0	1	3	1%
Recom. 5	12	6	1	2	8	8	37	9%
Recom. 6	6	4	1	3	6	10	30	7%
Recom. 7	4	2	0	1	7	5	19	5%
Recom. 8	0	4	1	0	6	7	18	4%
Recom. 9	0	0	0	0	2	0	2	0%
Recom. 10	0	0	1	0	0	0	1	0%
Recom. 11	10	6	1	5	5	6	33	8%
Recom. 12	0	0	2	0	0	0	2	0%
Recom. 13	1	0	0	1	0	0	2	0%
Recom. 14	0	0	0	0	1	0	1	0%
Goal 2	15	21	6	3	23	39	107	26%
Recom. 15	6	5	0	0	4	8	23	6%
Recom. 16	7	1	1	1	3	8	21	5%
Recom. 17	0	2	0	0	4	11	17	4%
Recom. 18	0	0	0	0	1	2	3	1%
Recom. 19	1	6	5	0	0	8	20	5%
Recom. 20	0	0	0	0	8	0	8	2%
Recom. 21	0	5	0	1	3	2	11	3%
Recom. 22	1	2	0	1	0	0	4	1%
Goal 3	23	7	4	13	8	14	69	17%

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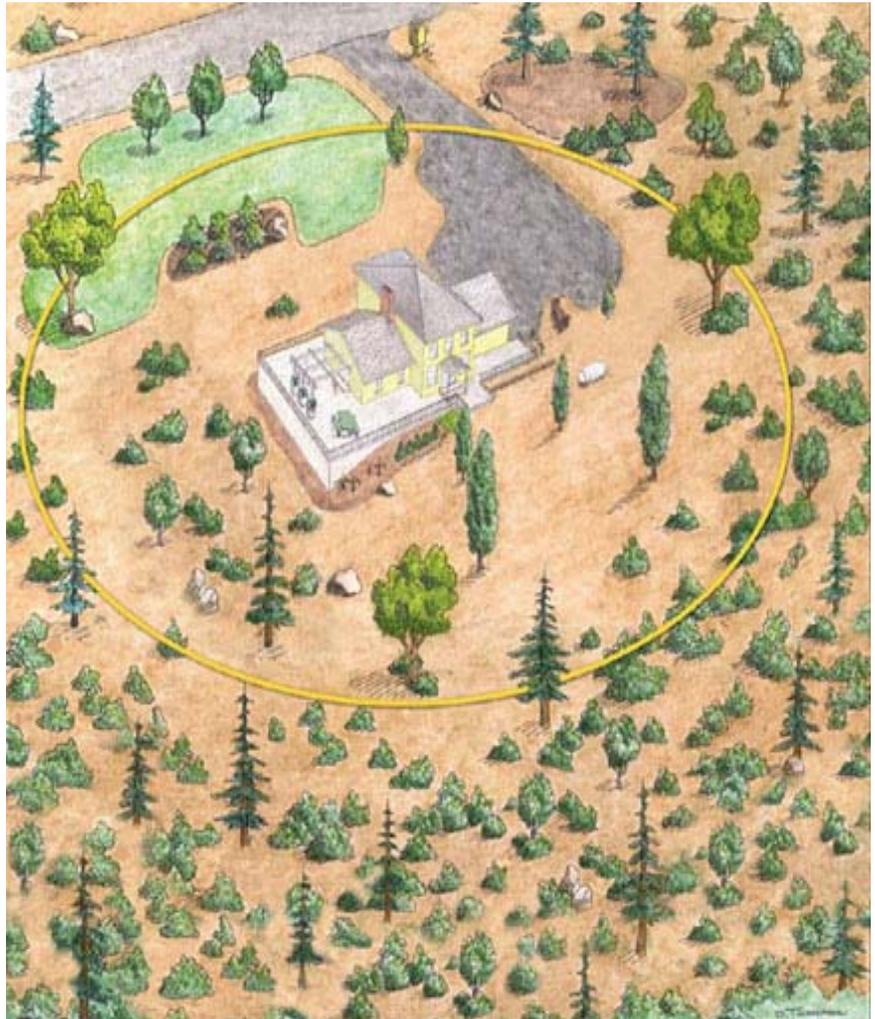
	<u>FPC COMM</u>	<u>GV</u>	<u>NSJ</u>	<u>TRK</u>	<u>CABPRO</u>	<u>FONA</u>	<u>Totals</u>	<u>% of Total</u>
Recom. 23	1	0	0	0	0	0	1	0%
Recom. 24	0	0	0	4	0	0	4	1%
Recom. 25	3	3	1	4	1	6	18	4%
Recom. 26	3	0	0	4	1	1	9	2%
Recom. 27	8	3	0	0	0	2	13	3%
Recom. 28	5	1	1	1	1	1	10	2%
Recom. 29	3	0	2	0	5	4	14	3%
Goal 4	9	10	6	5	6	8	44	11%
Recom. 30	1	1	1	0	2	1	6	1%
Recom. 31	0	2	1	1	1	2	7	2%
Recom. 32	0	0	1	0	0	0	1	0%
Recom. 33	4	3	2	4	1	1	15	4%
Recom. 34	2	0	0	0	0	2	4	1%
Recom. 35	1	0	0	0	0	0	1	0%
Recom. 36	0	3	1	0	2	2	8	2%
Recom. 37	1	1	0	0	0	0	2	0%
Goal 5	6	6	2	1	6	8	29	7%
Recom. 38	6	5	1	0	1	4	17	4%
Recom. 39	0	1	1	0	1	0	3	1%
Recom. 40	0	0	0	1	3	4	8	2%
Recom. 41	0	0	0	0	1	0	1	0%
Recom. 42	0	0	0	0	0	0	0	0%
Grand Total # of Votes:							415	100%

APPENDIX – B DEFENSIBLE SPACE FUEL MANAGEMENT PRESCRIPTION

In addition to the requirements of Public Resources Codes 4290 and 4291, any person owning, leasing controlling, operating or maintaining any structure, as defined by the building code, within the unincorporated areas of Nevada County shall at all times maintain around and adjacent to such structures an effective fuel-break made by removing and clearing away combustible vegetation and material that exists within the defensible space of such structure. The size of the defensible space is defined below. (For the purpose of this prescription, a structure is a building as defined by the building code)

This shall not apply to single specimens or stands of protected species of trees, ornamental shrubbery or similar plants used as ground covers, provided they are maintained and/or irrigated and they do not form a means of rapidly transmitting a fire from the native growth.

The size of the defensible space area is expressed as a distance extending outward from the sides of a permanent structure. The distance varies by the type of wildland vegetation growing near the structure and the steepness of the terrain.



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The following matrix defines the Defensible space area based on vegetation type and slope:

VEGETATION TYPE	SLOPE		
	0 TO 20%	21 TO 30%	> 31%
GRASS	100 feet	100 feet	100 feet
BRUSH	100 feet	150 feet Down slope	200 feet Down slope
TREES	100 feet	150 feet Down slope	200 feet Down slope

Any person owning, leasing, controlling, operating or maintaining any structure in the unincorporated area of Nevada County shall at all times maintain the defensible space of such building in the following manner:

Understory Fuels

Understory herbaceous and woody fuels over 1 foot in height are to be treated as directed below in order to develop vertical separation from the canopy above and low horizontal continuity of fuels. Plants to be retained shall not be within the drip lines of an overstory tree.

Down fuels and slash between 1 inch and 8 inches in small end diameter and two feet in length or longer shall also be removed so they do not form a means of rapidly transmitting a fire from the native growth.

Rare and endangered species, elderberry plants for example, shall not be removed or treated.

Grasses: Grasses within the Defensible Space area shall be maintained to a height of 4 inches or less by the beginning of and through declared Fire Season each year.

NEVADA COUNTY FIRE PLAN

Brush: It is desirable to remove as much brush as possible within the Defensible Space area. However, if individual plants or groups of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or groups of plants that are no more than 10 feet wide, with a horizontal separation between plant canopies of 3 times the height of the plants to be retained. Retained plants shall not be within the drip line of mid or overstory vegetation.

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Mid-story Fuels

For mid-story fuels, this prescription only considers trees up to the 8-inch diameter class at breast height (dbh) are eligible to be removed. Note that trees larger than 8-inch diameter class may be removed at the owner's discretion if done so in compliance with all applicable local, state, and federal regulations.

Trees 8 inches diameter at breast height and less shall be removed to create horizontal distances between retained tree trunks (boles) a minimum of 20 feet. Larger overstory trees (> 8 inches dbh) do count as trees to be retained and, in order to reduce ladder fuels, shall have brush vegetation within their drip lines removed. Retained trees that are 8 inches dbh and less; that exist within the drip line of larger overstory trees shall have a space a minimum of 20 feet between their trunks. Prune branches off of all retained trees from 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

Rare and endangered species, elderberry plants for example, shall not be removed or treated.

Special Considerations:

Snags

Snags (standing dead trees) are a conduit for fire spread during a wildfire and shall be removed. However, they may also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags may be retained:

- Eighteen inch diameter class or larger and not more than 30 feet in height which, should they fall, are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

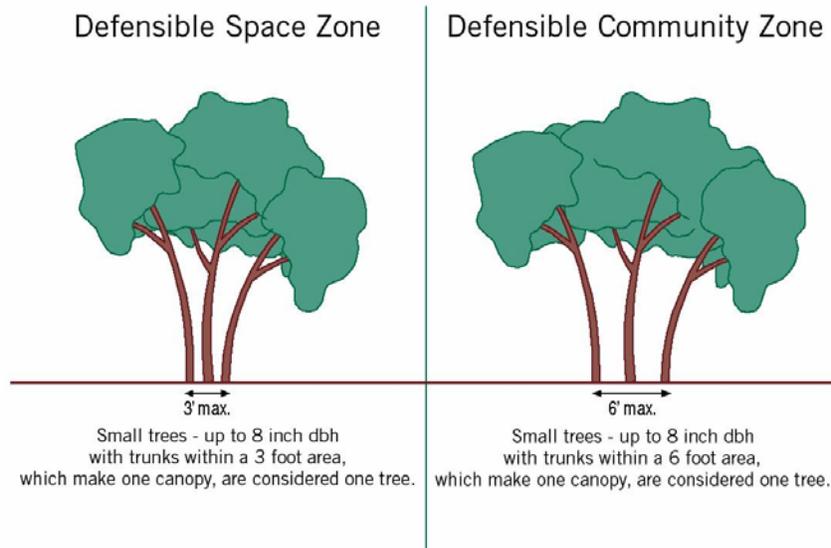
NEVADA COUNTY FIRE PLAN

- Live but defective trees larger than the 8-inch diameter class providing cavities or obvious wildlife use may also be retained.

Tree Groups

Trees up to the 8-inch diameter class at breast height (dbh) with trunks within 3 feet of each other, essentially making one canopy, may be considered one tree in the

Tree Groups as One Tree



Defensible Space area.

Prune branches off of all retained trees from 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

Adjacent trees shall be removed to create horizontal distances between retained trees a minimum of 20 feet.

Wetlands and Watercourse and Lake Protection Zones

Live vegetation within functional wetlands is not recommended for treatment. Only dead material within 100 feet of watercourses and lakes with riparian vegetation shall be removed.

Riparian setback areas, as defined by County Code for building construction and leach field installation, will only have dead material be required to be removed.

APPENDIX – C COMMUNITY FUELS MANAGEMENT PRESCRIPTION

In addition to the requirements of Public Resources Codes 4290, 4291, and the Defensible Space requirements above in (a), any person owning, leasing controlling, operating or maintaining any parcel 10 acres or less in size in the unincorporated area of Nevada County shall at all times manage wildland fuels by removing and clearing away combustible vegetation and material that exists on the parcel in accordance with the following prescription.

This shall not apply to single specimens or stands of protected species of trees, ornamental shrubbery or similar plants used as ground covers, provided they are maintained and/or irrigated and they do not form a means of rapidly transmitting a fire from the native growth.

Any person owning, leasing, or controlling any parcel 10 acres or less in size in the unincorporated area of Nevada County shall at all times maintain the parcel in the following manner:

Understory Fuels

Understory woody fuels over 1 foot in height are to be treated as directed below in order to develop vertical separation from the canopy above and low horizontal continuity of fuels.

Down fuels and slash between 1 inch and 8 inches in small end diameter and two feet in length or longer shall also be removed so they do not form a means of rapidly transmitting a fire from the native growth.

For rare and endangered species concerns, elderberry plants shall not be removed or treated.

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Grasses: For parcels one acre and less in size, grasses within the Defensible Community-level Fuel Modification area shall be maintained to a height of 4 inches or less by the beginning of and through declared Fire Season each year. For parcels greater than one acre in size, grasses within the Defensible Community-level Fuel Modification area need not be treated.

Brush: It is desirable to remove as much brush as possible within the Defensible Community-level Fuel Modification area. However, if individual plants or groups of plants are desired to be left, leave plants with the following characteristics: individual or groups of plants that are no more that 10 feet wide, with a horizontal separation between plant canopies of 1.5 times the height of the plants to be retained. Retained plants shall not be within the drip line of mid or overstory vegetation.

Mid-story Fuels

For mid-story fuels, this prescription only considers trees up to the 8-inch diameter class at breast height (dbh) are eligible to be removed. Note that trees larger than 8-inch diameter class may be removed at the owner's discretion if done so in compliance with all applicable local, state, and federal regulations.

Trees 8 inches diameter at breast height and less shall be removed to create horizontal



distances between retained tree trunks (boles) a minimum of 15 feet. Larger overstory trees (> 8 inches dbh) do count as trees to be retained and, in order to reduce ladder fuels, shall have brush vegetation within their drip lines removed. Retained trees that are 8 inches dbh and less; that exist within the drip line of larger overstory trees

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shall have a space a minimum of 15 feet between their trunks. Prune branches off of all retained trees from 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

Rare and endangered species, elderberry plants for example, shall not be removed or treated.

Special Considerations:

Snags

Snags (standing dead trees) are a conduit for fire spread during a wildfire and shall be removed. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

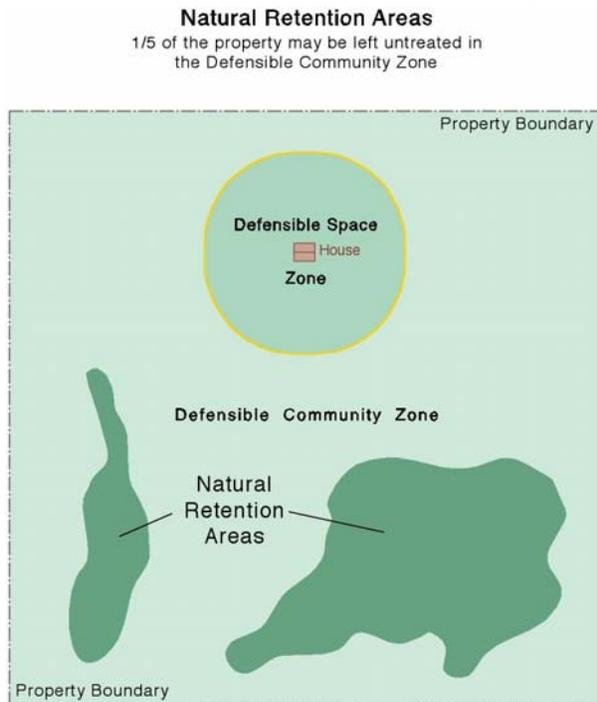
- Eighteen inch diameter class or larger and not more than 30 feet in height which, should they fall, are not capable of reaching a road provided there is a separation of least 100 feet between snags.
- Live but defective trees larger than the 8-inch diameter class providing cavities or obvious wildlife use may also be retained.

Tree Groups

Trees up to the 8-inch diameter class at breast height (dbh) with trunks within 6 feet of each other, essentially making one canopy, may be considered one tree in the Defensible Community-level Fuel Modification area. Prune branches off of all trees to be retained from 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree. *Adjacent trees shall be removed to create horizontal distances between residual trees a minimum of 15 feet.*

Vegetation Retention Areas

One 1/5-acre clump of vegetation, including brush and trees, per acre may also be retained in the Defensible Community-level Fuel Modification area providing spread of fire to or from this feature is adequately mitigated. Mitigation measures for this feature include:



fire to or from this feature is adequately mitigated. Mitigation measures for this feature include:

- a. Adjacent trees to this feature shall be removed to create horizontal distances between retained trees a minimum of 15 feet.
- b. It is recommended that these features, when left on the property, be located adjacent to watercourses, lakes, and/or wetlands.
- c. The 1/5-acre vegetation retention areas may be combined on parcels larger than 1 acre as long as they do not fall within the defensible space of a structure and do not form a means of rapidly transmitting a fire from the native growth off the parcel.

Wetlands and Watercourse and Lake Protection Zones

Live vegetation within functional wetlands is not recommended for treatment. Only dead material within 100 feet of watercourses and lakes with riparian vegetation shall be removed.

Riparian setback areas, as defined by County Code for building construction and leach field installation, will only have dead material be required to be removed.

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Exemption from Defensible Community-level Fuel Modification requirements

Those parcels 10 acres and less that do not have a structure within its boundaries may be considered for an exemption from the Defensible Community-level Fuel Modification requirements under the following condition:

The parcel lies within an area surrounded by larger than 10-acre parcels or of low-density of 10 acre and less parcels where the fuel modification would not provide Community level benefits.

APPENDIX – D FUELS MANAGEMENT PRESCRIPTION SUMMARY

Defensible Space – Defensible Community Guidelines Summary

Exempt Materials

- ❑ **Any vegetation utilized as landscape which is maintained in a fire safe manner, i.e., irrigated, pruned, free of dead material.**
- ❑ **Trees greater than 8-inch dbh (diameter measured at 4-1/2 feet from the ground).**
- ❑ **All Rare and Endangered plants.**
- ❑ **Snags greater than 18-inch dbh and not more than 30 feet in height which, should they fall, are not capable of reaching a road and have a separation of at least 100 feet between snags.**

	Defensible Space Zone	Defensible Community Zone
Application	Pertains to all parcels with structures in the unincorporated portions of the County. Clearance requirements, based on slope and vegetation types up to 200 feet from the structure(s).	The area outside of the Defensible Space zone. Pertains to all parcels ten acres and less within the unincorporated portions of the County.
Grasses	Grasses and weeds to be maintained to less than 4 inches.	Grasses and weeds to be maintained to less than 4 inches on unimproved parcels less than 1 acre.
Brush-Shrubs	Separated from other vegetation by a distance equal to at least 3 times the height of the fuel.	Separated from other vegetation by a distance equal to at least 1-1/2 times the height of the fuel.
Trees	Trees 8 inches dbh and less shall be spaced at least 20 feet apart. Exempt trees (>8 inches dbh), in order to reduce ladder fuels, shall have brush vegetation within their drip lines removed. Retained trees that are 8 inches dbh and less which exist within the drip line of larger overstory trees shall be spaced a minimum of 20 feet between their trunks.	Trees 8 inches dbh and less shall be spaced at least 15 feet apart. Exempt trees (>8 inches dbh), in order to reduce ladder fuels, shall have brush vegetation within their drip lines removed. Retained trees that are 8 inches dbh and less which exist within the drip line of larger overstory trees shall be spaced a minimum of 15 feet between their trunks.

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Tree Groups	Trees up to the 8-inch dbh with trunks within 3 feet of each other, essentially making one canopy, may be considered one tree.	Trees up to the 8-inch dbh with trunks within 6 feet of each other, essentially making one canopy, may be considered one tree.
Branches	Any dead woody material and low hanging limbs up to 8 feet above the ground or half the tree's height, whichever is less, shall be removed.	
Natural Retention Areas	Not Applicable	1/5 acre untreated natural retention area per acre can be grouped or spread across the property
Riparian Areas	Independently evaluated based on threat to structure.	Only dead material within riparian areas is required to be removed.
Special Considerations	Not Applicable	For parcels greater than 10 acres, the fuels treatment shall be placed in such a manner to inhibit the spread of high intensity fire to adjoining smaller parcels.

**APPENDIX - E RECOMMENDED CHANGES TO LAND USE AND
DEVELOPMENT CODE CH. II-SETBACKS**

NOTE: ITEMS IN RED ARE RECOMMENDED CHANGES TO THE LUDC

**~~ITEMS WITH THE STRIKE THROUGH ARE RECOMMENDED TO BE
REMOVED FROM THE LUDC~~**

CHAPTER L-II 4.2.5 BUILDING SETBACKS

Sec. L-II 4.2.5 Building Setbacks

A. PURPOSE. Building setbacks are intended to provide open areas around structures for visibility and traffic safety, access to and around structures for safety and convenience purposes, access to natural light, ventilation and direct sunlight, separation of incompatible land uses, space for privacy and landscaping, protection of natural resources, and defensible space against encroaching wildland fire.

1. For the specific purpose of providing defensible space against an encroaching wildfire, Exceptions to Standards as for provided in Sec. L-XVI 2.6 may be used for the application of same practical effect measures.

B. DEFINITIONS.

1. Setback – The distance by which a structure or an addition to a structure must be separated from a parcel line, natural feature, other structure, road, right-of-way, or easement.

2. Yard - An unoccupied space on a parcel on which a structure is situated, or for which a structure is intended, which is open from the ground upward, except as otherwise provided in this Chapter.

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3. Yard, Front – A yard measured from the edge of the easement or right-of-way across the front of the parcel between side parcel lines and to a width required by the district in which said parcel is located.
 4. Yard, Exterior Side – A yard along the edge of a side street, right-of-way or easement to a width required by the district in which said parcel is located.
 5. Yard, Interior Side – A yard along the interior side parcel line of the parcel to a width required by the district in which said parcel is located.
 6. Yard, Rear – A yard extending along the rear parcel line of the parcel, or edge of easement or right-of-way on a through parcel, and to a width required by the district in which said parcel is located.
- C. STANDARD. Unless otherwise delineated on the zoning district map or otherwise provided in this Chapter, the space within a required setback as established for the base districts in Article 2 shall be unoccupied space open from the ground upward and no structure or addition to an existing structure of any kind shall be permitted within a required setback.
- D. NATURAL RESOURCES. Additional setbacks are required for selected natural resources as provided in Section 4.3 Resource Standards.
- E. DETERMINING THE FRONT YARD.
1. Interior parcels: The front yard shall be on the side containing the road right-of-way or easement.
 2. Corner parcels: The front yard shall be the shorter line abutting the road (except in commercial and industrial districts, in which case the longer line abutting the road shall be considered the front parcel line).

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3. Flag Pole Parcels: The front yard shall be the parcel line nearest and perpendicular to the driveway or flagpole portion.
4. Through Parcels: Shall maintain front yard setbacks on both the front and rear parcel lines.

F. MEASUREMENT.

1. Front and Exterior Side: Setbacks from local and fire standard (or emergency) access roads shall be measured from the edge of the right-of-way, or from the centerline of the right-of-way, whichever setback standard is greater, to any portion of the structure.

Setbacks from arterial and collector roads shall be measured from the edge of the existing right-of-way, or ultimate right-of-way as provided in LUDC Section L-XVII 3.3 Table 2 or as determined by resolution of the Board of Supervisors, whichever setback standard is greater, to any portion of the structure.

2. Interior Side and Rear: Setbacks shall be measured from the side or rear property line to any portion of the structure.

G. EXCEPTIONS TO BUILDING SETBACKS. Building setbacks must be maximized wherever possible; however, exceptions to setback standards are as follows:

1. Parcels that are less than 3 acres in size. Such parcels may reduce setbacks as follows:

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“R1”, “R2”, and “R3” districts shall provide a 5’ interior side yard setback and a 20’ rear yard setback;

“RA”, “AG”, “AE”, & “FR” districts shall provide a 10’ interior side yard setback and a 20’ rear yard setback.;

Provided all of the following are satisfied:

- a. The site is served by a community or public water supply pursuant to Chapter XVI, Section 4.3 of the LUDC, ~~or, if approved by the California Department of Forestry, & Fire Protection, 2,500 gallons of storage available at 500 gallons per minute.~~
- b. The under-floor (subdeck) space of structures, including decks, of combustible construction shall be enclosed on the side or sides within that area between the standard setback and the reduced setback. The enclosure shall be skirting of solid sheathing or equivalent material. Venting of covered areas shall be allowed consistent with the Uniform Building Code. This protection may be omitted for areas where the horizontal supports are greater than 8’ from grade.
- c. One of the following features is incorporated into that portion the structure proposed within that area between the standard setback and the reduced setback:
 - 1) ~~The undersides of projections beyond the exterior wall including eaves, cantilever balconies and similar overhangs, shall be enclosed with solid sheathing or equivalent material. The undersides of attached decks 8’ or taller must similarly be enclosed. Venting of covered areas shall be allowed consistent with the Uniform Building Code.~~

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- 2) The sum of the area of unprotected openings in the exterior wall(s) shall not exceed 25 percent of the total area of the exterior wall(s).
 - 3) Non-combustible materials or materials approved for one-hour fire-resistive construction shall be installed on the exterior side of the wall. The location of the wall shall be approved by the County Fire Marshal or his/her appointed designee.
 - 4) ~~If the proposed construction is located on the uphill side of a slope in excess of 20%, a 4' high, non-combustible wall may be constructed along the length of the exposed side of the structure.~~
 - 5) If a setback easement is recorded on the adjacent parcel, providing the required 60' of defensible space between structures, which allows for modification and maintenance of vegetative fuels.
2. This section deleted. (Ord. #2090, 7/9/02.)
 3. Architectural Features/Aboveground Utilities. Such features, including but not limited to cornices, eaves, roof overhangs, canopies, decks and unenclosed porches not more than 18" in height, bay windows, steps, stairways, fire escapes, landing places, fireplaces, propane tanks and heating or air conditioning units, may extend into front and rear yard setbacks by not more than 5'.
 4. Site Design Features. The following features are exempt from the setback requirements of this Section:

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- a. Fences or walls that meet the height limits established in Section 4.2.6 of this Chapter.
 - b. Retaining walls less than 4' in height above the finished grade.
 - c. Signs consistent with Section L-II 4.2.12.
 - d. Underground utilities and septic tanks leach lines.
5. Open-Air Structures Abutting Water. Notwithstanding any other provision of Chapters II and XII of this Code, the following water-use related structures that do not include walls or roofs, may be constructed without complying with the rear and side property line setback requirements as established in this Code for any parcel of real property that abuts a lake, watercourse, or floodplain:
- a. Docks & Piers
 - b. Boat Hoists and Canopies
 - c. Private boat launch facilities
 - d. Directional hazard or warning, marina and gasoline signs.

See floodplain-related setback requirements in Section L-II 4.3.10.

6. Clustered Parcel Development, Dwelling Groups, and Planned Developments. Clustered parcels, dwelling groups, and planned developments (within both the base and combining districts) are exempt from the Article 2 setback standards, provided that:
- a. The modified setback standards are a part of a conditional use permit and/or subdivision map.
 - b. Findings for approval ensure consistency with and furthers the purpose of all Article 4.3. Resource Standards

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- c. The modified standard is recorded as a part of the subdivision map, deed restriction, or other enforceable restriction.
7. Dwellings in Commercial/Industrial. Dwellings proposed in any commercial or industrial district shall provide setbacks as required in the “R2” and “R3” Districts, except when located within a commercial or industrial structure.
8. Swimming Pools. Shall maintain a minimum setback of 10’ from any side or rear property line and shall not be permitted within any required front yard setback. Fencing standards for swimming pools are contained in Article 15 of the Nevada County Land Use and Development Code.
9. Properties East of the 10E Range Line. Attached or detached garages and/or carports may be constructed within 1’ of the front property line if 20’ is maintained from the edge of pavement or traveled way if unpaved.
10. Setback Easements. In order to provide required side and rear building setbacks on properties that cannot otherwise provide those setbacks, a building setback easement may be recorded and recognized on adjacent properties, pursuant to the following standards:
 - a. Applications for setback easements shall include the written consent of the grantor and grantee property owners.
 - b. Applications shall include a site plan exhibit for all affected properties, pursuant to Section 5.1 of this Chapter, including a clear delineation of the proposed easement, reflecting the required setbacks for both grantor and grantee properties.

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- c. Applications for setback easements shall provide clear justification for the need of the easement, providing supporting documentation that other alternatives, including a variance, are not feasible.
- d. Setback Easements shall be recognized only after review and approval by the Planning Director who shall make findings that the recording of such easement will not jeopardize the integrity of the neighborhood nor will it conflict with any recorded Conditions, Covenant and Restrictions for all properties.
- e. A deed restriction shall be recorded concurrently with said easement in the Nevada County Recorder's Office, noting the purpose and intent of the setback easement and noting that building setbacks shall be measured from the setback easement.
- f. Reconveyance or other abandonment of a setback easement without the express approval of the County of Nevada shall constitute grounds for revocation of any permit issued pursuant to this Section.

11. Parking Lots.

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**APPENDIX-F RECOMMENDED CHANGES TO LAND USE AND
DEVELOPMENT CODE CH. XVI-FIRE SAFETY REGULATIONS**

NOTE: ITEMS IN RED ARE RECOMMENDED CHANGES TO THE LUDC
**~~ITEMS WITH THE STRIKE THROUGH ARE RECOMMENDED TO BE
REMOVED FROM THE LUDC~~**

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ARTICLE 1 DEFINITION

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ARTICLE 1 DEFINITIONS

Sec. L-XVI 1.1 Purpose

For the purpose of carrying out the intent of this Chapter, words, phrases and terms used herein shall be deemed to have the meaning ascribed to them. When not inconsistent with the content, words in the singular number include the plural and words in the plural include the singular. (Ord. #1734, 9/10/91)

Sec. L-XVI 1.2 Definitions

- A. **ACCESSORY BUILDING:** Any building used as an accessory to residential, commercial, recreational, industrial or educational purposes as defined in the California Building Code, 1989 Amendments, Chapter II, Group M, Division 1, Occupancy that requires a building permit.
- B. **AGRICULTURE:** Land used for agricultural purposes as defined in a local jurisdiction's zoning ordinances.
- C. **BUILDING:** Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the California Building Code, 1989 Amendments, Chapter II, except Group M, Division 1, Occupancy. For the purposes of this Article, building includes mobile homes and manufactured homes, churches and day care facilities.
- D. **CDF:** California Department of Forestry and Fire Protection.
- E. **DEAD END ROAD:** A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.
- F. **DEFENSIBLE SPACE:** The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter, as used in this Chapter, is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

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- G. DEVELOPMENT: As defined in Section 66418.1 of the California Government Code.
- H. DIRECTOR: The Director of the Department of Forestry and Fire Protection or his/her designee.
- I. DRIVEWAY: A vehicular access that serves no more than two parcels with no more than two (2) dwelling units on each, and any number of accessory buildings.
- J. DWELLING UNIT: Any building or portion thereof which contains living facilities for not more than one family, including provisions for sleeping, eating, cooking and/or sanitation.
- K. EXCEPTION: An alternative to the specified standard, requests by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions such as recorded historical sites to provide mitigation of the problem.
- L. FIRE VALVE: See hydrant.
- M. FUEL MODIFICATION AREA: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.
- N. GREENBELT: A facility or land use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.
- O. HAMMERHEAD T: A roadway that provides a "T"-shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.
- P. HYDRANT: A valved connection on a water supply/storage system having at least one 2 1/2 inch outlet with male National Hose Threads (NH) used to supply fire apparatus and hoses with water.
- Q. LOCAL JURISDICTION: Any county, city/county agency or department or any locally authorized district that issues or approves building permits, use permits, parcel maps or tentative parcel maps or has authority to regulate development and construction activity.
- R. OCCUPANCY: The purpose for which a building, or part thereof, is used or intended to be used.

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- S. ONE-WAY ROAD: A minimum of one traffic lane width designed for traffic flow in one direction only.
- T. ROADS, STREETS, PRIVATE LANES: Vehicular access to more than two residential parcels; access to any industrial or commercial occupancy.
- U. ROADWAY: Any surface designed, improved, or ordinarily used for vehicle travel.
- V. ROADWAY STRUCTURES: Bridges, culverts, and other appurtenant structures which supplement the roadway bed or shoulders.
- W. SAME PRACTICAL EFFECT: As used in this Chapter, means an exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics and provisions for fire fighter safety including:
 - 1. access for emergency wildland fire equipment
 - 2. safe civilian evacuation
 - 3. signing that avoids delays in emergency equipment response
 - 4. available and accessible water to effectively attack wildfire or defend a structure from wildfire
 - 5. fuel modification sufficient for civilian and fire fighter safety
- X. SHOULDER: Roadbed or surface adjacent to the traffic lane.
- Y. STATE BOARD OF FORESTRY (SBOF): A nine member board, appointed by the Governor, which is responsible for developing the general forest policy of the State, for determining the guidance policies of the Department of Forestry and Fire Protection, and for representing the State's interest in federal land in California.
- Z. STATE RESPONSIBILITY AREAS (SRA): As defined in Public Resources Code Sections 4126-4127.
- AA. STRUCTURE: That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.
- BB. SUBDIVISION: As defined in Section 66424 of the Government Code.
- CC. TRAFFIC LANE: The portion of a roadway that provides a single line of vehicle travel.

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- DD. TURNAROUND: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.
- EE. TURNOUTS: A widening in a roadway or driveway to allow vehicles to pass. Minimum 30' long plus 10' wide with a 25' taper on both ends.
- FF. VERTICAL CLEARANCE: The minimum specified height of a bridge or overhead projection above the roadway.
- GG. WILDFIRE: As defined in Public Resources Code Sections 4103 and 4104. (Ord. #1734, 9/10/91)

Ord. #1734, 9/10/91

ARTICLE 2. GENERAL REQUIREMENTS

Sec. L-XVI 2.1	Purpose and Intent of Chapter
Sec. L-XVI 2.2	Scope
Sec. L-XVI 2.3	Project Consultation and Review
Sec. L-XVI 2.4	Violations
Sec. L-XVI 2.5	Inspection Authority
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ARTICLE 2. GENERAL REQUIREMENTS

Sec. L-XVI 2.1 Purpose and Intent of Chapter

The regulations contained in this Chapter and the provisions in Chapter II (Zoning Regulations), Chapter IV (Subdivision Regulations), Chapter VII (Street Addressing and Naming), and Chapter V (Buildings) and County adopted road standards collectively provide the necessary minimum wildfire protection standards that will minimize public safety effects with the establishment of land uses and buildings within State Responsibility Areas (SRA) lands within Nevada County. These regulations are intended to mitigate effects of wildland fire exposure to such land uses within the State Responsibility Areas and they are further adopted to equal, exceed, or provide the same practical effect contained in the California State Board of Forestry's Fire Safe Regulations adopted on November 7, 1990.

The fire safety regulations contained in these Chapters provide measures for emergency access, street name and building address signage, water reserves for emergency fire use, and vegetation modification.

These regulations are not to be applied retroactively to existing dwelling units as reflected on the official tax rolls as of October 10, 1991, or to any approved and unexpired entitlements (tentative maps, use permits, site plans, building permits, etc.). They shall be applied to all activities set forth in Sec. L-XVI 2.2. (Ord. #1734, 9/10/91)

Sec. L-XVI 2.2 Scope

Activities affected by this Chapter include, but are not limited to:

- A. Subdivisions.
- B. Application for mobile home set-up permits and building permits for new construction, not related to an existing structure, filed on or after October 10, 1991.
- C. Application for a use permit and all ministerial and discretionary site plans.
- D. Road construction, including construction of a road that does not currently exist, or extension of an existing road, not including roads for agricultural or mining use solely on one ownership, and roads used solely for the management and harvesting of wood products.

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(Ord. #1734, 9/10/91)

Sec. L-XVI 2.3 Project Consultation and Review

- A. All projects subject to this Chapter shall be sent for review and comment to the appropriate fire district, to the California Department of Forestry Director (or designee) and/or any other designated fire official having expertise in wildland fire mitigation. Any conditions imposed by said fire agencies shall not be a substitute for or be less restrictive than the minimum requirements contained in these Chapters of the Nevada County Land Use and Development Code.
- B. All projects located on SRA lands shall be reviewed for compliance with all regulations in the Nevada County Land Use and Development Code that provide fire safety requirements. No project may be authorized until the decision-making body or County agent has verified that all appropriate requirements have become a condition of project approval.

(Ord. #1734, 9/10/91)

Sec. L-XVI 2.4 Violations

Any permittee or applicant who violates any provision contained in this Chapter shall be guilty of an infraction pursuant to Sec. L-II 37.5 of the Land Use and Development Code. (Ord. #1734, 9/10/91)

Sec. L-XVI 2.5 Inspection Authority

- A. Inspections of the various fire safety regulations on SRA lands shall be completed by the County department under whose jurisdiction the fire safety standard exists and which has inspection authority. The Board of Supervisors may, by Resolution, authorize a different County department, division or officer with fire protection responsibility to perform all or part of such inspection duties.
- B. Within local fire district boundaries, inspections established by this Chapter may be performed by district personnel with the approval of the California Department of Forestry and Fire Protection ~~Ranger~~ Unit Chief.
- C. All necessary inspections must be performed and approval obtained prior to final occupancy, map recordation or other authorization to occupy as applicable to the use or permit being finalized.

(Ord. #1734, 9/10/91)

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Sec. L-XVI 2.6 Exceptions to Standards

- A. All exceptions or modifications to the stated standards not contained in Chapter II of the Land Use and Development Code, **with the exception of L-II 2.5 Building Setbacks, as they relate only to the provision of defensible space**, shall be considered by the planning agency having jurisdiction over the land use entitlement. The planning agency shall consider all the facts associated with the requested exception and request for mitigated practices. In approving same, the hearing body must find that the substituted mean(s) provide the same overall practical effect. Such evidence shall be supported by the Director.

Exceptions or modifications to any portion of Chapter II of the Land Use and Development Code shall be considered pursuant to Article 30 (Area Variances) of Chapter II of the Land Use and Development Code. In addition to the findings required to approve an area variance, any exception or substitution to the stated standards shall have the same practical effect as supported by the Director and by finding of the appropriate hearing body.

- B. All requests for exceptions and area variances shall include the following information:
1. The specific Section of the applicable Chapter of the Land Use and Development Code that is being sought to be modified.
 2. Material facts and reasons supporting the request.
 3. Details of the exception and substitute standard being proposed along with a demonstration that the same practical effect is being achieved.
 4. Site plan and/or other supporting documentation showing the location of the exception, proposed modifications and any mitigating factors that contributes to the exception request.

(Ord. #1734, 9/10/91)

Sec. L-XVI 2.7 Appeals

All appeals from this Chapter and any other Chapters of the Land Use and Development Code shall be processed pursuant to Article 33 of Chapter II of the Land Use and Development Code. Appeals may only be filed from actions taken by the appropriate hearing body. No appeal may occur without first having it considered as an exception or an area variance. (Ord. #1734, 9/10/91)

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Sec. L-XVI 2.8 Distance Measurements

All specified or referenced distances as to road lengths and vegetative clearing areas are measured along the **horizontal** ground, unless otherwise stated. (Ord. #1734, 9/10/91)

Sec. L-XVI 2.9 Maintenance of Defensible Space Measures

To ensure continued maintenance of properties in conformance with these standards and measures and to assure continued availability, access, and utilization of the defensible space provided for in these standards during a wildfire, provisions for continued annual maintenance shall be included in the development plans and/or shall be provided as a condition of the permit, parcel or map approval. The persons or entity responsible for maintenance must be designated in the development plans. (Ord. #1734, 9/10/91)

Ord. #1734, 9/10/91

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ARTICLE 3 DRIVEWAYS

- Sec. L-XVI 3.1 Purpose
- Sec. L-XVI 3.2 Private Driveway Construction Standards
- Sec. L-XVI 3.3 Exception to Driveway Permit Requirement

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ARTICLE 3 DRIVEWAYS

Sec. L-XVI 3.1 Purpose

Proper emergency access providing evacuation of residents and guests and access by emergency response vehicles is of paramount importance in order to assure that the spread of a wildland fire can be retarded, that improvements can be protected from wildland fire and that year round access can be assured for the owners' convenience and access by emergency vehicles. (Ord. #1734, 9/10/91)

Sec. L-XVI 3.2 Private Driveway Construction Standards

All newly constructed residences shall be served by a driveway. Any subdivision proposing that two (2) lots be served by a common driveway shall have the driveway constructed prior to the map recordation. The driveway shall meet the following construction standards as administered by the Building Department through a driveway permit when a grading permit is not applicable:

A. DRIVEWAY GRADE

1. Below 4,000foot elevation, 16% maximum grade without a hard surface. For driveway grades between 16.1% and 20% refer to B.2. for surfacing requirement. For driveway grades between 20.1% and 25% refer to B.3 below. ~~except for distances less than 100 feet when topographic conditions make moderate grade impractical. In no event may such grades exceed 20%-25%.~~
2. Above 4,000 foot elevation, 16% maximum without a hard surface. For driveway grades greater than 16% up to a maximum of 20%, surfacing shall be as described in B.2.

B. DRIVEWAY SURFACE

1. A surface capable of supporting a 40,000 lbs. legally-loaded vehicle as certified by a registered civil engineer or a ~~minimum of 4"~~ Class II aggregate base compacted to a minimum of 4".
2. For driveway portions in excess of 16% up to the maximum 20%, the surface provided in B.1 (above) must be paved with 2" of Asphalt concrete, concrete or an engineered hard surface system.

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3. For driveway portions in excess of 20% up to a maximum of 25% the surface must be roughened concrete or an engineered roughened hard surface. The roughened concrete surface must have surface drains in the shape of grooves in the driveway surface running diagonally from side to side to rapidly shed water. These grooves shall be two feet on center a minimum of 1/2 "deep and a minimum 1/4" wide. The engineered roughened hard surface must be designed to rapidly shed water.

C. DRIVEWAY DESIGN

1. The vehicle access by a driveway must be built to within 50 feet of the nearest point of each dwelling unit. If the access to a dwelling unit is met through off street access, the distance between the dwelling and street must be easily traversable by pedestrians
2. Width: 10 foot minimum surfaced width with one foot shoulders on driveway grades up to 20%. 12 foot minimum surfaced width with one foot shoulders on driveway grades greater than 20% up to a maximum of 25%.
3. Vertical clearance: 15 feet minimum measured from the outside edge of the shoulder.
4. Horizontal curve radius: 50 foot minimum from centerline. Add 4' of surfacing to the outside of the curve for radii between 50.1 feet and 75 feet. Add 2' of surfacing to the outside of the curve for radii between 75' and 100'. ~~For all driveway radii less than 100', an additional 4' of surfacing shall be provided on said curves.~~
5. Vertical Curve: Any gradebreak of greater than 14% shall be made by means of a minimum 20 ft. radius vertical curve.
6. Back-out maneuvering area in front of parking garages and open parking stalls: 24 feet. This area may be used as a part of the turnaround, but not as required off street parking.
7. For driveways in excess of 400 feet, a turnaround or hammerhead T of 12 percent maximum grade shall be provided within 100 feet of the dwelling and meeting the following standards:
 - a. Turnaround: The terminus bulb shall have a minimum 40' radius.
 - b. Hammerhead T: The long axis shall be a minimum of 60' and the leg shall be a minimum of 40'.

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For driveways less than 400' in length and where 50% or more of that driveway is greater than 16% grade, a turnaround shall be required where the driveway length exceeds 200'

Note: the purpose for this requirement is to minimize the distance a fire engine has to back down a steep driveway recognizing that the air compressor for the braking system may not be able to supply enough air with the engine running at an idle.

8. Turnouts: Driveway lengths exceeding 400', but less than 800' shall have a turnout near the mid-point. Where the driveway exceeds 800', turnouts shall be provided no more than 400' apart.
- 9 All bridge and culvert portions of the driveway shall support a 40,000 pound legally loaded vehicle.

Roadside vegetation: A fuel modification area shall be provided for a distance of 10 feet on the uphill side of each side of the driveway and 10' for every 10% of topographic slope on the downhill side of the driveway. The fuel modification shall be consistent with the community level fuel management prescription.

- 10 All appropriate grading, drainage and erosion control shall be included pursuant to Chapter V of the Land Use and Development Code.
- 11 Lateral slopes must be designed and installed to accommodate a minimum 2% and maximum 4% cross slopes, taking topography into consideration.

D. Gates on Driveways

1. Gate entrances shall be at least two feet wider than the width of the traffic lanes serving the gate.
2. All gates providing access from a road to a driveway or another road shall be located at least 30 feet away from the primary roadway and shall open to allow a vehicle to stop without obstructing traffic on that primary road.

E. Driveway Encroachment onto Private Roads

1. Driveway encroachment onto private roads shall be constructed in accordance with Standard Drawing B-8 'Encroachment Detail – PRIVATE DRIVEWAY' except that encroachment surface shall be equal to or greater than the surfacing of the private road.

(Ord. #1748, 10/22/91; paragraph 9 amended by Ord. #1919, 11/5/96)

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Sec. L-XVI 3.3 Exception to Driveway Permit Requirement

A driveway permit pursuant to this Article shall not be required for a driveway completed prior to November 21, 1991, so long as the driveway was constructed under and in compliance with a duly issued grading permit and the driveway as constructed complies with the driveway construction standards of Sec. L-XVI 3.2. (Ord. #1773, 5/12/92)

Ord. #1734, 9/10/91; Ord. #1748, 10/22/91; Ord. #1773, 5/12/92; Ord. #1919, 11/5/96

ARTICLE 4 EMERGENCY WATER SUPPLY

Sec. L-XVI 4.1	Purpose and Intent
Sec. L-XVI 4.2	Application
Sec. L-XVI 4.3	General Standards
Sec. L-XVI 4.4	Standards for Hydrants/Fire Valves

ARTICLE 4 EMERGENCY WATER SUPPLY

Sec. L-XVI 4.1 Purpose and Intent

To provide available and accessible emergency water for wildfire protection on SRA lands, in specified quantities and locations to attack a wildfire or defend property from a wildfire. Such emergency water may be provided in a fire agency mobile water tender or naturally occurring or manmade containment structure, as long as the specified quantity is immediately available. (Ord. #1734, 9/10/91)

Sec. L-XVI 4.2 Application

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- A. Subdivisions, use permits, **administrative development permits**, site plans. The provisions of this Article shall apply when new parcels, use permits, or site plans are approved. The water supply **requirements shall be met** ~~shall be available on-site~~ prior to map recordation in the case of subdivisions, or building construction in the case of use permits or site plans.
- B. ~~Remote single-family residential buildings. The provisions of this Article shall apply when building permits are approved for residential structures that are in excess of eight (8) miles from the closest fire department water tender and which otherwise do not meet the requirements of Sec. L-XVI 4.3. The stored amount of water available for fire protection shall be 2500 gallons, exclusive of domestic requirements. The water shall be available on-site at the time of the framing inspection. Construction of the water storage facility shall be in compliance with Examples 1, 2 and 3.~~

Note: This section is proposed for repeal only with successful implementation of the Rural Fire Protection Water Supply System>

(Ord. #1734, 9/10/91)

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EXAMPLE 1: ON FILE WITH THE BOARD OF SUPERVISORS

EXAMPLE GRAPHICS NOT YET AVAILABLE

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EXAMPLE 2: ON FILE WITH THE BOARD OF SUPERVISORS

EXAMPLE GRAPHICS NOT YET AVAILABLE

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EXAMPLE 3: ON FILE WITH THE BOARD OF SUPERVISORS

EXAMPLE GRAPHICS NOT YET AVAILABLE

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Sec. L-XVI 4.3 General Standards

Each subdivision shall install a water supply system as provided in the following chart. All emergency water to meet fire flow requirements is in addition to the domestic water source.

LAND USE	DENSITY AC/DU	SYSTEM TYPE	FIRE FLOW REQ. (GPM)	HYDRANT SPACING
SINGLE-FAMILY	0-.5	Public (Note 1)	1,000	500
	.5-1.0	Public (Note 1)	500 1000	500
	1.01-1.5	Public (Note 1)	500 1000	1,000
	1.51-3	Public (Note 1)	500 1000	1,000
		Community (Note 2)	500	1,000
	3-5*	Public (Note 1)	500 1000	2,000
		Community (Note 2)	500	2,000
		Class 8 (Note 3)		1 mile
	5+*	Public (Note 1)	500 1000	2,000
		Community (Note 2)	500	1 mile
		Class 8 (Note 3)	500	1 mile
MULTIPLE-FAMILY DWELLINGS		Refer to Sec. 10.301(c) of 1988 Uniform Fire Code Refer to the currently adopted version of the Calif. Fire Code		
COMMERCIAL		Refer to Sec. 10.301(c) of 1988 Uniform Fire Code Refer to the currently adopted version of the Calif. Fire Code		
INDUSTRIAL		Refer to Sec. 10.301(c) of 1988 Uniform Fire Code Refer to the currently adopted version of the Calif. Fire Code		

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* NOTE: Subdivisions using Class 8 may require installation of strategic water supply with storage volumes based on the formula for community water systems.

1. PUBLIC WATER SYSTEM - Nevada Irrigation District or other public water purveyor standards.
2. COMMUNITY WATER SYSTEM - Centrally located water storage system maintained by property owners.

In no case shall the water storage quantity be less than 4000 gallons regardless of the number of parcels served. All such systems shall be designed to avoid contamination of potable water supplies in accordance with Environmental Health Standards.

The minimum water supply shall be determined by using the Formula $Q=1500F$ when Q=quantity of water storage and F=the number of units or parcels served.

3. CLASS 8 - Those areas within a fire jurisdiction where the Insurance Services Office (ISO) has issued a dwelling Class 8 rating. Typically within five miles of a fire station and within eight miles of a water tender.

In no case shall the water storage quantity be less than 4000 gallons regardless of the number of parcels served. All such systems shall be designed to avoid contamination of potable water supplies in accordance with Environmental Health Standards.

The minimum water supply shall be determined by using the Formula $Q=1500F$ when Q=quantity of water storage and F=the number of units or parcels served.

(Ord. #1734, 9/10/91)

Sec. L-XVI 4.4 Standards for Hydrants/Fire Valves

When the fire protection water supply consists of a static water source, a dry hydrant connection shall be provided for fire department use. A dry hydrant connection is an arrangement of pipe permanently connected to a water source that provides a ready means of accessing a water supply for firefighting purposes and that utilizes the drafting (suction) capability of fire department pumps.

General requirements for the installation of a dry hydrant:

1. The dry hydrant shall be readily accessible by fire apparatus and shall be located not less than 50 feet or more than 500 feet from the structure intended to be

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served by the system.

2. The dry hydrant shall be located within 10 feet of the driveway or other approved access roadway.
 - (a) If the dry hydrant is located along the driveway serving a single structure or along the primary access roadway serving multiple structures, the connection shall be located in such a manner that fire apparatus can utilize the hydrant without obstructing the access roadway.
 - (b) An approved turnout, consisting of a 10-foot wide driving surface with a 25-foot taper on either end (total length of 75 feet), shall be provided when the dry hydrant is placed adjacent to a single lane access roadway or where fire apparatus using the hydrant would obstruct the access roadway.
 - (c) All flammable vegetation within 10 feet of the dry hydrant shall be removed.
3. Piping supplying the dry hydrant shall be not less than 4 inches in diameter.
 - (a) If PVC piping is used, the piping shall be Schedule 40, or better.
 1. Exposed PVC piping shall be primed and painted with epoxy paint or otherwise protected from damage that could be caused by exposure to sunlight in an approved manner.
 2. If PVC piping is used for the dry hydrant, an approved brace or support shall be provided to support the connection
 - (b) If galvanized steel piping is used, the piping in contact with the soil shall be wrapped with 2 layers of Mil Tape or otherwise protected from corrosion in an approved manner.
4. The connection for the dry hydrant shall consist of a 4-1/2 inch threaded male fitting with National Standard Threads. The connection shall be provided with an approved cap to protect the threads and to protect the water supply from contamination.
5. The connection for the dry hydrant shall be located between 18 inches and 36 inches above the finished grade.
6. If the dry hydrant connection is located lower than the water source, such as a storage tank, an approved valve at the base of the dry hydrant shall be provided to control the water flow.
 - (a) Provisions shall be made to drain any standing water from the piping above the valve.

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- (b) Any exposed piping that contains water shall be protected from freezing in an approved manner.
7. Closed storage tanks shall be vented in an approved manner.
- (a) Vent piping shall be equal to or larger than, the size of the piping serving the dry hydrant.
 - (b) The vent opening shall be screened with an approved material to prevent obstruction of the vent or contamination of the water supply.
8. When the water supply consists of an open water source such as a lake, reservoir, or pond, the following shall apply:
- (a) If the distance between the water source and the dry hydrant is greater than 100 feet, a minimum 6-inch piping shall be used to supply the dry hydrant.
 - (b) The piping between the base of the dry hydrant and the water source shall be buried at least 3 feet below the finished grade.
 - (c) The end of the piping located in the water source shall be located a minimum of 2 feet above the bottom surface of the water source and a minimum of 2 feet below the lowest recorded level of the top surface of the water source.
 - (d) The end of the piping located in the water source shall be fitted with a commercially manufactured dry hydrant strainer, a hand-made strainer consisting of a capped section of pipe with 1000 holes that are 5/16 inch in diameter drilled along the length, or equal.
 - (e) The distance between the lowest recorded level of the water surface and the connection for the dry hydrant shall not exceed 10 vertical feet.
9. Approved signs indicating the size, location, and access travel route to a fire protection water storage facility shall be provided in such a manner that all pertinent information relating to the facility is clearly identified.
- (a) All signs shall be mounted on noncombustible posts, shall be a minimum of 18" by 24" in size, and shall be a minimum of 0.080 gauge metal.
 - (b) The sign(s) shall have a reflective blue background with a minimum of 3" high reflective lettering that sharply contrasts with the background.
 - (c) If the water supply consists of a fixed amount, such as an underground or aboveground storage tank, the sign shall be located on or adjacent to the facility. The sign shall be clearly visible and legible from the access roadway

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serving the facility. The lettering on the sign shall be arranged as shown in the following example:

6,000 Gallon
Fire Protection
Water Supply

- (d) If the water storage facility consists of a reservoir, pond, or similar facility, at least one sign shall be provided at the intersection of the primary access roadway serving the area and the access roadway serving the water storage facility. This sign shall be located in such a manner that it is clearly visible and legible from the primary access roadway serving the area. Additional signs shall be provided along the access roadway serving the water storage facility if the route of travel is not easily recognized. The lettering on the sign shall be arranged as shown in the following example:

Access to
Fire Protection
Water Supply

- A. ~~The hydrant shall be located 18" above grade in a turnout/turnaround or other approved location, not less than 50' from any building. Flammable vegetation shall be removed within 8' of the hydrant.~~
- B. ~~The hydrant shall be: (1) brass with 2 1/2 inch National Hose male thread with cap for pressure and gravity flow systems and 4 1/2 inch for draft systems; or (2) any hydrant approved by the American Water Works Association. Such hydrants shall be an insulated wet barrel or dry barrel as required by the delivery system. It shall have suitable crash protection if required by the local jurisdiction.~~
- C. ~~Signing of Water Sources – Each hydrant/fire valve or access to water shall be identified as follows:~~
- ~~1. If located along a driveway, a reflectorized blue marker, with a minimum dimension of 3 inches shall be located on the driveway address sign and mounted on a fire retardant post, or~~
 - ~~2. If located along a street or road, it shall be marked/signed to the satisfaction of the fire agency with fire protection responsibility or the hydrants located along state highways shall be as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways.~~

(Ord. #1734, 9/10/91)

NEVADA COUNTY FIRE PLAN

ARTICLE 5. FUEL MODIFICATION

- Sec. L-XVI 5.1 Purpose and Intent
- Sec. L-XVI 5.2 Disposal of Flammable Vegetation and Fuels
- Sec. L-XVI 5.3 ~~Fuel Modification/Greenbelts~~ Management of Vegetative Fuels

ARTICLE 5 FUEL MODIFICATION

Sec. L-XVI 5.1 Purpose and Intent

To reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation, these areas shall provide (1) increased safety for emergency fire equipment and evacuating civilians; and (2) ~~a point of attack or defense from a wildfire;~~ and significant reduction in fire intensity resulting in lower resistance to fire control efforts; and (3) ~~strategic siting of fuel modification and greenbelts;~~ a reduction in costs and losses from wildland fire. (Ord. #1734, 9/10/91)

Sec. L-XVI 5.2 Disposal of Flammable Vegetation and Fuels

Disposal of flammable vegetation and fuels caused by site development and construction, road and driveway construction and fuel modification, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, shall be completed prior to completion of road construction or final inspection of a building permit or subdivision, whichever is appropriate. (Ord. #1734, 9/10/91)

Sec. L-XVI 5.3 Fuel Modification/Greenbelts Management

As a condition of approval of any Tentative or Final Subdivision Map, the applicant shall submit to the County Fire Marshal a vegetative fuels management plan that complies with the provisions of the County Ordinance describing the Landscape Level Fuel Management Prescription. The fuels management plan shall be implemented prior to the recordation of any map.

NEVADA COUNTY FIRE PLAN

~~As determined by the Director, a fuel modification zone or greenbelt may be required along all or some subdivision exterior boundaries. All subdivisions in excess of 10 lots with a density of one residence per 1-1/2 acres or greater shall provide greenbelts or fuel modification areas as a separation between wildland fuels and the lots within the subdivision. In all cases, the minimum width of a greenbelt or fuel modification zone shall be determined by the Director.~~

~~Depending on the fire hazard severity classification and other factors, those subdivisions providing a greenbelt may reduce or otherwise eliminate the setbacks required in the base zoning district in Chapter II of the Land Use and Development Code requiring 30" to interior side and rear yards. The less setbacks provided for may be used in lieu of the 30 feet. Such reduction or elimination of setbacks must be determined as part of the review of the tentative map and shall be incorporated as notes on the final map.~~

~~(Ord. #1734, 9/10/91)~~

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APPENDIX-G RECOMMENDED CHANGES TO LAND USE AND DEVELOPMENT CODE CH. XVII-ROAD STANDARDS

NOTE: ITEMS IN RED ARE RECOMMENDED CHANGES TO THE LUDC
~~ITEMS WITH THE STRIKE THROUGH ARE RECOMMENDED TO BE REMOVED FROM THE LUDC~~

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Sec. L-XVII 3.4 Design Geometrics

A. DESIGN WIDTHS AND SPEEDS

The minimum design widths, speeds and other major design criteria for road construction are as follows in the chart on the following page. Further details are provided in the Standard Drawings to be adopted by resolution to supplement this Chapter.

NEVADA COUNTY FIRE PLAN

TABLE II

NEVADA COUNTY STANDARD SPECIFICATION SUMMARY CHART

Functional Classification	Min. Right of Way Width Note 4	Standard Lane Width	Standard Shoulder Width	Fuel Mod. Zone Width	Standard Design Speed	Standard Max. Grade Below 3500'	Standard Max. Grade Above 3500'	Required Surface
Minor Arterial (Urban)	60-100'	12'	Varies	10' min.	35 mph	10%	8%	Note 1,6
Minor Arterial (Rural)	60'	12'	6'	10' min.	35 mph	10%	8%	Note 1,6
Collector (Urban)	60-100'	12'	Varies	10' min.	35 mph	10%	8%	Note 1,6
Major Collector (Rural)	60'	12'	4'	10' min.	35 mph	10%	8%	Note 1,6
Minor Collector (Rural)	60'	12'	4'	10' min.	35 mph	10%	8%	Note 1,6
Local Class 3 Over 2000 ADT	60'	12'	4'	10' min.	35 mph	10%	8%	Note 1,6
Class 2 401-2000 ADT	50'	10'	4'	10' min.	25 mph	10%	8%	Note 1,5,6
Class 1 101-400 ADT	50'	9'	2'	10' min.	20 mph	10%	8%	Note 1,5,6
Fire Standard Access Road Up to 100 ADT Two-Way One-Way	50' 34'	9' 10'	1' 2'	10' min. 10' min.	20 mph 20 mph	16% 16%	16% 16%	Note 2,5,6 Note 2,5,6
Driveway								Note 3

NEVADA COUNTY FIRE PLAN

- Note 1: All structural sections for this classification based on future year traffic and estimated percentage of that traffic which will be heavy vehicle
- Note 2: Surface capable of supporting a 40,000 lb. vehicle with a minimum 4" A.B. compacted to 95% with sub-grade compacted to 90%
- Note 3: Driveway standard specifications are contained in Chapter XVI of the Nevada County Land Use and Development Code, Fire Safety Regulations
- Note 4: Intersection channelization may increase the minimum right of way at spot locations
- Note 5: If approved by the Engineer, all grades over 10% will require minimum 2" A.C. surface
- Note 6: A Vertical Clearance of 15 ft shall be provided over all roads including required shoulders.

B. ROADSIDE FUEL MODIFICATION

Roadside fuel modification shall be as described in LUDC Sec. L-XVI 3.2 C.8.

APPENDIX – H GLOSSARY OF TERMS

Acre foot: The volume of water, equal to one acre covered by one foot of water or 43,560 cubic feet. One acre-foot equals 326,000 gallons or enough for two families for one year.

Aspect: The direction toward which a slope faces (*e.g.*, south facing or *north* facing)

Brush or Shrub Separation: The rule of “1 1/2 to 3 x height” applies to the horizontal separation of all brush or shrub plants within each Fire-Safe zone. Separate each plant by a minimum of this distance.

Chimney: A topographic feature, usually in a V shaped depression, creek bed, or canyon running a vertical direction from the base to the top of a ridge. These features may act as a “chimney” to conduct and direct heat and flame toward the ridge top. Structures situated in such areas may be at greater risk from on-coming wildfire.

Conifers [softwoods]: Sugar pine, ponderosa pine, digger pine, Douglas fir, and incense cedar.

Crown: The upper part of a tree or other woody plant carrying the main branch system and foliage.

Crown Separation: The distance from the outer edge of one tree crown from the adjacent tree crown.

Decadent: In regards to vegetation, it refers to plants of declining vigor and deteriorating health.

Defensible Space: That area which lies between a house and an oncoming wildfire where the vegetation has been modified to reduce the means of rapidly transmitting fire from native or ornamental growth to any building or structure. Defensible space may also aid firefighters by providing a less dangerous area from which to defend a structure. Aggressive defensible measures may provide stand-alone survival of property without the benefit of active fire suppression measures.

Defensible Space Zone: An area in which the vegetation has been modified to reduce the rapid transmission of heat and flame, generally from an approaching wildfire toward residential structures or other buildings. This zone may be as little as 100’ to as much as 200’ feet or more depending on vegetation, slope, and other natural influences.

Drip Line: The outer edge of the tree crown described as “that area where water would shed off the tree.”

NEVADA COUNTY FIRE PLAN

Fire environment: The surrounding conditions, influences, and modifying forces of topography, fuel, and weather that determine fire behavior.

Fire Fuel: Any combustible material. As related to wildfire, fuels typically refer to living or dead vegetation, and duff. Structures too, are a component, and contribute to the wildland fuel mix!

Fire Fuel Load: The volume or mass of the vegetation, in weight and density.

Fire Fuel Reduction: A process of thinning and separating the horizontal and vertical arrangement of the vegetation within a prescribed Defensible Space Zone to reduce the transmission of fire from the wildland to the buildings.

Fire Resistive Vegetation: All plants are flammable, but fire resistive plants burn at relatively low intensities, with a slow rate of spread and with short flame lengths. The following are some characteristics of fire resistive vegetation:

- Growth with little or no accumulation of dead vegetation, either on the ground or standing upright.
- Non-resinous plants or those having low sap or resin content.
- Low total volume vegetation; grass as opposed to shrubs or brush, as opposed to trees.
- Broad leaf deciduous trees as opposed to those with needle or blade leaves.
- Plants with high live fuel moisture.
- Plants with heavy stem and limb structure.

Flash fuels: Small size fuels (*1/2 inch in diameter or smaller*) loosely arranged such as grass, pine needles, etc.

Fuelbreak: A strategically located wide block, or strip, on which a cover of dense, heavy, or flammable vegetation has been permanently changed to one of lower fuel volume or reduced flammability, allowing for safe access by firefighters. A fuelbreak is usually constructed on a ridge and the fuelbreak width varies with the height of the heavy fuels. A *shaded fuelbreak* is a fuelbreak located in forest or woodlands, where the trees are pruned up to 20', and the intermediate shrubs, brush, and dead fuels are removed and replaced with grasses and forbs.

Fuel Loading: Refers to the amount of vegetation, live and dead, available for burning in an area and is commonly measured in tons (dry weight) per acre.

Hardwoods: Oaks - blue oak, black oak, live oak; alder, willow, madrone, and cottonwood.

Ladder Fuel: Or Fuel Ladder. Fuels that provide vertical continuity between strata, Fire is able to move from surface fuels (grass/brush) into tree crowns with relative ease.

NEVADA COUNTY FIRE PLAN

Litter: A surface layer of loose organic debris in forests, consisting of freshly fallen or slightly decomposed organic materials such as leaves, pine needles, and twigs.

Native Plant Species: Plants regenerated from seed sources indigenous to the same geographic place.

Ornamental Specimen: Single specimens of trees, ornamental shrubbery, or similar plants, which are used as ground cover, are generally acceptable if they do not form a means of rapidly transmitting fire from native growth to any building or structure.

Overstory: Those portions of the trees in a forest stand forming the upper tree crown cover.

Pyrophytes: Plants that ignite readily and burn intensely. Pyrophytes are typically:

- Blade or needle leaf evergreens
- Stiff, woody, small or fine lacey leaves.
- Leaves or wood containing volatile waxes, fats, terpenes or oils. (Crushed leaves have strong, aromatic odors)
- Sap usually gummy, resinous, strong odor.
- Contain plentiful fine, twiggy, dry or dead materials.

Ridgetop: A ridge top is the highest point running the length of a long narrow hill or chain of mountains.

Saddle: A saddle shaped depression in the ridge of hill. Often found at the head of a “chimney.”

Slope: Upward or downward inclination. Measures of the vertical rise or fall all of a slope from a given point. Usually expressed in percent or degree of rise or fall.

Tree Canopy: The crown cover of green leaves and branches formed by all of the tree crowns in a forest.

Tree Crown: The branches and foliage of a tree; the upper portion of a tree.

Wildfire: Any unwanted fire occurring in a wildland setting.

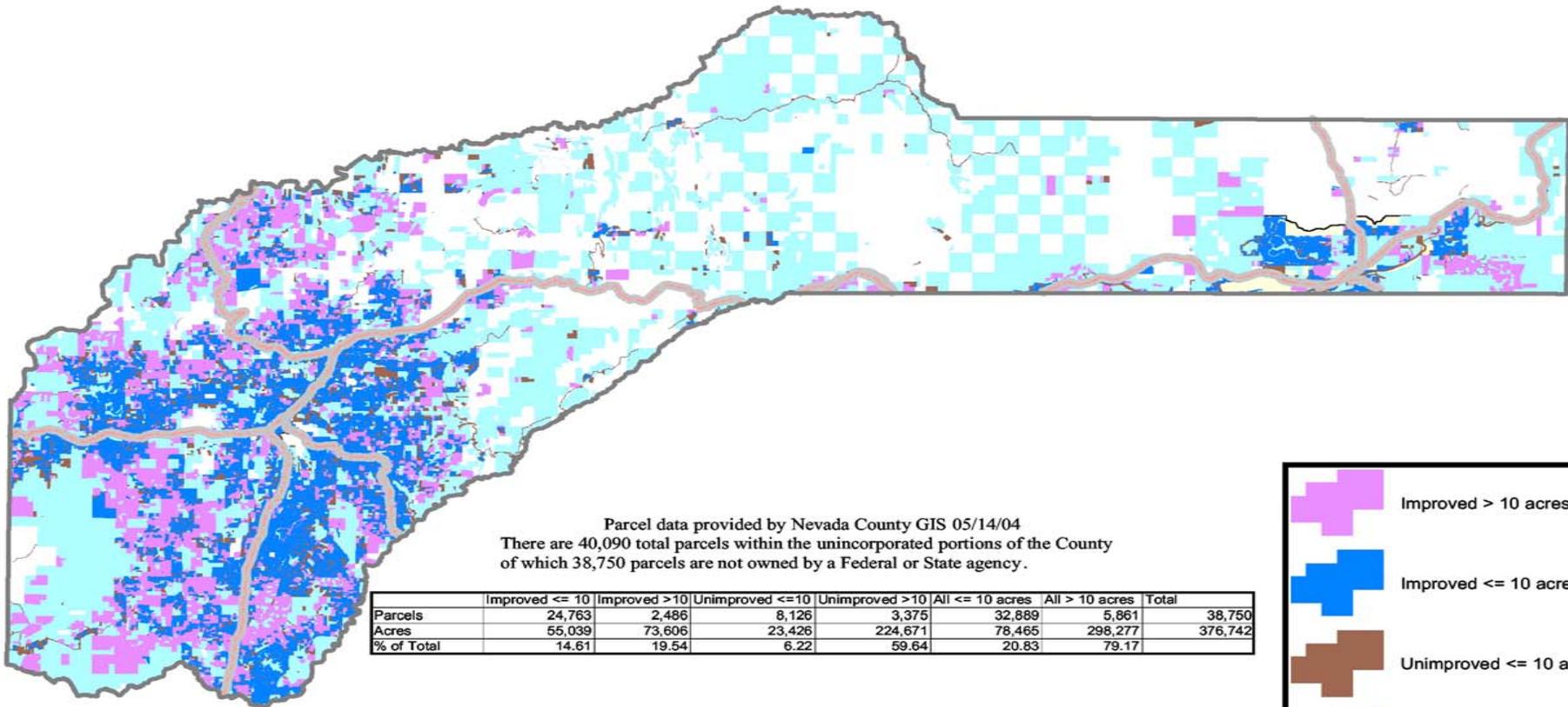
Wildland/Rural Intermix: Where many structures are present on a random or matrix pattern throughout large areas that are covered with contiguous brush and trees.

Wildlife Habitat: Vegetation, climate, and other natural conditions suited to the life needs for an animal species to survive and reproduce.

NEVADA COUNTY FIRE PLAN

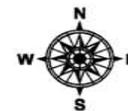
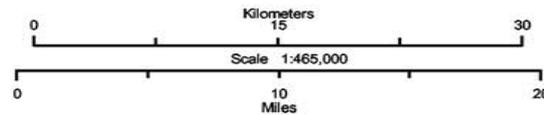
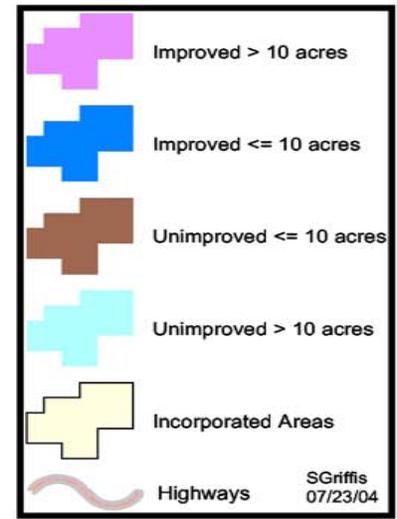
APPENDIX I- MAPS

Nevada County Parcel Allocations



Parcel data provided by Nevada County GIS 05/14/04
 There are 40,090 total parcels within the unincorporated portions of the County
 of which 38,750 parcels are not owned by a Federal or State agency.

	Improved <= 10	Improved >10	Unimproved <=10	Unimproved >10	All <= 10 acres	All > 10 acres	Total
Parcels	24,763	2,486	8,126	3,375	32,889	5,861	38,750
Acres	55,039	73,606	23,426	224,671	78,465	296,277	376,742
% of Total	14.61	19.54	6.22	59.64	20.83	79.17	



SGriffis
07/23/04

Nevada County Fire Plan

Addendum 1.

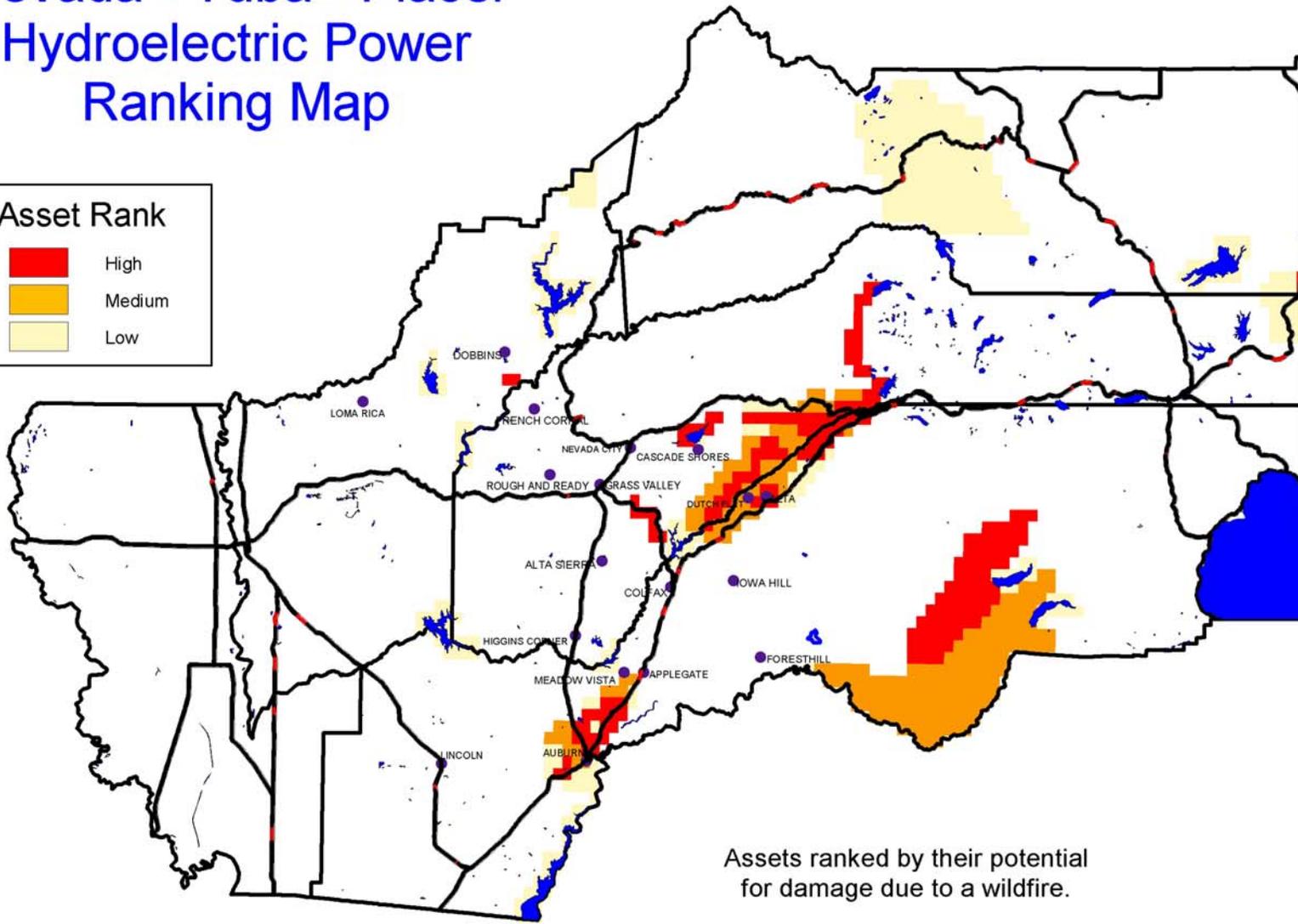
1. Recommendation 1. Include the Tahoe/Truckee Unified School District as a participant in development of a school curriculum having to do with teaching students about the fire adapted ecosystem. (Supervisor Green)
2. Recommendation 7. Clarification. Recommendations for activities and the application of standards within very high fire hazard areas associated with the Second Dwelling Unit Pilot Program are already contained in recommendations for application within CDF's Very High Hazard Severity Zones within which lie all of the of the Second Dwelling Unit very high fire hazard areas. (Supervisor Van Zant)
3. Recommendation 21. Add, "The FPC further recommends that the elderly/disabled emergency notification/evacuation system (known as S.A.F.E. or Special Assistance for Emergencies) be maintained as a viable method for early notification and evacuation of elderly or disabled citizens in the vicinity of major emergencies." (Supervisor Sutherland)
4. Recommendation 25. Clarification. The recommendation states that "... green waste pick up, mulching or composting be the preferred alternative for leaf and pine needle disposal." The intent is that this recommendation is referring to leaves that have fallen from trees or shrubs because of seasonal changes and when piled together do not burn freely, generating an inordinate amount of smoke. (Supervisor Sutherland)
5. Goal II, Objective D. Add Recommendation 20-1. "The FPC recognizes the fire protection value of having economical and readily available irrigation water available to the landowners of Nevada County and recommends continued support for the Nevada Irrigation District and the agricultural community in keeping irrigation water available in the future. It further recommends that NID work closely with the fire service to make irrigation water readily accessible for fire suppression purposes." (Supervisor Sutherland)

Nevada County Fire Plan

Addendum 2.

1. **Recommendation 16.** Development of a compliance program for future developments and the extent permitted by State law to ensure that roads required as a condition of approval through subdivision maps are maintained over the long term, to the standard that they were originally approved.
2. **Recommendation 17.** The DOTS, along with County OES, law enforcement and fire services, conduct an analysis of private roads with offer of dedication on them and identify those of significant regional importance for fire safe ingress and egress. Once identified, those roads need to be prioritized for inclusion into the County maintained mileage program through a public process. Inclusion into the County maintained mileage system would require compliance with the County policy that they be brought up to County road standards and have a funding mechanism in place for future maintenance (e.g. CSA or PRD).

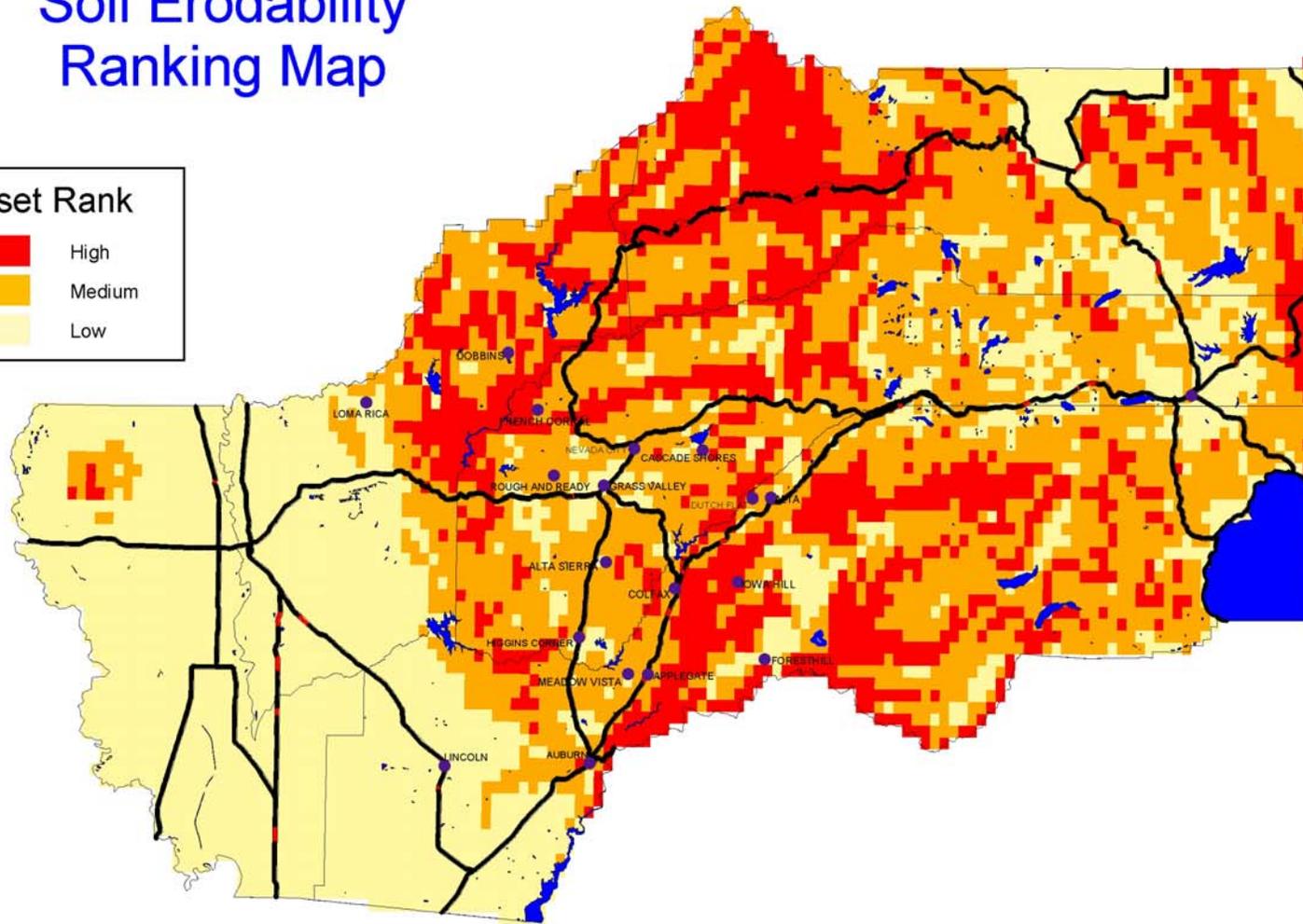
Nevada - Yuba - Placer Hydroelectric Power Ranking Map



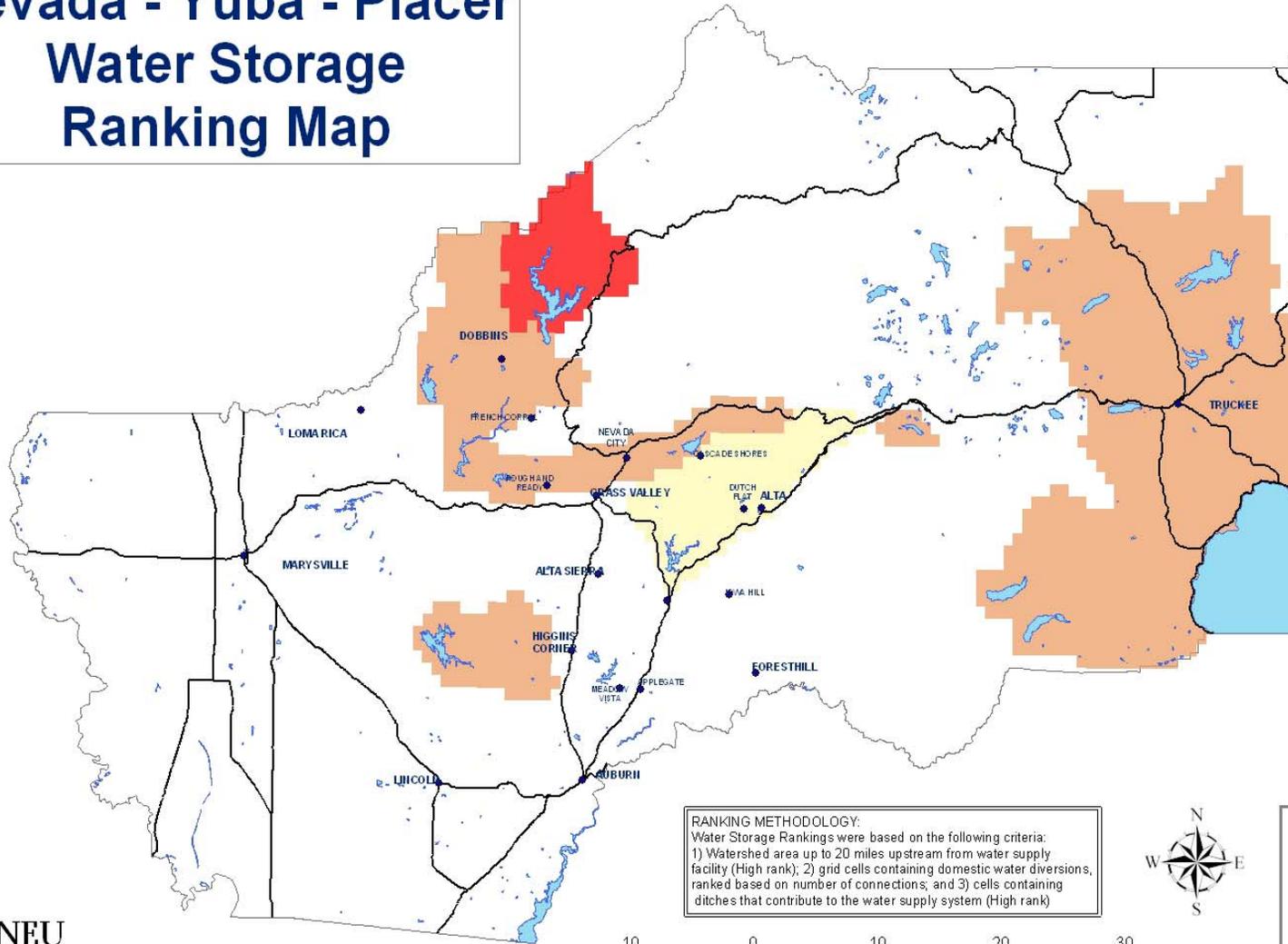
Assets ranked by their potential
for damage due to a wildfire.



Nevada - Yuba - Placer Soil Erodability Ranking Map



Nevada - Yuba - Placer Water Storage Ranking Map



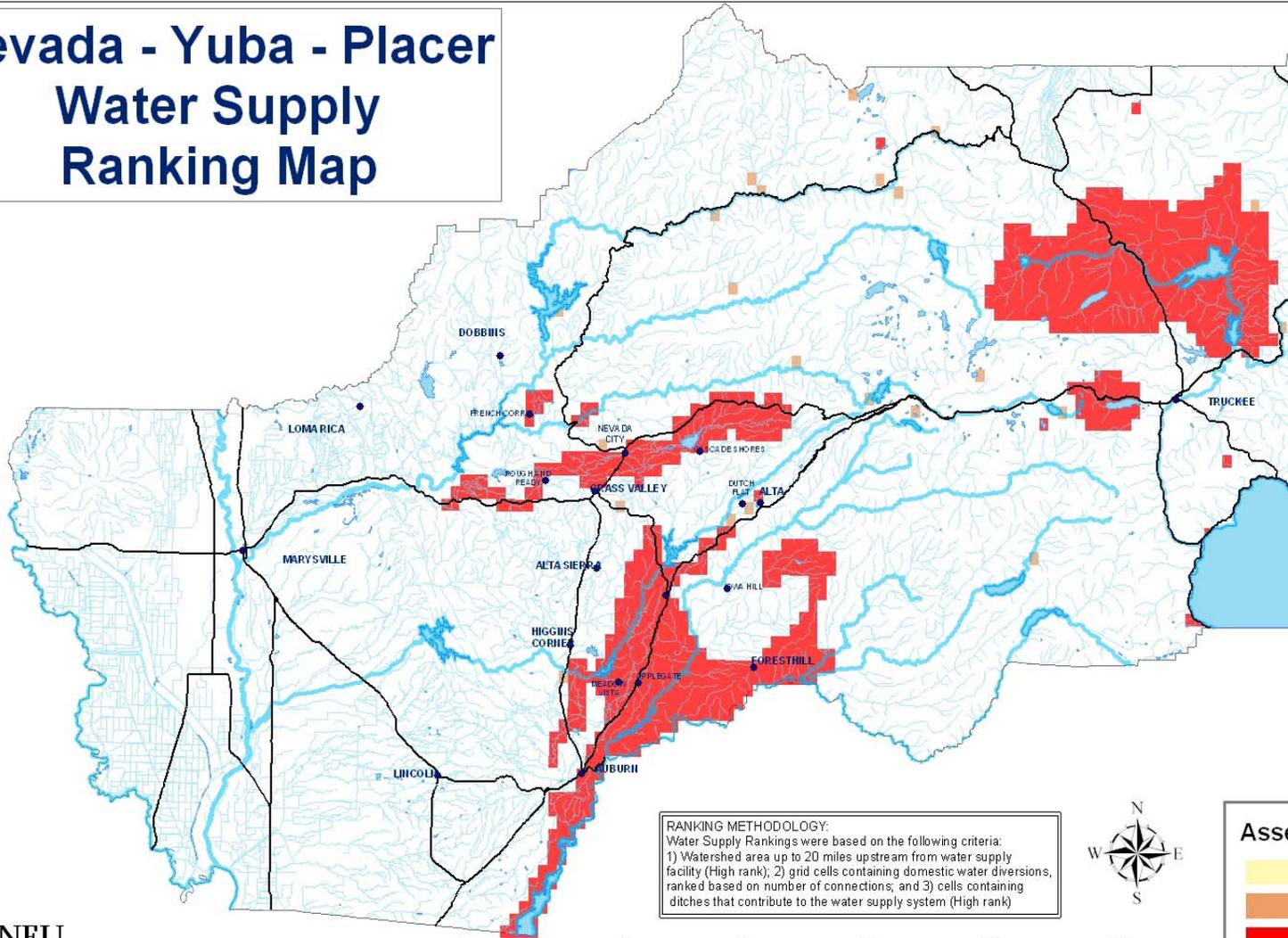
RANKING METHODOLOGY:
Water Storage Rankings were based on the following criteria:
1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)

Asset Rank

- Low
- Medium
- High

The State of California and the Chapter Cities of Sonoma and Yuba are not responsible for any errors or omissions in this map. The State of California and the Chapter Cities of Sonoma and Yuba are not responsible for any errors or omissions in this map. The State of California and the Chapter Cities of Sonoma and Yuba are not responsible for any errors or omissions in this map.

Nevada - Yuba - Placer Water Supply Ranking Map



RANKING METHODOLOGY:
Water Supply Rankings were based on the following criteria:
1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)

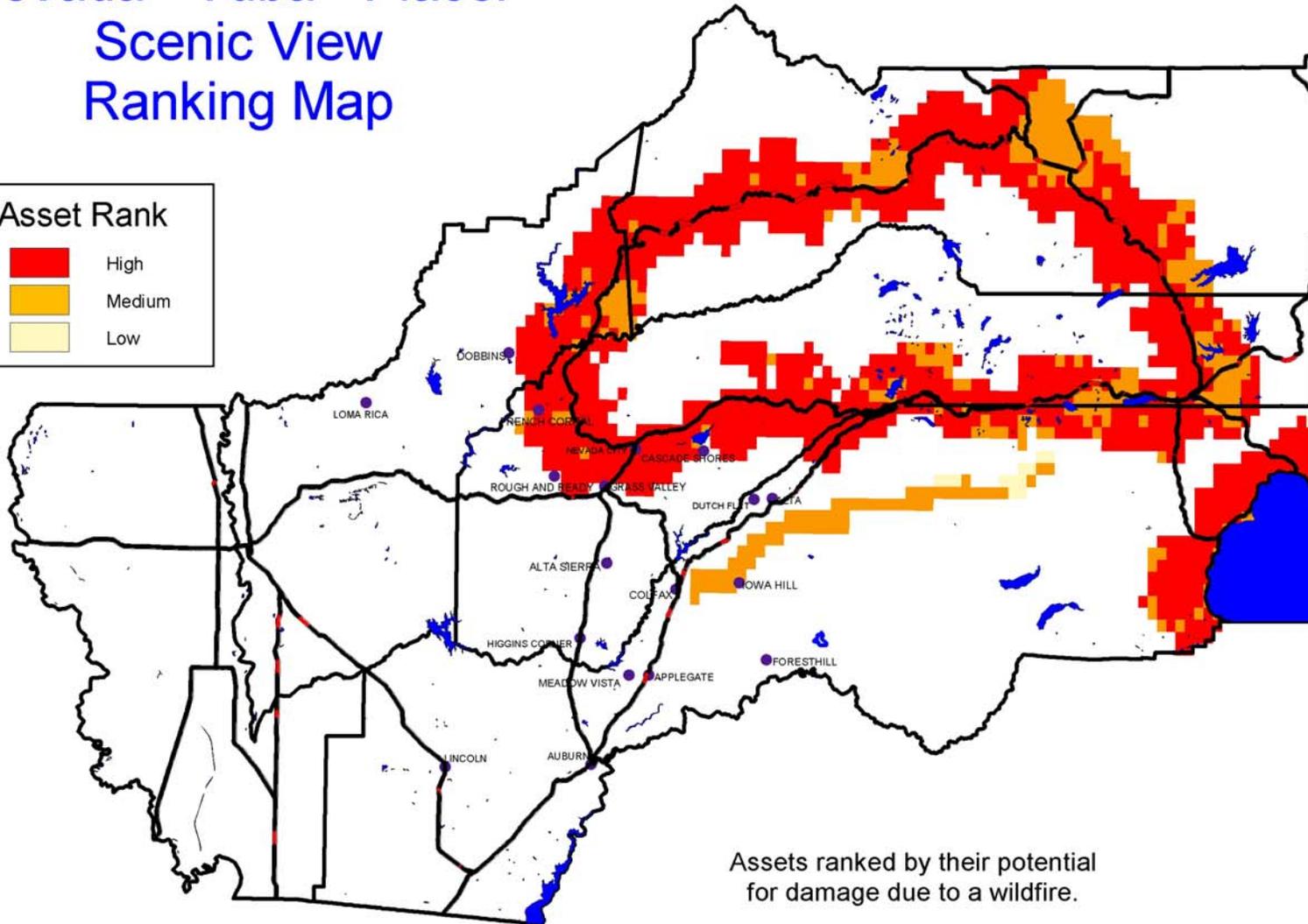


Asset Rank	
Low	Yellow
Medium	Orange
High	Red



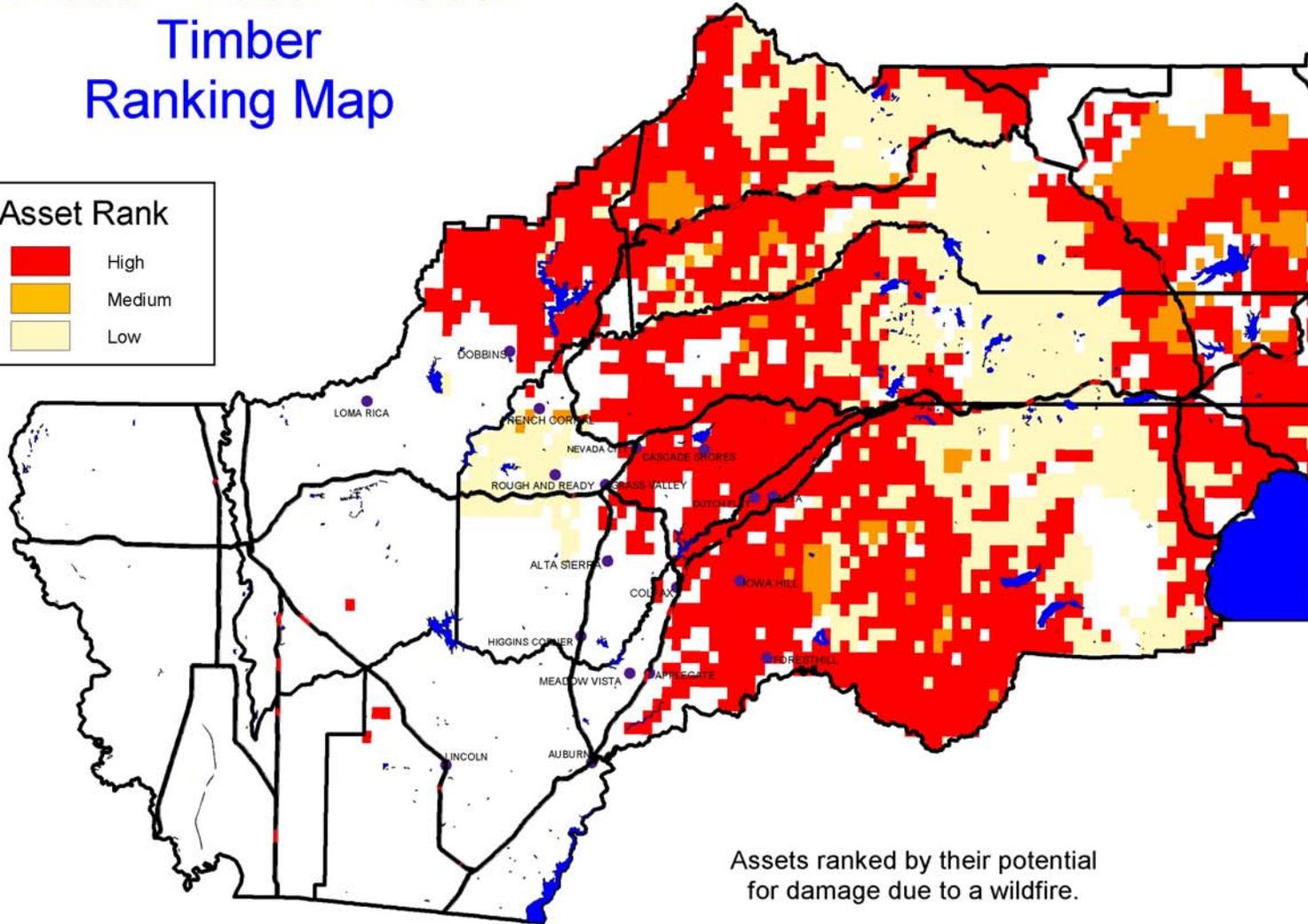
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Nevada - Yuba - Placer Scenic View Ranking Map



Assets ranked by their potential
for damage due to a wildfire.

Nevada - Yuba - Placer Timber Ranking Map

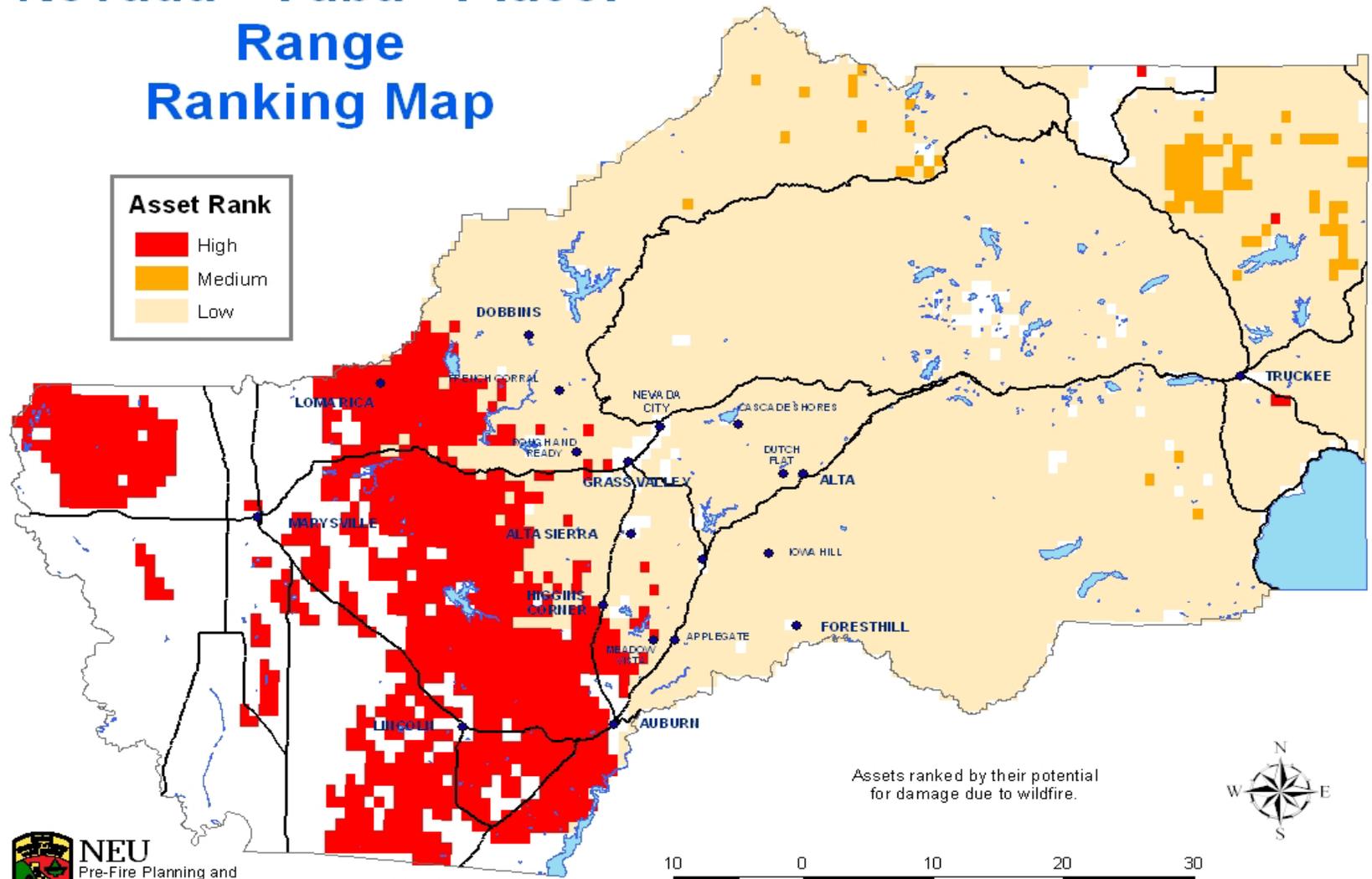


Assets ranked by their potential
for damage due to a wildfire.

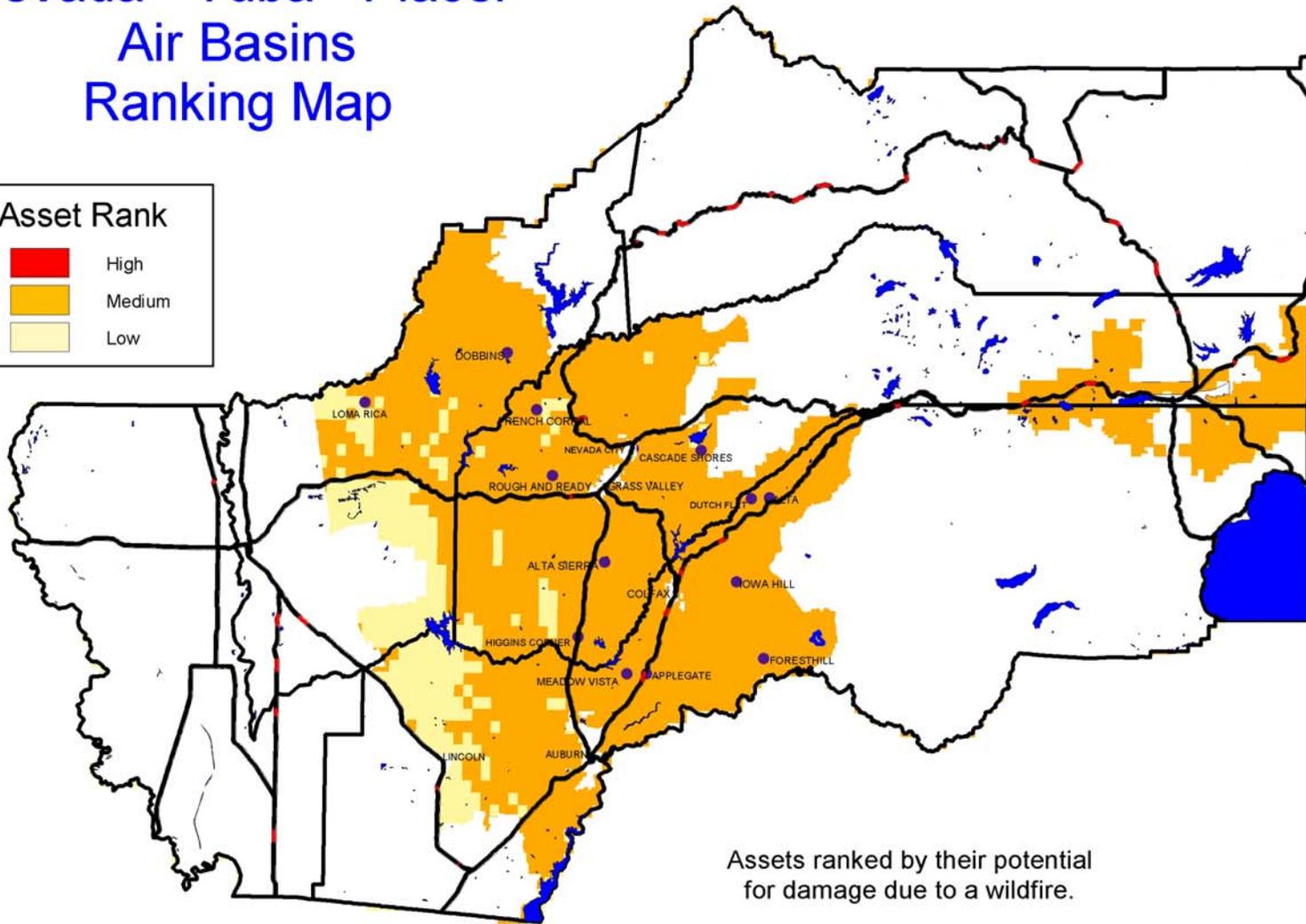
Nevada - Yuba - Placer Range Ranking Map

Asset Rank

- High
- Medium
- Low

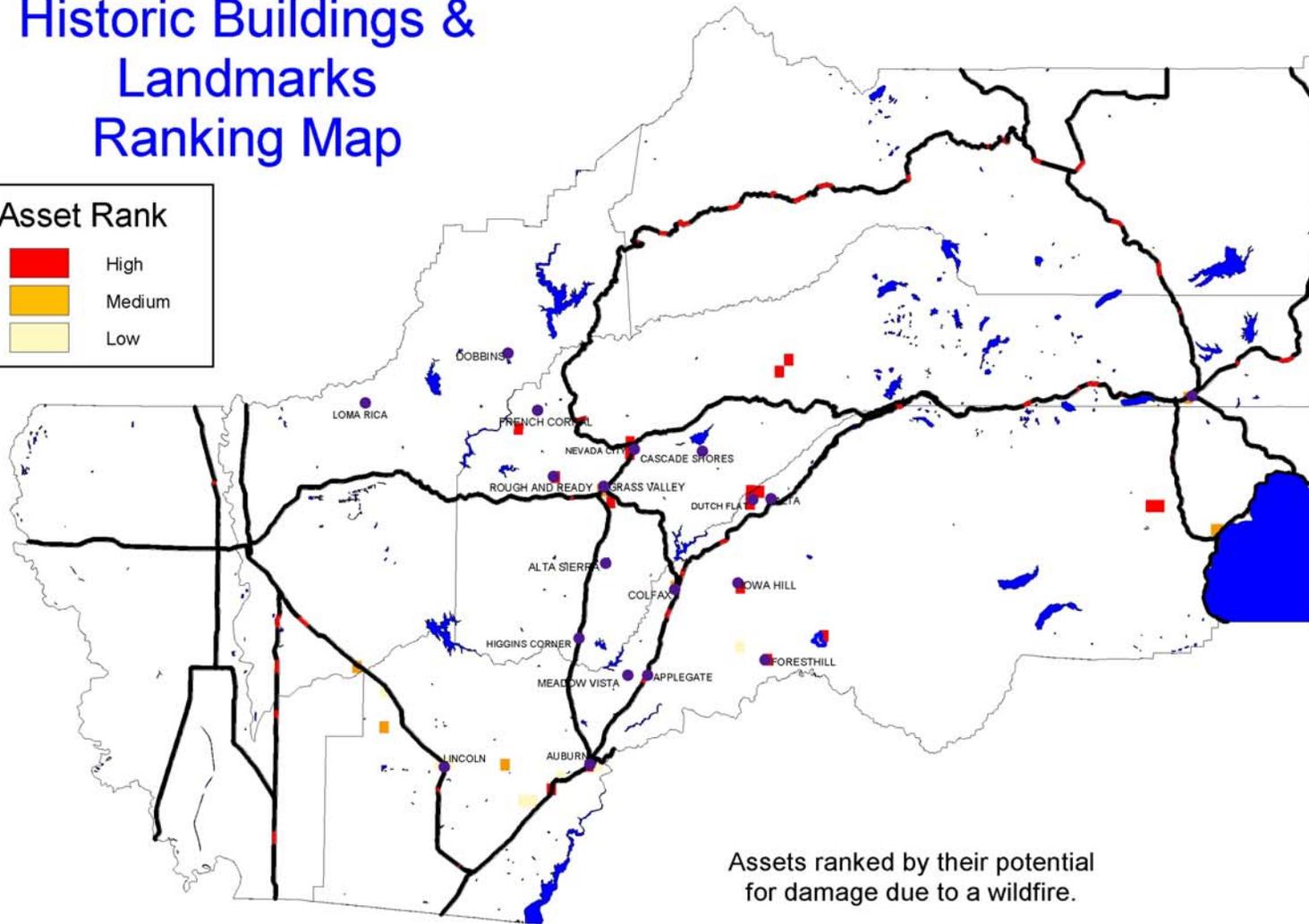


Nevada - Yuba - Placer Air Basins Ranking Map



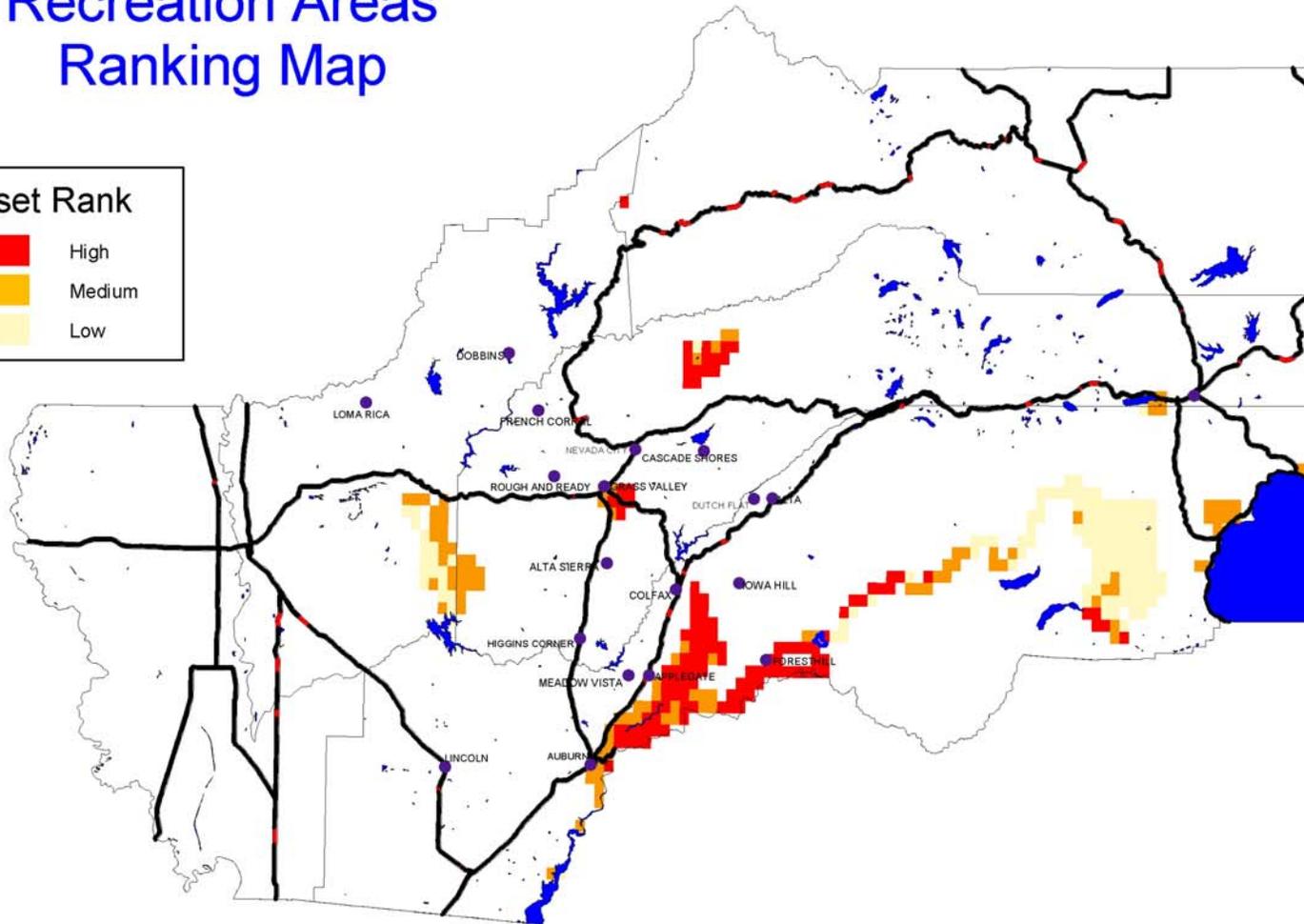
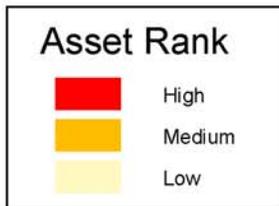
Assets ranked by their potential
for damage due to a wildfire.

Nevada - Yuba - Placer Historic Buildings & Landmarks Ranking Map

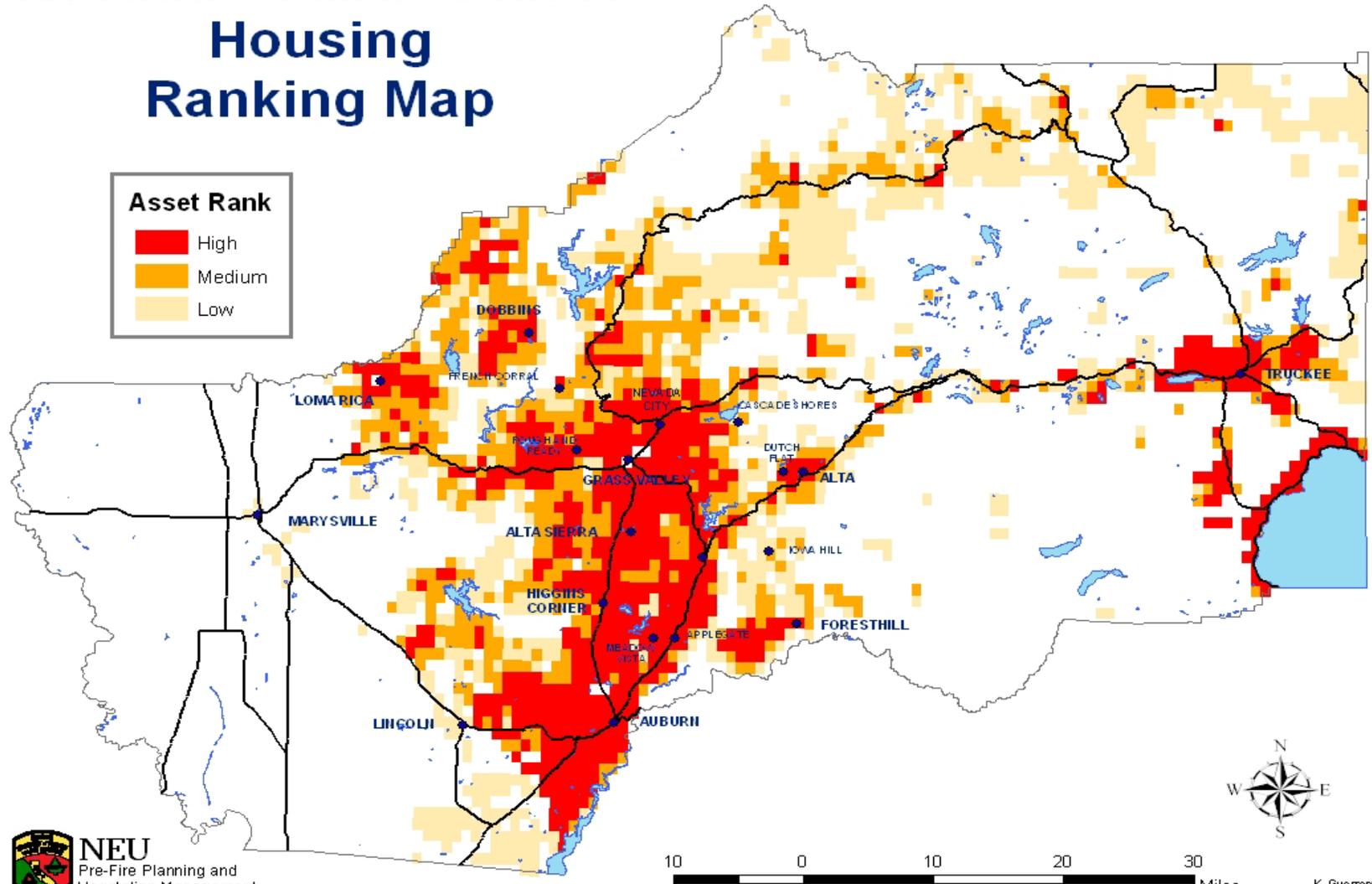


Assets ranked by their potential
for damage due to a wildfire.

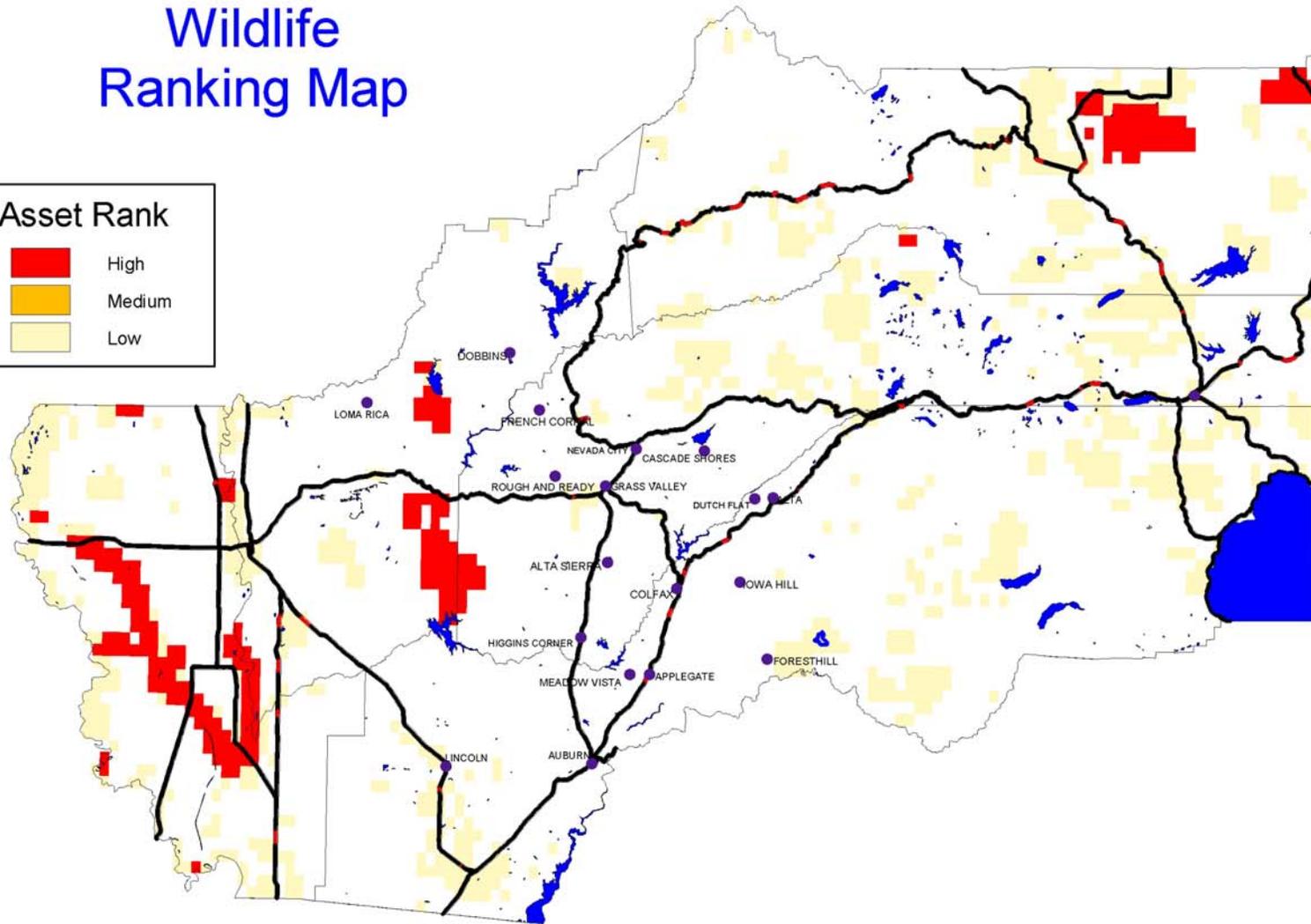
Nevada - Yuba - Placer Recreation Areas Ranking Map



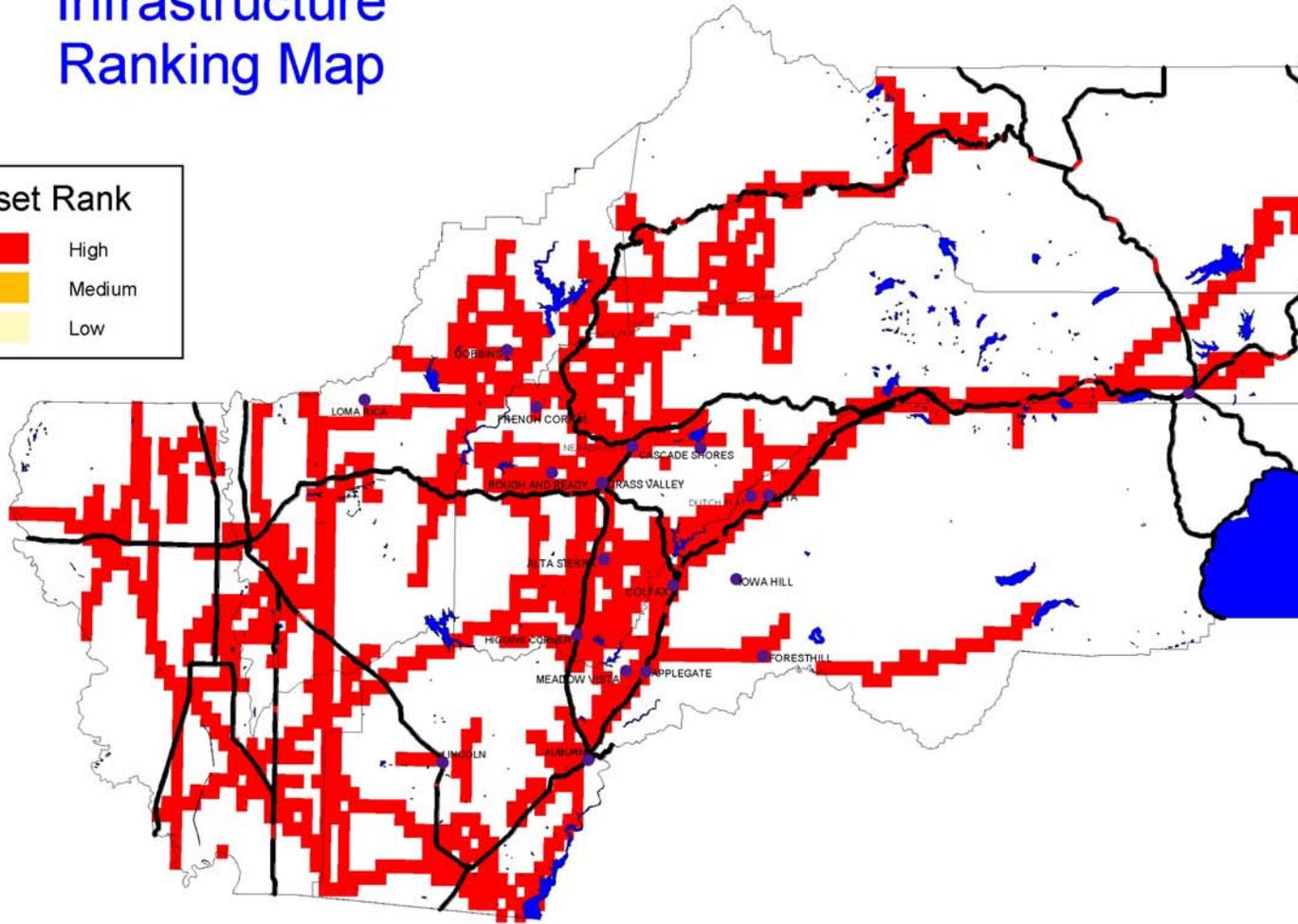
Nevada - Yuba - Placer Housing Ranking Map



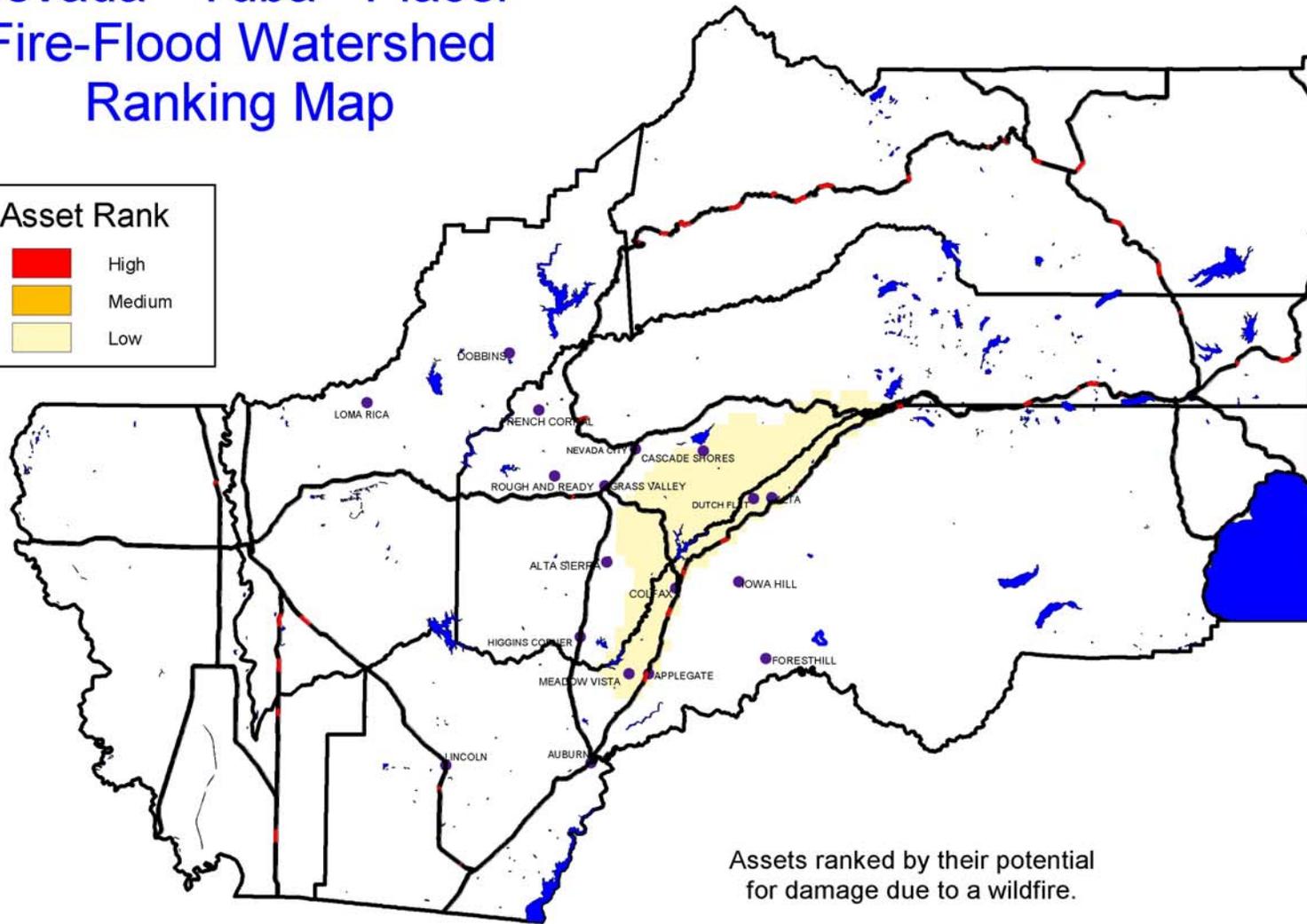
Nevada - Yuba - Placer Wildlife Ranking Map



Nevada - Yuba - Placer Infrastructure Ranking Map



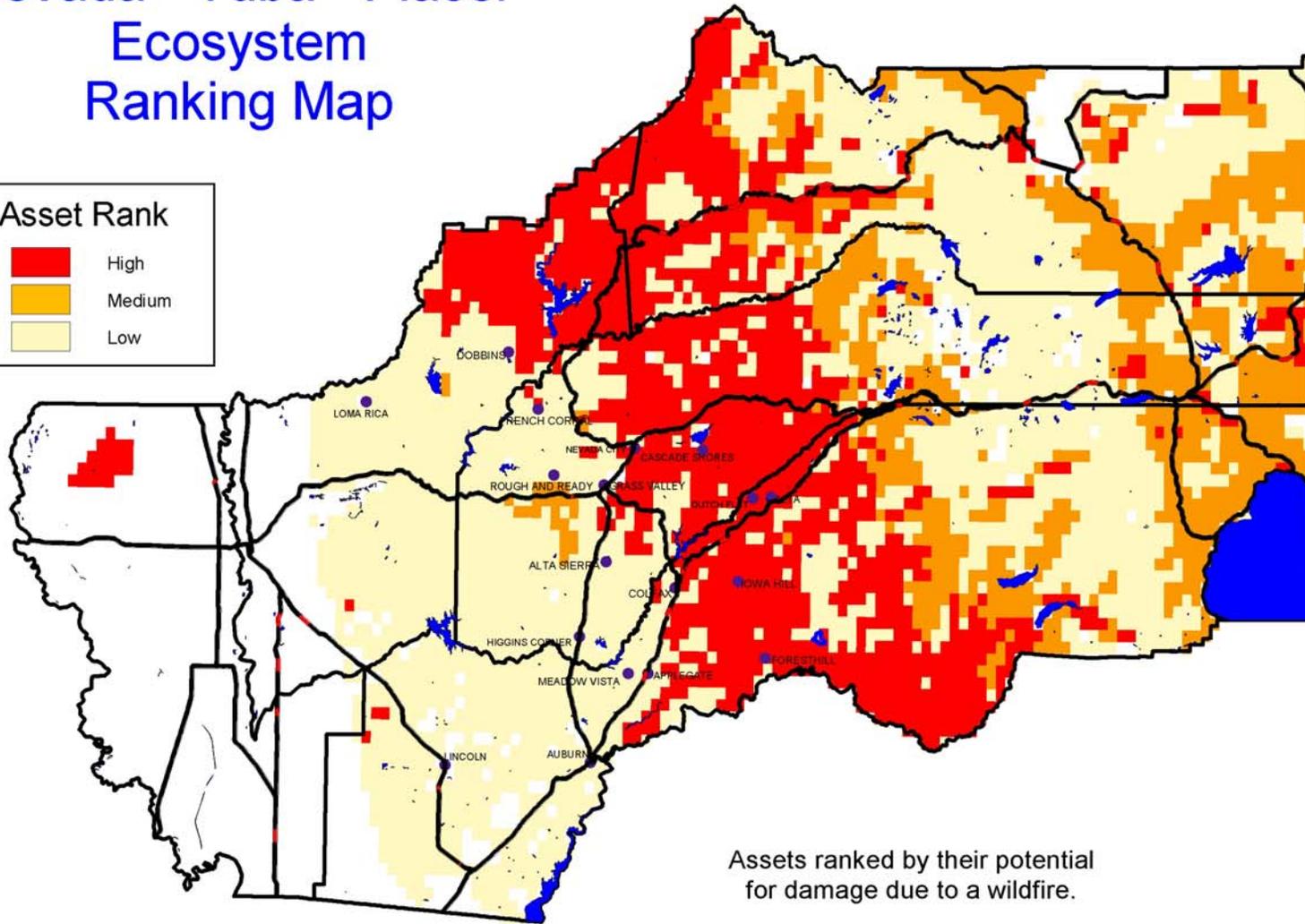
Nevada - Yuba - Placer Fire-Flood Watershed Ranking Map



Assets ranked by their potential
for damage due to a wildfire.

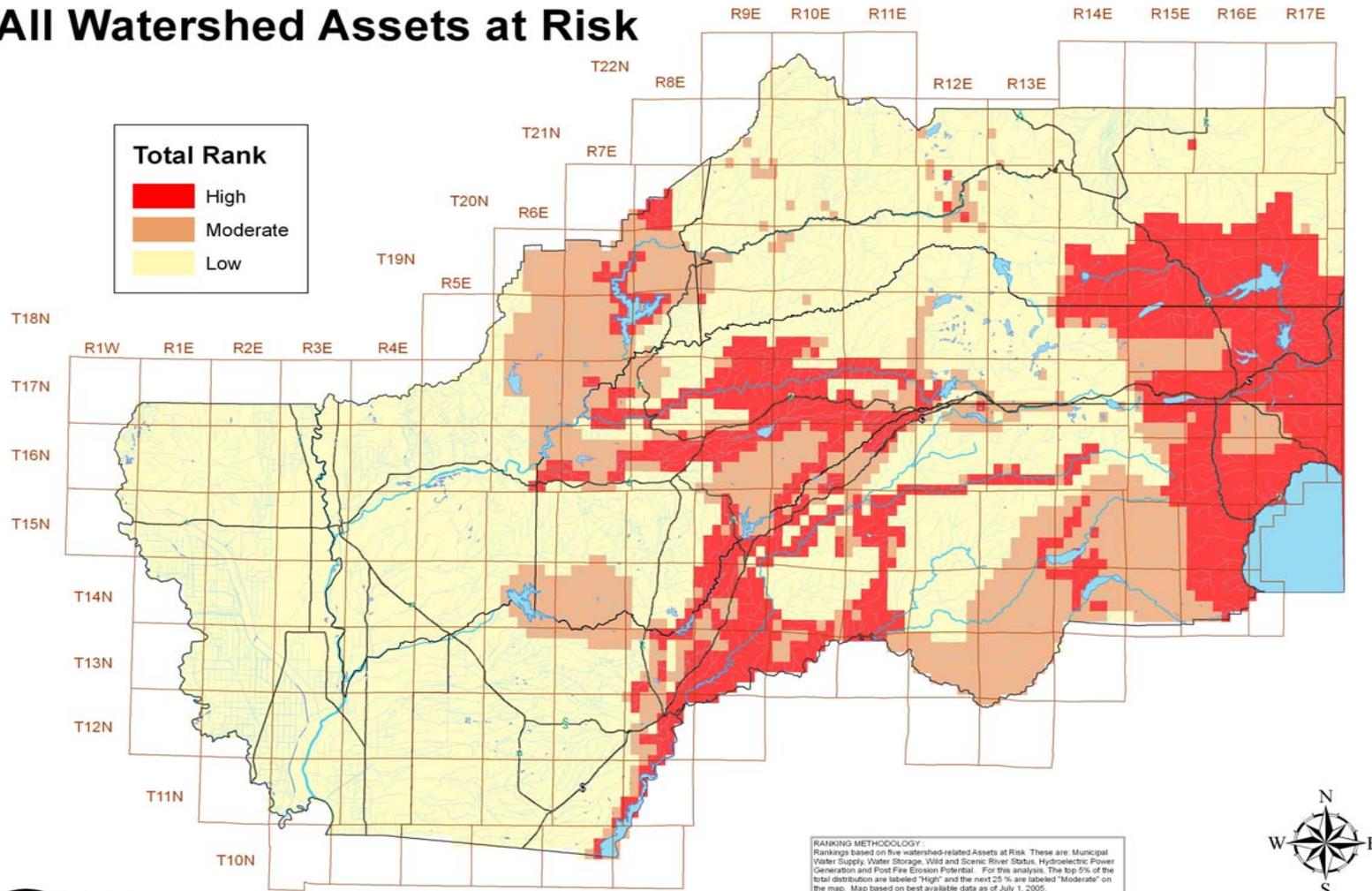


Nevada - Yuba - Placer Ecosystem Ranking Map



Assets ranked by their potential
for damage due to a wildfire.

Nevada / Yuba / Placer All Watershed Assets at Risk



Total Rank

- High
- Moderate
- Low

RANKING METHODOLOGY:
Rankings based on five watershed-related Assets at Risk. These are: Municipal Water Supply, Water Storage, Wild and Scenic River Status, Hydroelectric Power Generation and Post Fire Erosion Potential. For this analysis, the top 5% of the total distribution are labeled "High" and the next 25 % are labeled "Moderate" on the map. Map based on best available data as of July 1, 2005.



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